AN INVESTIGATION ON THE ADOPTION OF ONLINE APPAREL SHOPPING OF MALAYSIAN GENERATION Y

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DECLARATION

I hereby declare that:

(1) This MKMA25106 Research Project is the end result of my own work and that due acknowledgement has been given in the references to all sources of information be they printed, electronic, or personal.

(2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.

(3) The word count of this research report is 18,200.

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Last but not least, my sincere appreciation goes to those who have directly or indirectly involved in assisting me towards the completion of this research project. This research would never have made it so far without their support and assistance.

DEDICATION

To my beloved parents,

Toh Soo Hock and Low Kwen Yeng,

Without their support and guidance, none of this would be possible.

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ABSTRACT

The Internet has provided opportunities for businesses to sell products and services online through the online stores. With online shopping, consumers can purchase products and services anywhere, 24 hours a day, 7 days a week, without geographical restrictions. Although many marketers contended the importance of using the Internet in their marketing strategies, yet it is a big challenge for businesses who involve in apparel industry to implement the online store as apparels is thought to be saleable in touch-and-feel environment. Besides, Malaysia's society show negative attitude towards buying apparel online even though online shopping provides flexibility regarding time as well as place and improve the productivity and effectiveness to consumers. Therefore, the objective of the research is to identify the factors that affect Generation Y's intention to adopt online apparel shopping in Malaysia. In this study, Technology Acceptance Model (TAM) was selected as a theoretical framework to build a conceptual model. Due to the limitations of TAM, TAM was extended and combined with four additional constructs, namely, "social influence", "trust", "perceived behavioural control" and "website quality" to predict customers' intention to adopt online shopping. Six hypotheses were developed in the study to address the research problem. A web-based questionnaire survey of Generation Y Internet users aged between 16 and 33 including both online visitors (non-shoppers) and purchasers (shoppers) was conducted and 307 data were collected with a response rate of 87.46 percent. Multiple regression analysis is employed in this study to analyse the data and test the developed hypotheses. The findings revealed that perceived usefulness, social influence, and website quality are positively associated with consumers' intention to adopt online shopping in Malaysia. The findings of this study provide guidance to e-marketers who currently targeting Generation Y consumers to formulate effective marketing strategies that encourage the adoption of online shopping. It is also believed that the findings will be useful to web developers in designing attractive and effective websites to enhance consumer's buying intention as well as provide greater understanding of consumers' acceptance of online apparel shopping in Malaysia.

CHAPTER 1

INTRODUCTION

1.1Background of Research

The Internet has developed rapidly in the recent years. Followed by the rapid development, online shopping has grown tremendously all over the world. Internet is not only a mean for networking media, but it is also a mean for transaction of information, services and goods for consumers across the globe. Moreover, the advancement of technology has facilitated the surfing activity on the net. People are finding it easier and pleasant to shop online rather than doing shopping physically (Kau, Tang & Ghose, 2003).

According to ACNielsen (2008), 875 million of the world population had made an online purchase in 2008 compare to 627 million in 2006. It also reported that the most popular purchased items are books (41%), followed by clothing/accessories/shoes (36%), video/DVD/games and airline ticket reservations (24%). However, there is only 9.3% of Internet users purchased through the Internet in mid of 2005, this indicates a low adoption rate among Malaysians (Malaysian Communication and Multimedia Corporation [MCMC], 2005). Nonetheless, it is expected that Malaysian online sales will increase every year at a high growth rate.

With the growing trend of online shopping, businesses are offering online store for their customers because they find it advantageous to join this bandwagon and they are scared of losing sales to their competitors who are offering online store (Kau et al., 2003). In addition, businesses are able to market their products directly to consumers, to cultivate strong relationships with their customers, and to

conduct useful market research via Internet. However, businesses also face the challenge of attracting Internet users to make online purchases and make price comparisons (Boisvert & Begin, 2002; Chang & Li, 2003; Wang, Head & Archer, 2002).

Hui and Chau (2002) contended that the success of e-commerce depends to a large extent on the characteristics of the products and services being marketed. They believe that the suitability of online retailing to consumers varied by the category of products, due to either the uniqueness of the product itself, the nature of the Internet, or the newness of the distribution channel. Those products which the shoppers already had sufficient information such as books, computer products, are the fast-selling products on the Internet (Reda, 2001). Nevertheless, the advancement of technology had led to the widespread sales of the items previously thought to be saleable only in a touch-and-feel environment such as apparel and jewellery (Kim & Niehm, 2009). By 2010, analysts expect apparel to be the second largest product category for online sales, with $28.4 billion projected (Forrester Research, 2004, as cited in Internet Retailer, 2004). According to Abend (2001), online apparel retailers in the USA and Europe have increased profitability by giving consumers access to interactive try-on sessions such as the "virtual dressing room", "digital supply chain" and "online fit prediction". Furthermore, the recent integration of apparel manufacturers into direct web selling, as well as the continuing incursion of traditional retailers into the online channel, has fuelled the clothing surge (Schaeffer, 2000).

According to Liang (2009), online shopping holds a great potential for the market of Generation Y (Gen Y), those who born between 1978–1995. It is because this group of customers has a great potential of buying power, which is five to six times than Baby Boomers who were born between 1946-1964 (Anderson, 2001, as cited in Liang, 2009). Moreover, young consumers are more likely to shop online (Dholakia & Uusitalo, 2002; Vrechopoulos, Siomkos, & Doukindis, 2001). Sorce, Perotti and Widrick (2005) find that younger consumers searched for more products online and they were more likely to agree that online shopping was more convenient. This implies that those with more positive convenience and

information attitudes towards online shopping have higher online searching behaviour and purchasing behaviour. Gupta and Gupta (2009) proposed that it is a challenge for online marketer to invite and retain young consumers as the penetration of digital products is higher among these groups of customer. Besides, Gen Y will also determine the future online market trend. Hence, businesses need to acquire a better understanding of what the important factors are in influencing consumers to make online purchases, and then further refine their marketing mixes and online shopping model in order to attract consumers to purchase more.

According to Evans (2010), Gen Y is more financially optimistic than the average online buyers, and they are also motivated by deals for repeat purchases. Additionally, more Gen Y buyers actively interact with retailers than any other age group. In Malaysia, the online users are mostly consist of these groups of young adults, which is 54.8 percent (MCMC, 2005). Therefore for those businesses who considering growth through market expansion and targeting on Gen Y consumers in the e-commerce world, the understanding of the factors in influencing their willingness to adopt and engage in transaction using Internet is crucial. Thus, the primary objective of this research is to understand the Gen Y consumers' perception towards the acceptance of online apparel shopping in Malaysia and indentify the factors that can predict their intention to adopt online shopping.

In order to understand the factors that drive consumers' adoption or rejection of online shopping, a lot of studies have been conducted using traditional adoption models and theories, such as Technology Acceptance Model (TAM) (Davis, 1989) and Theory of Planned Behaviour (TPB) (Ajzen, 1991). In this research, TAM is used as the foundation of the research. It is believed to be the most appropriate model, which can explain Information Technology (IT) or Information System (IS) adoption behaviour well and operate in valid and reliable instruments (Mathieson, Peacock & Chin, 2001). TPB was proposed to add on social influence and perceived behavioural control. Besides, website quality was inserted as another independent variable as numerous studies have found that it has significant effect on influencing the online shopping adoption among Gen Y (Djamasbi, Siegel, &

Tullis, 2010; Kim & Niehm, 2009; Xu & Koronios, 2005). Therefore, the extended TAM model with added constructs will be developed in this research to predict the intention to shop online for apparel among Gen Y in Malaysia.

1.2Research Problem

Haque, Sadeghzadeh and Khatibi (2006) propose that Internet access rate is high among Malaysians but only small percentage of users have to shop online. According to MCMC (2005), there is only 9.3% of Internet users who actually made purchase through the Internet. This indicates that Malaysians show little interest and negative attitudes towards online shopping. Although previous research have focused on understanding the important factors that influence the adoption of online shopping, yet there are no affirmative conclusions as to what factors contribute to consumers' intention toward online shopping. Moreover, for apparel, little is known about the factors influencing their decision to purchase. Therefore, by examining what factors are important to online shoppers and predicting their purchase intentions, retailers can develop effective strategies for its products that will better position them against their competitors. Ha and Stoel (2009) argue that the potential for success through online marketing of apparels is greater, considering the increase in consumer demand for online shopping and the decrease in inhibitors related to online shopping for apparels. Due to the reasons above, this research is undertaken to examine the factors influencing the intention of Gen Y to adopt online apparel shopping in Malaysia.

1.3 Research Questions

Based on the research problem above, the research questions have been proposed:

1. What is the acceptance level of online apparel shopping in Malaysia?
2. How will the customers' perception (perceived usefulness, perceived ease of use, trust, social influence, and perceived behavioural control) and website quality influence upon online apparel shopping adoption in Malaysia?

1.4 Research Objectives

In order to adequately answer the research problems, the following research objectives are formulated:

1. To identify factors influencing the acceptance of online apparel shopping among Gen Y in Malaysia.
2. To understand Gen Y consumer's perspective and the influence of website quality towards online apparel shopping adoption.
3. To discuss empirical result and the implications to promote and encourage the adoption of online apparel shopping.

1.4 Significance of Research

The success of e-commerce actually relies on the willingness of consumer to involve in transactions using Internet. Hence, it is important to understand the consumers' perception and identify their needs and wants. Therefore, it is crucial to investigate the consumers' perception towards the acceptance of online apparel shopping in Malaysia and identify the factors that can predict their intention to shop online.

On the other hand, the developed model in this research represents an important extension of TAM with four added constructs such as "trust", "social influence", and "perceived behavioural control" as well as "website quality". This model is tested empirically to explain the Gen Y's intention to adopt online shopping in Malaysia. It gives better understanding on the factors contributing to the e-commerce success.

Besides, this research is important because the research will find out the influence of consumer's perceived usefulness, perceived ease of use, trust, social influence

and perceived behavioural control as well as the website quality on the intention to adopt online apparel shopping. It will help the marketers to identify the market segment and plan for the marketing mixes to cater to the online consumer's needs and increase consumer satisfaction as well as provide an understanding on the factors that contribute to the success of online apparel shopping. The research that focuses on Gen Y will further assist marketers to develop the appropriate marketing strategy for this market segment in order to draw more business from Gen Y. Additionally, this study will provide useful input for web developers to design attractive and effective content and layout in websites and homepages to entice consumers to buy online.

Apart from theoretical values, the research findings will benefit the practitioners, as well as telecommunication and Internet service providers. The results in the research provide a guide for businesses to design the future plans and solutions in order to encourage broader implementation and use of online shopping. The outcome of the research is not only limited to clothing industry. For further research, this research can be used to support the finding and analysis in the context of online apparel shopping and young adults' behaviour towards online apparel shopping.

1.5 Scope of Research

The research will be focusing on the Gen Y customers' perception on online apparel shopping in Malaysia. The research will be done by reviewing the prior literature on online shopping, information technology adoption models and its constructs, and factors that influence consumers' intention to shop online for apparels. Survey will be conducted in this research to gather information among Gen Y who has browse Internet (visitors) as well as those who has experience in online shopping (purchasers) and find out how their perception on online apparel shopping and how the quality of website influence their perception to shop online.

1.6 Outline of the Research

The research is structured into five chapters. Chapter 1 presents an overview of the issues arising from the growing importance of the Internet in business today, background to the research, research problem and objectives, justification and the scope of the study. Chapter 2 provides a literature review on prior researches to develop the research model and hypotheses. Subsequently, Chapter 3 discusses the research methodology, which includes the data collection, sampling plan and questionnaire development. In Chapter 4, the description and analysis of the data collected is presented. Finally, research finding and implications will be reported and described in detail in Chapter 5. Limitations of the research are discussed and recommendations for future studies are suggested in chapter 5 as well.

1.7 Conclusions

This chapter lays the foundation of the research. It first introduces the background of the research, and followed by the research problem, objectives, significance of research, scope of research, as well as outline of the research. These research foundations lead to the detailed description of the research.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature concerning on online shopping as well as the consumers' perception and intention towards the online shopping of apparel in Malaysia. Next, the theoretical frameworks of Technology Acceptance Model (TAM) and Theory of Planned Behaviour (TPB) are discussed. Due to the limitations of TAM model, TAM is extended and combined with four additional constructs, which are "trust", "social influence", "perceived behavioural control" as well as "website quality". The "trust", "social influence", and "perceived behavioural control" are derived from TPB to enhance the prediction of consumers' intention to adopt online shopping in Malaysia. The "website quality" is added into the research model because it is an important construct to determine the intention to adopt online shopping for apparel from the previous researches. After the extensive review of literature, the hypotheses are formulated. In the last section, a research model of consumer adoption of online shopping is developed.

2.2 Online Shopping versus Traditional Shopping

The retailing trends showed a shift from traditional store-based retailing to an online store-based retailing (Keen, Wetzels, Ruyter & Feinberg, 2002; Monsuwe, Delleart, & deRuyter, 2004). In the past few years, many businesses have faced the challenge of incorporating online stores into their business model in order to serve their customers 24/7. In establishing an online stores rather than existing

physical stores, retailers encounter the difficulty of not being able to use the same format for both online and traditional stores. Although online shopping incorporates many of the same characteristics as "real world shopping", consumers are in a different frame of mind and have different informational needs when shopping on the Internet or the traditional way (Burke, 2002; Chen & Leteney, 2000).

For instance, Internet shoppers are not able to gain the experience they usually get when shopping the traditional way. It means that online shopping did not allow the consumers interacting with a salesperson, feeling the atmosphere, and touching or trying the merchandise (Li, Kuo, & Russel, 2003). In cases where these features are specifically important to consumers, they will choose to engage in traditional shopping over online shopping. Nevertheless, Internet shopping fulfilled several consumer needs more effectively and efficiently than traditional shopping (Chen & Leteney, 2000; Grewal, Iyer, & Levy, 2002).

Firstly, consumers can browse the various products with minimal effort by adopting online shopping. Wofinbarger and Gilly (2001) point out that convenience and accessibility are the most important factors that influence the usage of online shopping. This is because consumers can comfortably shop on the Internet at their home, as well as able to shop any time. This is particularly true for the working adults who only have a small amount of free time after work and for those whose time costs are perceived to be too high to invest in traditional shopping (Grewal et al., 2002). Furthermore, shopping on the Internet is an alternative to overcome the geographical distance. They can fulfil their shopping goals without travelling large distances.

Next, consumers can easily compare product features, availability, and prices more efficiently and effectively than with traditional shopping. They also can efficiently obtain critical knowledge about firms, products and brands, and thereby increase their competency in making decisions while shopping. Following this, Internet shopping provides a level of anonymity when shopping for certain sensitive products. Grewal et al. (2002) find that the intention to shop on the Internet is high when the products required high privacy and anonymity. Another

factor that increases consumers' intention to adopt online shopping is the "need for special items" (Wolfinbarger & Gilly, 2001). If the consumers need to acquire tailored products, such as special sized clothing or large sized shoes which are not available in traditional stores, shopping on the Internet is an option for them to purchase these special items (Monsuwe et al., 2004). In short, it is to say that online shopping is not just another way of shopping that provides consumers with the same outcome at the end of the process as with traditional shopping. In fact, online shopping provides consumers with added value, but can also withhold them from certain sources of value (Chan & Cheng, 2008).

2.3 Gen Y and Online Shopping

Gen Y, an age cohort who born between 1978 and 1995, is the generation who are comfortable with the idea of transmitting information via a computer (Liang, 2009). Gen Y has been exposed to technology and Internet since preschool, hence they are likely to go online for news, information, and research as well as recreation and socialize through chat rooms or social networking sites (Fox, 2008). Noble and Noble (2000) also reported that Gen Y spend more time online than any other demographic group. In short, these young adults are more interested in using new technologies, like the Internet, to find out about new products, search for product information, and compare and evaluate alternatives (Wood, 2002). This is because older consumers may perceive the benefits of Internet shopping to be less than the cost of investing in the skill needed to do it effectively, thus they avoid shopping on the Internet (Ratchford, Talukdar, & Lee, 2001).

Sullivan and Heitmeyer (2008) propose that Gen Y has been recognised as a new sizable market segment that will change the landscape of the Internet in an increasingly connected world. Combining the wide and prevalent use of the Internet and the distinct position of growing up exposed to advanced technology, Gen Y becomes a unique target for businesses as well as a unique demographic to study (Djamasbi et al., 2010). This group of people grew up in generally strong economic conditions and thus their purchasing power is high (Blakewell &

Mitchell, 2003). Additionally, they are not only buying for themselves, but they influence their family purchase decisions as well (Sullivan & Heitmeyer, 2008).

According to Lester, Forman, and Loyd (as cited in Nusaira, Parsa, and Cobanoglu, 2011), Gen Y are technologically savvy and are more immersed in online purchase behaviours. They use the Internet for 15 percent of their spending. Their technological experience and sophistication make them confident to shop online. In addition, Lester et al. (2006) surveyed about 780 university students and concluded that over 95 percent of the university students used the Internet and over 91 percent of them had online purchase experience.

Being the technologically savvy demographic group, Gen Y demands that corporations understand their needs. The company should adapt accordingly in order to maintain relevance in a competitive marketplace (Djamasbi et al., 2010). Thus, how this group of customers perceived toward the online shopping is of great interest to marketers, practitioners and academicians.

2.4 Theoretical Models of Innovation and Technology Adoption

A lot of previous studies and research have developed and proposed various frameworks and models to clarify the factors or determinants influencing the acceptance of technology in consumer context. Most of them are based on Technology Acceptance Model (TAM) (Davis, 1989), and Theory of Planned Behaviour (TPB) (Ajzen, 1991). Hence, these models are studied in this chapter to provide the theoretical foundation. Besides, the extended models developed in prior studies are brought into the discussion and compared with original models (TAM and TPB).

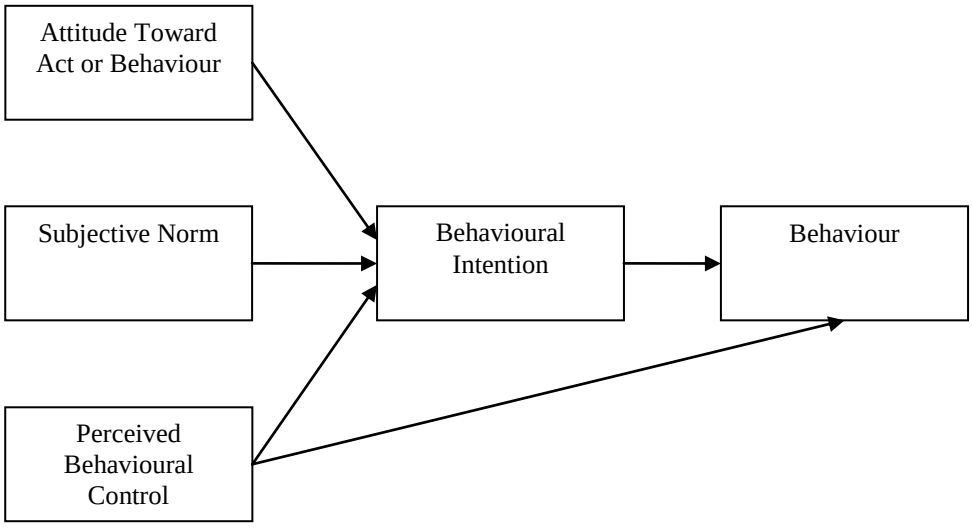
2.4.1 Theory of Planned Behaviour (TPB)

Theory of Planned Behaviour (TPB) is derived from Theory of Reasoned Action (TRA) by adding “perceived behavioural control” construct (Ajzen, 1991) to

consider user perceptions regarding possible internal and external constraints on behaviour. As illustrated in Figure 2.1, TPB suggests that individual Behaviour is driven by Behavioural Intentions (BI), where BI is formulated by the individual's Attitude toward the Behaviour, the Subjective Norm and Perceived Behavioural Control.

According to Ajzen (1991), Attitude toward the Behaviour has the definition of one's positive or negative feelings about performing a behaviour. Subjective Norm is defined as individual's belief that he or she should perform the certain behaviour as a result of the general social pressures from the people important to the individual. Behavioural control refers to one's perception of the difficulty of performing a behaviour and whether it is under one's control (Ajzen, 1991). The "control" means that whether the behaviour is easily executed or whether the required resources, specialised skills and opportunities are available (Conner & Abraham, 2001).

Figure 2.1: Theory of Planned Behaviour (TPB)



Note. From Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behavior and Human Decision Processes, 50*(2), p. 182.

TPB has been adopted in many researches and it has been used as the basis for several researches of online shopping behaviour. The constructs of "Subjective Norm" and "Behavioural Control" are validated in the study of Limayem, Khalifa and Frini (2000). They use and refine TPB in order to determine the factors that motivate online shopping. The findings indicate that media and family influences as well as the behavioural control (self efficacy and facilitating conditions) have significant effects on consumers' intentions and eventually influenced online shopping behaviour.

In the study of George (2002), the TPB model is extended by adding three constructs which are Privacy, Trust and Experience and there are successfully integrated into the model. These constructs are used to evaluate the users' concern about privacy and trust as well as their previous experience with the Internet towards the behavioural intention in online shopping. It is reported that these three constructs have positive relationship with online shopping. Pavlou and Chai (2002) also integrated Trust into TPB model and they argue that the model provides a substantial foundation for the fundamental role of trust in online shopping.

2.4.2 Technology Acceptance Model (TAM)

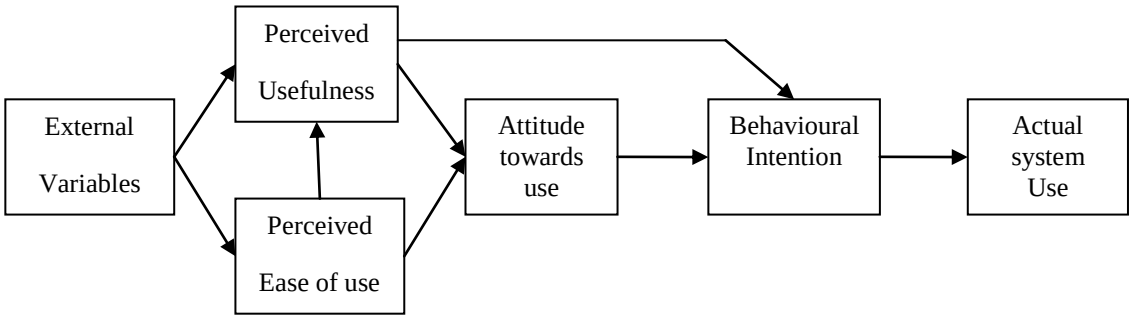
Technology acceptance model (TAM) was developed and introduced with the objective "to provide an explanation of the determinants of computer acceptance that is general, capable of explaining user behaviour across a broad range of end-user computing technologies and user populations, while at the same time being both parsimonious and theoretically justified" (Davis, Bagozzi, & Warshaw, 1989, p. 985). It has been widely used to predict the degree of consumer technology acceptance among various models (Venkatesh & Davis, 2000).

TAM proposes two constructs, which are "Perceived Usefulness" (PU) and "Perceived Ease of Use" (PEOU), to predict the attitude (ATT) towards using the technology, which eventually affect the behavioural intention (BI). This concept was adopted from Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975). PU is defined as the degree to which individual believes that the use of the system

can assist his or her job performance, whereas PEOU refers to the extent to which the individual believes that the use of system is effortless and free from difficulty (Davis, 1989).

Davis (1989) suggests that PU has greater correlation with usage behaviour than PEOU. It is because if the technology is not useful, it is not worth to improve the usability of technology. Besides, PU has direct impact to intention to use, or indirect impact through attitude as shown in Figure 2.2. Therefore, PU is critical to how individuals formulate attitudes toward a technical system (Davis, 1989). Several researchers have discovered that the TAM consistently explains many of the reasons that users accept or reject technical systems (Hausman & Siekpe, 2009; Song & Zinkhan, 2003).

Figure 2.2: Technology Acceptance Model (TAM)



Note. From Davis, F. D. (1989). Perceived usefulness, perceived ease of use and user acceptance of information technology. *MIS Quarterly*, *13*(3), p. 325.

TAM has been specially built for applications regarding adoption of information technology and it is also easy to implement with less complications (Venkatesh & Davis, 2000). Besides, the measurement scales used in TAM of PU and PEOU had consistently been proven to have both high reliability and validity. It also explains a substantial proportion of variances between behavioural intention and actual behaviours (Kamarulzaman, 2007).

2.4.3 Extending TAM

Although TAM has been applied and adopted by most researchers, Lee, Kozar and Larsen (2003) argues that original TAM should be integrated and extended in order to obtain a better understanding of IT adoption. According to Wixom and Todd (2005), there are three approaches to extend TAM, which are "by introducing factors from related models" (Delafrooz, Paim, Haron, Sidin & Khatibi, 2009), "by introducing additional or alternative belief factors" (Moon & Kim, 2000), and "by examining antecedents and moderators of perceived usefulness and perceived ease of use" (Kamarulzaman, 2007; Monsuwe et al., 2004). Some studies might use any two approaches or all the three approaches to extend the original TAM (Amin, 2007; Chang, 2004).

Delafrooz et al. (2009) added "Perceived Benefits" construct which is derived from Theory of Reasoned Action (TRA) into TAM to investigate the factors that influence students' attitude toward online shopping in Malaysia. The Perceived Benefits of online shopping include cost saving, convenience, cheaper price, a way to easily search for information, and a 24 hours services. However, the PU and PEOU of TAM have been replaced by "Online Shopping Orientations" in this study. The result reveals that Online Shopping Orientations has strong relationship with the ATT. The hypothesis of positive relationship between Perceived Benefits and ATT is greatly supported in the research. This implies that consumers are looking for more convenience (time and money saving), cheaper prices and wider selection when they shop online, which make these factors as the motivation to adopt online shopping in Malaysia.

On the other hand, Moon and Kim (2000) also extend the TAM by including "Perceived Playfulness" in their study. They point out that TAM with only PU and PEOU as main determinants may not fully explain the adoption of Internet as it is currently widely used for both work and pleasure. The finding proven that their developed hypotheses are supported, which means the Behavioural Intention to use Internet is highly correlated to the ATT, PU and Perceived Playfulness. However, PEOU and Perceived Playfulness have more significant influence on ATT than PU. Therefore they suggest that IS practitioners should reflect

playfulness concept and user friendliness of a system in order to increase the usage of Internet. Besides, Kim and Niehm (2009) developed a model based on the TAM with the addition of "website quality". They find that the website quality are significantly correlated with purchase and revisit intention. It is suggested that the design and the information provided in the website should be organised in the schematic way in order to allow consumers to handle more information and increase their online purchase intention.

Ha and Stoel (2009) extended TAM by incorporating Trust and Enjoyment construct in their study. They propose that consumer trust of Internet technology play a critical role in consumers' online shopping behaviours, while enjoyment is a major factor that drives users to use a new technology. Therefore they extended the original TAM to encompass trust and perceived enjoyment as the additional motivational determinants of acceptance of online shopping. The findings show that attitude toward online shopping is significantly affected by trust, enjoyment and PU. This is same with the findings of Childers, Carr, Peck and Carson (2001). Ha and Stoel (2009) suggest that those e-marketers who wish to encourage online shopping to their consumers should focus on the consumers' trust and information needs as well as consumers' service and experiential needs.

In some study, external variables are included for better understanding of consumers' attitude and intention toward online shopping. Monsuwe et al. (2004) have proposed a framework that combined the original TAM and five factors which are "consumer traits", "situational factors", "product characteristics", "previous online shopping experiences" and "trust in online shopping" in the study. They conduct extensive literature review to provide a clear picture on the adoption of online shopping. The review concluded that all of the factors have significant impact on consumers' attitude and intention toward shopping online. Hence, they advise that e-marketers should improve the website design of the online stores as well as take consumers' motivations and limitations to shop online into their consideration in making adequate strategic, technological, and marketing decisions.

Taking the advantage of validity and reliability of PU and PEOU in TAM model, Kamarulzaman (2007) proposed the augmentation of other constructs such as "Personal Characteristics", "Perceived Risk" and "Trust" in order to improve explanatory and predictive power in assessing the adoption of travel e-shopping. The finding shows that PU is positively related with the PEOU and Behavioural Intention, it is again validated the postulation in the TAM. Besides, the result also indicates that Personal Characteristics, Perceived Risk and Trust have significant effect on the intention to adopt travel e-shopping. The research provides an understanding of the factors associated with the adoption of travel e-shopping and thus helps the retailers and policy makers to better develop appropriate strategies in order to enhance and promote e-shopping to future users and existing customers.

In order to explore the validity of the extended TAM model, Chang (2004) conducts a research by integrating social factors and facilitating factors with TAM in predicting the intranet usage. He also incorporates age and prior experiences as the external variables in the research. The findings indicate that the original TAM constructs (PU, PEOU, ATT, BI and AU) have stronger correlation among themselves than the social factors and facilitating conditions, yet the two new added variables were proved to have a role in predicting user acceptance and they have found to enhance the validity of the extended TAM. However, the two external variables, namely age and prior experience, which has been proved to be significance in predicting the Internet usage, are not strong enough to impact the intranet adoption.

2.4.4 Differences between Adoption Theories

TAM and TPB have its own strengths and weaknesses. Drawing from the theoretical foundation of TRA, TAM was formed and it is now being a widely accepted interpretation of IT acceptance. Prior studies have validated TAM as a robust and parsimonious framework for understanding the user's adoption of technology in a variety of contexts such as online shopping, banking technology, online games, mobile commerce, and so on (Ha & Stoel, 2009). TAM was also found to be the most popular theory used by most researchers for studying the

behavioural intention to use technological products. However, TAM has its limitation as it ignores some important theoretical constructs (Lee et al., 2003).

Unlike TPB, TAM does not include subjective norm as the determinant of intention because of its uncertain theoretical empirical psychometric status (Davis et al, 1989). TAM is more oriented to analyse the human behaviour on using IT/IS comparing to TPB. For instance, according to Mathieson et al. (2001), TAM is being widely used since it is IS specific and is based on a theory of social psychology. Besides, it is parsimonious and it has the validity and reliability of its instrument. However, Mathieson et al. (2001) argue that TAM is limited by the lack of barriers that inhibit the individual from using an IS.

On the other hand, TPB model provides the constructs that TAM model does not emphasis which are Subjective Norms and Perceived Behavioural Control (Mathieson et al., 2001; George, 2002). TPB has received substantial empirical support for predicting behaviour in IS and other domains as it includes more effects and variables than TAM that may be important in some situation. According to Taylor and Todd (1995a), TAM explains 53 percent of the variance in behavioural intention while TPB explains 57 percent. In order to make TPB more IS specific, they introduce the new model, which integrates TPB with TAM by including 13 constructs. Although this new model managed to explain 60 percent of the variance in Behaviour Intention, yet it greatly increases the model complexity (Mathieson et al., 2001). Additionally, George (2002) believes that TPB is too general and the constructs are difficult to define and measure, as well as it suffers from multicollinearity among the independent variables.

In brief, the Technology Acceptance Model (TAM) is chosen as the theoretical basis to develop a conceptual model for testing behavioural intention in this research. Since online shopping is a retail format innovation and makes use of innovative technology systems, and online shopping behaviour such as browsing and transaction is a type of consumer usage system, TAM provides a solid theoretical foundation for research investigating consumer acceptance of online shopping. Moreover, the subsequent empirical studies on the TAM have numerous proven records to show that it has both reliability of the measures and validity of

the constructs as well as it enjoys a rich base of academic acceptance. However, in order to improve the ability to predict and explain technology usage, Mathieson et al. (2001) and Wixon and Todd (2005) has extended TAM yet retaining the simplicity of the TAM. In addition, there are extensive prior empirical studies validating the better prediction capabilities of extended TAM by using this approach as discussed under section 2.4.3.

Therefore, this research will extend the TAM by adding appropriate constructs derived from prior studies in order to enhance the prediction of intention of purchasing online among Gen Y in Malaysia. The additional constructs that will be adding into this research are: Trust, Social Influence, Perceived Behavioural Control and Website Quality. These constructs are selected because they have been validated in many prior empirical studies as important determinants to explain the intention to shop online (will be discussed in details in section 2.5).

2.5 Proposed Research Model and Hypothesis

Since the success of e-commerce depends on the willingness of consumer to adopt the technology and engage in activities using Internet, therefore it is important to understand the consumers' perception towards the acceptance of online shopping in Malaysia. Besides, the shopping on apparels that appeal to customers' senses would require the e-marketers to design a website that could enhance the consumers' shopping experiences through online stores as if they are shopping in the real store. Therefore, this research integrated the constructs from TAM and TPB as well as the Website Quality to investigate the adoption of online shopping in the apparel industry. Numerous studies and extensive reviews have been conducted to identify the factors of usage of online shopping. Previous studies indicate that online shopping adoption is related with the perceived usefulness (Amin, 2007), perceived ease of use (Peng, Wang, & Cai, 2008), trust (Paynter & Lim, 2001; Yao & Li, 2009), social influence (Ahmad & Juhdi, 2008; Al-maghrabi & Dennis, 2010), perceived behavioural control (Athiyaman, 2002; Limayem et al., 2002, Pavlou & Chai, 2002) as well as website quality (Kim &

Niehm, 2009; Shergill & Chen, 2005; Szymanski & Hise, 2000; Yoo & Donthu, 2001). This research applies the variables from the previous studies to predict the usage of online shopping among Gen Y consumers in Malaysia.

2.5.1 Perceived Usefulness

Perceive usefulness is defined as "the degree of which person believes that using a particular system would enhance his or her job performance" (Davis, 1989). The effect of perceived usefulness in online shopping context has been previously validated in many studies (Amin, 2007; Guriting & Ndubisi, 2006; Hu, Brown, Thong, Chan, & Tam, 2009). For example, Peng et al. (2008) and Heijden's study (as cited in Kim & Forsythe, 2009) suggest that perceived usefulness has strong influence to the adoption of online shopping.

Hence, in this research, perceived usefulness is defined as the degree to which individual believes that the adoption of online shopping will improve his or her job performance and daily activities. This construct can be used to determine how online shopping can help the users to achieve effectiveness and efficiency. For instance, they can easily compare the product features and prices through the Internet. Thus, the relationship between perceived usefulness and consumers' intention to adopt online shopping is hypothesized as follows:

H1: The perceived usefulness is positively related to consumers' intention to adopt online apparel shopping.

2.5.2 Perceived Ease of Use

According to Davis (1989), PEOU refers to the degree to which an individual believes that purchase online would be free of physical and mental effort. Although the individuals may believe the given application is useful, they might think that the system is hard to use at the same time. As suggested by Rogers (1995), complexity of one particular system will become the inhibitor that discourages the adoption of an innovation.

Peng et al. (2008) believe that PEOU is one of the factors that influence consumer's willingness to purchase online. The result shows that the consumers believe that the online shopping should be "the easier, the better". It also means that the consumer believes that online shopping is useful when it is easy for them to use. Hence, perceived ease of use refers to the degree to which an individual believes that adopt online shopping would be effortless. Eventually, shopping for apparel online must be easy to use or learn and the following hypothesis is proposed:

H2: The perceived ease of use is positively related to consumers' intention to adopt online apparel shopping.

2.5.3 Trust

In prior studies, trust has been defined in many ways. Trust can be defined as a feeling of security and willingness to depend on someone or something (Chung & Kwon, 2009). Bart, Shankar, Sultan, and Urban (as cited in Urban, Amyx, & Lorenzon, 2009) suggest that trust consists of consumer perceptions of how the website would deliver on expectations, how believable the website's information is, and how much confidence the website commands in the online shopping context. Trust is an expectancy of positive outcomes that can be received from another party, and it can be based on the expected actions within an interaction characterised by uncertainty (Bhattacherjee, 2002). However, in this research the boundary was limited to the context of B2C online shopping. Gefen (2000) argues that the influence of trust on consumer online transaction activities is one significant prerequisite in predicting online shopping adoption. According to Paynter and Lim (2001), the main obstacle that prevents Malaysia consumers from transacting over the Internet is security and trust issue. This has been creating unnecessary anxieties for many businesses and consumers.

Trust is critical in the online shopping context because the buyers and sellers normally complete the transaction through website and might not necessary meet each other face to face. The buyers, therefore, will be worried that their personal information and money will be transferred to third party without their knowledge. In addition, trust is important because it allows social control and provides buyers

reason about reliability, capability and honesty of possible business partners. Thus, it is a challenge for businesses that engaged in e-commerce to ensure that consumers have sufficient trust in order to attract them to purchase online (Yao & Li, 2009). Kim, Chung and Lee (2010) proposed that consumers will most likely to purchase online if given that the website is perceived as trustful. It implies that trust is one of the construct that will influence the customers' intention to adopt online shopping. In this research, the "Trust" construct is defined as the extent to which individual believes that using online shopping is secure and has no privacy threats. Since the trust plays a significant role in influencing the intention to shop online, therefore the following hypothesis is proposed:

H3: The trust is positively related to consumers' intention to adopt online apparel shopping.

2.5.4 Social Influence

Social influence is defined as the degree to which an individual user perceived that important others believe he or she should use the new system (Venkatesh, Morris, Davis & Davis, 2003). They proposed that social influences resulted from subjective norms, where it relates to consumers' perceptions on the beliefs of other consumers. According to Athiyaman (2002), subjective norm is defined as an individual perception of social pressure to perform or not to perform the behaviour.

Al-maghrabi and Dennis (2010) suggest that the social influence significantly affects the shopping intention among women in Saudi Arabia. According to Ahmad and Juhdi (2008), family is the strongest social influence whereby the actions of family members can make a difference during the decision making process. The influence of friends and other relatives can be just as strong as individual preferences. Thus, it might affect an individual decision to adopt a new system after he or she is being recommended by others around them. However, Rogers (1995) proposes that social influence can be split into two forms, which are mass media and interpersonal influence. Mass media influence includes newspapers, magazines, academic journals, television, radio, Internet, and other applicable mediums. Interpersonal influence includes the influence of social

network such as peers, friends, superiors. Ahmad and Juhdi (2008) found that social factors influence an individual's adoption of online shopping, the finding lead to following hypothesis:

H4: The social influence is positively related to consumers' intention to adopt online apparel shopping.

2.5.5 Perceived Behavioural Control

Perceived behavioural control (PBC) refers to belief regarding the availability of resources and opportunities for performing the behaviour as well as the existence of internal/external factors that may impede the behaviour (Ajzen, 1991). It also refers to the perception of consumer's about the ease of difficulties on performing the tasks (Athiyaman, 2002). Influence of PBC towards consumers' intention to shop online and the actual shopping behaviour has been widely studied and it is found that PBC significantly affects the intention to shop online (Athiyaman, 2002; Limayem et al., 2002, Pavlou & Chai, 2002).

In Taylor and Todd's study (1995b), they decompose the PBC into "facilitating condition" and "self efficacy". Facilitating condition is the degree to which an individual beliefs that an organisational or technical infrastructure exists to support the use of the system (Venkatesh et al., 2003). Self efficacy reflects an individual's self confidence in his or her ability to perform the behaviour. In other words, individual ability to search for information and navigate on the website has significant effect on customers' intention to use online shopping as online shopping is possible for consumers who are able to use the Internet (Ahmad & Juhdi, 2008; Limayem et al., 2002). PBC is important in explaining human behaviour since an individual might not be able to perform a task because his or her environment prevents him or her to do so. In this research, PBC is refer to the extent to which the individual believes that he or she has the ability to use the website as well as has the resources to shop online.

Pavlou and Chai (2002) believe that the Internet access, computer access and availability of assistance for consumers who intend to shop online are behavioural

control factors that are important in facilitating the online shopping in Malaysia. The supports above lead to the following hypothesis:

H5: The perceived behavioural control is positive related to consumers' intention to adopt online apparel shopping.

2.5.6 Website Quality

Although the online apparel retailing is growing rapidly in the recent years, yet many retailers have pointed out the Internet is not able to appeal to a wide range of senses. Thus, elements involved in designing a website such as background colours, fonts, images, logos, order forms and shopping procedures become more important to enhance consumer experiences, which are derived not only by cognitive information, but also by the enjoyment experience through online shopping (Harrison-Walker, 2002; Srinivasan, Anderson, & Ponnavolu, 2002). This is true for sensory products such as clothing, jewellery or accessories, which are experienced through one or more of the five senses (e.g. touch, sight, smell). The consumers' ability to examine merchandise before purchasing through online shopping is generally limited, even when the website has video or audio capacities. Online apparel retailers have attempted to capitalize on the advanced unique virtual shopping environment using 3D Flash sites, electronic dressing rooms and fashion-conscious virtual personal shoppers to guide users in their website (Stockport, Kunnath, & Sedick, 2001).

In the study of Lynch, Kent, and Srinivasan (2001), they propose the importance of website quality in affecting the willingness of Internet users to make purchases. Website quality is defined as users' evaluations of whether a website's features meet users' needs and reflect the overall excellence of the web site (Aladwani & Palvia, 2002). According to Li and Zhang (2002) and Zhang and von Dran (2000), the measures taken to value website quality include the website information content, information presentation, interaction between customers and vendors, navigation, searching mechanism, security, site technical feature, media richness, and so forth. Sam and Tahir (2009) suggest that the websites should also focus on its content, which includes text, pictures, graphics, layout, sound, and motion to attract the consumers as well as encourage repeat purchase.

Realising the importance of the website quality, many companies have invested tremendous resources in improving the quality of their websites, such as the incorporation of graphics and information. Lim, Widdows, and Hooker (2009) suggest that high-quality website design can enhance online customers' shopping experience by increasing navigability and ease of use. For instance, previous studies show that uncluttered and easy-to-search websites enhance attitudes toward online shopping, online purchase intention and the level of satisfaction with customers' shopping experience (Szymanski & Hise, 2000; Yoo & Donthu, 2001). Besides, Shergill and Chen (2005) find that the design of a website is one of the most important factors that influence online shopping in New Zealand.

According to Kim and Niehm (2009), the benefit of selling product through website is it provides customers direct access to product information. Hence, information is a fundamental part of websites and information quality is considered a marketing tool to guarantee the smooth transactions in online shopping (Xu & Koronios, 2005). Lim et al. (2009) contended that effective presentations of product information are expected to increase consumers' perceived compatibility in online purchasing. By helping Internet users to obtain the necessary information needed to help them make their decisions and increasing their use in making the purchases, effective websites can play an instrumental role in determining whether Internet users are willing to make purchases on the website (Liang, 2009).

In online shopping, the positive website environment allows an individual to gain more information and it brings more positive consequences. The pleasant information presentation formats and interactivity are crucial to help apparel consumers perceive presented information as higher quality (Kim & Niehm, 2009). Therefore, consumers' perceptions that the website is visually pleasing and innovative and creates pleasant feelings may increase their information search behaviours and allow them to handle more information which may influence their perceptions that the website is informative and provides information they need as well as influence their acceptance of shopping through the website. This is particularly true for the e-marketers who wish to target on the market segment

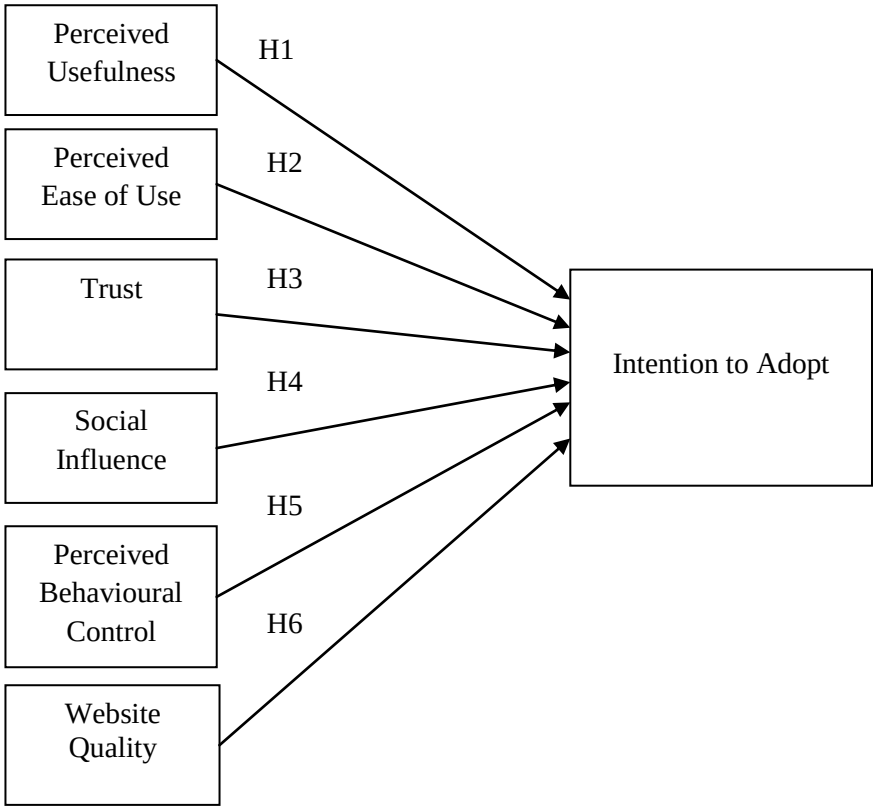
which consists of Gen Y because Djamasbi et al. (2010) find that the design of a website plays a significant role in influencing the purchase intention of Gen Y. They suggest that the presentation of the products and layout of the website affects Gen Y's impression of a store's image, as well as their expectation of merchandise quality and thus increase their intention to purchase through the online store.

Consumers show a greater preference for those websites that provide them with efficient tools for collecting information and forming knowledge about the products (Flavian, Gurrea, & Orus, 2009). This means that the designers of the website should focus on presenting the extensive information in a digestible format when the products are displayed on the computer screen. For instance, the information can be organised in a list or table where all the products can be assessed consecutively, the perceptions about the web site may be enhanced (Flavian et al., 2009; Kim & Niehm, 2009). Thus, in this research, the website quality is measured by website design (the presentation of graphics and pictures, the organization and layout of the website) and website information (information content, information presentation). Since the website quality should not be ignored in the online shopping context especially for clothing industry which aims to target on Gen Y, thereby the following hypothesis is proposed:

H6: The website quality is positively related to consumers' intention to adopt online apparel shopping.

The research model is proposed as in Figure 2.3. In summary, the research model is developed from the modified TAM incorporating four additional constructs to predict the customers' intention to adopt online shopping. The hypotheses are developed from the literature and previous researches. The proposed model is uniquely designed to fit with the behaviour of Internet users who are Gen Y in Malaysia, where culture, behaviour, and stage of use of the Internet are different than in the United States and other countries.

Figure 2.3 The Research Model



2.6 Conclusions

This chapter starts with the comparison between online shopping and traditional shopping, followed by identification of the importance of Gen Y consumers toward successful of e-commerce. Next, TAM and TPB are presented by reviewing previous literature. By comparing TAM and TPB through literature review, TAM is selected as the basis to build and develop the research model for this study as it has strong theoretical foundation, high reliability and validity as well as it has obtained wide acceptance.

Most of the previous studies successfully extended TAM by adding new constructs in order to obtain better explanation on IT adoption. Based upon its original constructs which are perceived usefulness (PU), and perceived ease of use (PEOU), this research incorporates four additional constructs, namely trust (T),

social influence (SI), perceived behavioural control (PBC) and website quality (WQ) to better predict Gen Y's online shopping intention. Finally, the relationships between constructs based on the literature review have been posited into six hypotheses, which will be tested through multiple regression analysis in next chapter.

CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter described the research methodologies to be used in the research for the understanding of the readers. The first section presents the research design, followed by the sampling plan which defines the target population, sampling method as well as the sample size. Data sources and data collection procedure is presented in the following section. Questionnaire development is discussed in detail in section 3.6. Finally, the methods and instruments to analyse the data are discussed at the end of this chapter.

3. 2 Research Design

The purpose of this research is to investigate and examine the factors influencing the adoption of online shopping on apparel among Gen Y in Malaysia. Therefore, the survey method is selected due to its common use in social, business and information science, as well as its ability to collect data on human attitude, behavior and characteristics (Palmquist, 1999). Besides, survey provides quick, inexpensive, effcient and accurate means of assessing information about the population as well as produce large amount of data in a short time (Kelley, Clark, Brown, & Sitzia, 2003; Zikmund, 2000).

To conduct this survey research, a review of literature is conducted to provide the conceptual background. A self-administered questionnaire is then designed and

pre-tested before being distributed to the public. This is to enhance the clarity and readability of the questionnaire (Mallat, Rossi, Tuunainen, & Oorni, 2006) as well as to reduce the incidence of non-response to the questionnaire (Gray, 2009). The final questionnaire is distributed to the people in the defined population after the pilot test. Data is then collected and imported into SPSS software for several testing and analysis. Finally, the finding and implementations are presented and discussed based on the derived results.

3.3 Sampling Plan

There are several steps in the sampling plan. The population is defined in the first step. Since the main purpose of this research is to test the Gen Y's perception towards the adoption of online apparel shopping in Malaysia, the target population would be focusing on the Internet users aged between 16 and 33 including both online visitors (non-shoppers) and purchasers (shoppers). The visitors are included in the sampling plan because they are considered as potential customers to adopt online shopping in the future than those who never visit the apparel website before. Hence, their perception towards online shopping on apparel is crucial in determining the success of e-commerce in clothing industry.

The sampling method in this research will be nonprobability sampling type, which is convenience sampling. This sampling method is chosen because it can get information quickly and efficiently at low costs (Sekaran, 2005). The data will be collected from the respondents of the above defined population who are conveniently available to provide it. In order to obtain large, more diversified and geospatially dispersed sample, the survey will be distributed online by publishing in Malaysia high exposure and well known forums such as Cari forum (www.cari.com.my).

Bartlett, Kotrlik, and Higgins (2001) propose that a sample size of 200–500 respondents is recommended to be sufficient for data analysis. Moreover, since the multiple regression analysis is used in the research, rule of thumb suggested by

Tabachnick and Fidell (2001) is used to calculate the required sample size. According to rule of thumb, formula of N > 50 + 8m (where m = number of independent variables) is used to determine the sample size required to test for R-square whereas N > 104 + m is for testing the beta coefficient. Given that there are 6 independent variables in the study, the minimum sample size needed are 98 and 110 respectively. Additionally, VanVoorhis and Morgan (2007) believe that larger sample size is needed if testing both values (R-square and beta coefficient) in multiple regression analysis. The research covers 307 respondents, which are in the acceptable range for items-to-response ratio, as well as satisfying the minimum requirement of sample size in rule of thumb.

3.4 Sources of Data

This research adopted two types of data, which are primary data and secondary data. Primary data is the information collected for this research that uses research instruments such as questionnaire (Kumar, 2005). On the other hand, secondary data is the information, facts or data that were studied in the prior researches. This secondary data is employed to support the current research purpose.

3.4.1 Primary Data

In this research, the quantitative approach is adopted to collect primary data. The primary data is about demographics characteristic and customer's perception as well as the website quality towards the adoption of online apparel shopping among Gen Y in Malaysia. The quantitative approach is selected as it enables the researcher to measure the reaction of a large sample group to a limited set of questions, thus facilitating comparison and statistical aggregation of the data (Gray, 2009; Kumar, 2005). The primary data is collected from self-administrated or self-reported questionnaire survey, which is a web-based survey (www.surveysgizmo.com). Web-based survey is used in this study as it can collect large and geospatially dispersed sample. It also produces faster and higher response rate, easier and convenient of data process (e.g., the responses can be directly imported to a spreadsheet or data analysis program) and its low cost

(Gunn, 2002). In addition, web-based survey has the strength of a mail survey where the respondents can carefully consider and answer questions at their discretion (Grossnickle and Raskin 2001). Another benefit of using the web-based survey is it allows respondents to answer the questions by referring to the website that they had visited or made purchase before.

3.4.2 Secondary Data

The secondary sources of the research is the literature review, which consists of the references from journals, articles, books, dissertations, conference proceedings and so on. It is the information and findings that had been done by the researchers before. The purpose of using the qualitative approach is to collect data, experience, facts, findings that were previously identified by researchers and that can be used to strengthen the assumptions in this research (Kumar, 2005). Additionally, the secondary data is helpful to explore the concept of online shopping behaviour and provide in-depth knowledge for researchers to develop a proper and useful hypothesis. Besides, the emergence of Internet has brought convenience and low cost for the research process. Most of the journals are obtained from Emerald, Science Direct, Proquest, IEEE and other Internet sources. The secondary data will be used for definition, question wording as well as act as a base for the analytical section of this research. It provides support or evidence for the study arguments and statements in the study.

3.5 Data Collection

This research is accomplished by conducting a self-administrated questionnaire survey, which is conducted using web-based survey. The questionnaire is developed in English and a pilot test is conducted before being distributed to public. This is to ensure that every question is comprehended correctly and each response is clear (Gray, 2009).

The questionnaire is tested with a small sample of 25 undergraduate students. The result was tested by using SPSS to measure the scale reliability and it is displayed in Table 3.2 with the Cronbach's alpha of 0.929. According to Sweet and Grace-Martin (2008), the alpha value of more than 0.7 is an acceptable value which indicates the high reliability. Therefore there is no change of the questionnaire.

Table 3.1: Cronbach's Alpha Reliability Test

Cronbach's Alpha	N of Items
0.929	35

The final questionnaire is then developed as web-based survey (http://www.surveygizmo.com/s3/435426/Online-Apparel-Shopping-Adoption-Among-Generation-Y-in-Malaysia) and published in the high exposure and well known forums (e.g.: www.cari.com.my). Those forums are selected due to their popularity and high participation rate as well as the response rate. The first page of the questionnaire informed respondents that the information provided would be used for solely academic purpose and assured for anonymity. Their personal information will be kept strictly confidential.

A total of 351 respondents participated in the survey after a 6 weeks survey period from 24th January, 2011 to 6th February, 2011. There were 44 samples excluded from the analysis due to partial respond and missing data which reduced the sample size to 307. These excluded respondents had not spent sufficient time and attention to answer all the questions. Besides, since the population of interest in this research focuses on the visitors and purchasers, the respondents who do not visit apparel website or those who never purchase apparel through Internet are eliminated as well.

3.6 Questionnaire Development

The questionnaire consists of three sections. A brief introduction and description of the online shopping as well as the definition of some terms are given in the cover page. Section A requires the respondents to fill in their demographics information which consists of five questions (gender, age group, marital status, education level and income).

Section B focuses on the general questions, which intents to get the information whether the respondent has visited or experienced the online shopping on apparel and the frequency of purchasing on apparel. This information is collected to filter unwanted respondents who do not visit the online apparel website before.

Section C consists of questions regarding to respondents' perception towards the adoption of online shopping in Malaysia. There are seven constructs (Perceived Usefulness, Perceived Ease of Use, Trust, Social Influence, Perceived Behavioural Control, Website Quality and Intention to Adopt) in the research and each of them has multiple items (questions) to measure a single concept. Kurnia, Smith, and Lee (2006) and Zikmund (2000) suggest that each statement in the questionnaire should be developed and phrased in the simplest way. In addition, the 'double-barreled' questions (two or more questions in one), questions containing double negatives and leading or ambiguous questions should be avoided in the questionnaire as well (Kelley et al., 2003).

Five point Likert scales is used in Section C of each questionnaire to enable respondents to rate their perception towards online shopping. For example, "1" as strongly agree, "2" as agree, "3" as neutral, "4" as disagree, and "5" as strongly disagree. This scale is used to measure each question in the questionnaire. The constructs and their measures are attached in Appendix A.

An extensive review of previous researches and literatures is conducted in order to ensure that a comprehensive list of items was included in the questionnaire. Moreover, the items for each construct were adapted from previous researches and

literatures to enhance the content validity and reliability (Karami, 2006). Therefore, the 39 survey items for 7 constructs in the questionnaire actually come from the prior empirical studies, and are modified to fit the context of online shopping on apparel. For instance, the scales for Intention to Adopt are measured using the items adapted from the research of Hahn and Kim (2009) and Manzari (2008).

The first independent variable to measure the online shopping intention is Perceived Usefulness (PU). The items for Perceived Usefulness construct are adapted from Davis (1989), which is adopted by Karami (2006) as well. In this study, the questionnaire implements 5 items to examine respondents' perception towards the usefulness of online shopping on apparel in the context of "efficiency", "effectiveness", "convenience", " time saving" and "usefulness".

The items for Perceived Ease of Use (PEOU) construct are taken from the previous researches which have been adopted by Karami (2006), Kim and Niehm (2009), and Sorce et al. (2005). Five statements are implemented in the questionnaire to assess the ease of use on online shopping. The respondents are asked to express their extent of agreement on a five point Likert scale which range from "1=strongly disagree" to "5=strongly agree" with the statement that asked on the ease of use of online shopping and respondents' capabilities.

Next, five items for Trust (T) are developed based on several studies (Karami, 2006; Kim et al., 2010; Kim & Niehm, 2009; Li & Zhang, 2002; Mat & Ahmad, 2005) are implemented in the questionnaire. There are used to reflect the consumer's concern on the security of transaction and payment process of online stores as well as the privacy of the consumer's personal information that would influence the intention to adopt online apparel shopping. The respondents are asked to rate the degree of their agreement with the statement on a five point Likert-scale.

For the Social Influence (SI) construct, it is measured by five items which are adapted from Ahmad and Juhdi (2008), Limayem et al. (2000), and Manzari (2008). The statements of this construct assess the influence from family members,

friends, colleagues, mass media as well as the society towards respondents' intention to adopt online apparel shopping. The respondents are asked to express their agreement or disagreement with a series of statement on a five point Likert-type scale.

Moving forward, the items of Perceived Behavioural Control (PBC) construct are adapted from previous researches (Ahmad & Juhdi, 2008; Karami, 2006; Limayem et al., 2000; Manzari, 2008). There are five statements given in the questionnaire to evaluate the respondents' perception on their capability of using the website as well as the resources they have to shop online. For instance, the respondents are asked to which extend they agree or disagree with the statement "I am able to navigate on the website without any help", "I have the skill to find information in a web directory", "I have the resources required to buy apparel through Internet" on a five point Likert-scale.

Finally, the items for Website Quality (WQ) construct are adapted from Cao, Zhang, and Seydel (2005); Ha and Stoel (2009); Kim, Fiore and Lee (2007); Kim and Niehm (2009); Li and Zhang (2002); Lynch et al. (2001); Mat and Ahmad (2005); Shergill and Chen (2005). There are ten statements to evaluate the respondents' perception on website quality that would influence their intention to adopt online apparel shopping. The Website Quality consists of two key characteristics, which are website design and website information. The respondents are asked on their perception about quality of the website that they have visited or purchased apparels before and rate on the scale provided. They are asked to evaluate on the quality dimension such as the presentation of the graphics and pictures, the organisation and layout of the website, accuracy of the information, information content as well as the virtual shopping environment.

Table 3.2: Constructs and Sources

Constructs	Number of Items	Sources
Perceived Usefulness (PU)	5	Davis (1989), Karami (2006).
Perceived Ease of Use (PEOU)	5	Karami (2006); Kim & Niehm (2009); Sorce, Perotti, & Widrick (2005).
Trust (T)	5	Karami (2006); Kim, Chung, & Lee (2010); Kim & Niehm (2009); Li & Zhang (2002); Mat & Ahmad (2005).
Social Influence (SI)	5	Limayem, Khalifa, & Frini (2000); Ahmad & Juhdi (2008); Manzari (2008).
Perceived Behavioural Control (PBC)	5	Ahmad & Juhdi (2008); Karami (2006); Limayem, Khalifa, & Frini (2000); Manzari (2008).
Website Quality (WQ)	10	Cao, Zhang, & Seydel (2005); Ha & Stoel (2009); Kim, Fiore, & Lee (2007); Kim & Niehm (2009); Li & Zhang (2002); Lynch, Kent, & Srinivasan (2001); Mat & Ahmad (2005); Shergill & Chen (2005).
Intention to Adopt (IA)	4	Hahn & Kim (2009); Manzari (2008).

3.7 Data Analysis and Measurement

The data collected from the survey is first exported from the survey website to a Microsoft Excel spreadsheet. Next, the data in MS Excel spreadsheet is imported into SPSS (Statistical package for social science) afterward. In order to show the

sample is representative of the defined population, the frequency and percentage distribution of respondents' demographic profile are developed and presented in the tables.

For the data analysis, the variables are first grouped by factor analysis and the factors are extracted by principle components extraction with Varimax rotation. After that, the reliability of each of the measures is investigated with cronbach's alpha to ensure the internal consistency. The correlations among variables are calculated and the variables represented in each hypothesis are explored through multiple regression analysis. Details of data analysis will be discussed in next chapter.

3.8 Conclusions

This chapter described the research methodologies used in this research. The research design and sampling plan are discussed in detail. In addition to that, sources of data and the appropriate data collection methods are presented. The questionnaire development is discussed and the web-based survey is employed in this research. The results of data analysis of the research are presented in next chapter.

CHAPTER 4

RESEARCH RESULTS

4.1 Introduction

The previous chapter identified and described the research methodology for the study. In this chapter, the data gathered from the survey will be analysed by using the methodologies described earlier. The analysis started by presenting the frequency and percentage of the respondents' demographic profile. Next, the validity and reliability of the constructs are being tested by factor analysis and reliability analysis respectively. In the last section, multiple linear regression analysis is used to test the developed hypotheses.

4.2 Profile of Respondents

The demographic profile of the surveyed respondents is presented in Table 4.1. This includes gender, age group, marital status, highest level of academic qualification and monthly income. The total sample for the survey consists of 307 respondents.

The respondents consist of 46.6% male and 53.4% female. The majority of the respondents are aged between 16 and 25 years, which contribute to 67.8% of the total respondents. The result also indicates that the respondents are mostly single (94.5%) and has income of less than RM 1000 (49.8%). The respondents predominantly have attained degree/professional qualification level (45.9%) and followed by those who have SPM/STPM level (37.8%). This is because some of the respondents are the university students who are still pursuing their course.

Table 4.1: Demographic Profile of Respondents

Variables	Frequency	Percentage (%)
Gender		
• Male	143	46.6
• Female	164	53.4
Age		
• 16 - 19 years	104	33.9
• 20 - 25 years	104	33.9
• 26 - 30 years	90	29.3
• 31 - 33 years	9	2.9
Marital Status		
• Single	290	94.5
• Married	17	5.5
Highest Level of Academic Qualification		
• SPM/STPM	116	37.8
• Diploma/Advanced Diploma	32	10.4
• Degree/Professional Qualification	141	45.9
• Master Degree	18	5.9
Income		
• Below RM 1000	153	49.8
• RM 1001 - RM 2000	23	7.5
• RM 2001 - RM 3000	59	19.2
• RM 3001 - RM 4000	35	11.4
• RM 4000 and above	37	12.1

As observed from Table 4.2, over half of the respondents spent more than 10 hours a week on the Internet (52.8%). The result also shows that majority of the respondents have no online purchase experience on apparel (69.1%), which implies that the adoption rate of online apparel shopping is 31% among the respondents. This indicates that the respondents are mostly visitors.

Table 4.2: Online Shopping Characteristics

Variables	Frequency	Percentage (%)
Hours spent on the Internet (weekly)		
• Less than 5 hours	67	21.8
• 5 – 10 hours	78	25.4
• 10 – 20 hours	77	25.1
• More than 20 hours	85	27.7
Frequency of purchase		
• Never	212	69.1
• 1 – 2 times	53	17.3
• 3 – 5 times	11	3.6
• More than 5 times	31	10.1

4.3 Factor analysis

The purpose of the factor analysis is to define the underlying structure among the variables in the analysis. In other words, it is used to explain the pattern of interrelationship (correlations) within a set of observed variables and to group the highly correlated variables (i.e., variables with similar characteristics) into a single underlying construct or factor (Hair, Black, Babin, Anderson, & Tatham, 2006). Since multiple regression analysis is use in testing the hypothesis, therefore factor analysis will be applied prior to performing the linear regression analysis to identify collinearity of the variables.

In order to assess the validity of the constructs for the questionnaires, the 25 items are tested by Principal Components Extraction with Varimax rotation. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Barlett's test of Sphericity are presented in Table 4.3. Field (2005) recommends that the acceptance value for KMO statistic is 0.5 and above. For these data, KMO value of 0.884 is fall in the acceptable range and the Bartlett's test with p value less than 0.001 is highly significant. Therefore, it can be concluded that factor analysis is appropriate for the data set.

Table 4.3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.884
Bartlett's Test of Sphericity	Approx. Chi-Square	5112.016
	df	595
	Sig.	0.000

The Rotated Component Matrix, which is a matrix for the factor loading for each item is displayed in Appendix B1. These item loadings are sorted by size. The loadings show that all of the items loaded properly with the construct. It is recommended that in order for the item to be accepted in the study, each item should have factor loading value of 0.5 and above, as well as loads on one and only one factor (Hair et al., 2006; Moon & Kim, 2000). As observed, the 35 items are sorted and grouped into 6 components, which are from Factor 1 to Factor 6. All of the items loaded with value greater than 0.5, and each of them loaded into only one factor after one rotation.

Ten items are loaded into Factor 1, which are the items relating to website quality, therefore the first factor is labelled as Website Quality. The component for second factor consists of effectiveness, time saving, convenience, efficient, and usefulness. It is thus labelled as Perceived Usefulness. Then, the items relating to consumers' trust are group under Factor 3 which is labelled as Trust. The next five items regarding the facilitating condition and self-efficacy is label as Perceived Behavioural Control. The items describing the influence from friends, family and mass media are grouped together under Factor 6 which is Social Influence. Each of the factors represents a set of highly interrelated items that may reflect a more general evaluative dimension (Hair et al., 2006).

In short, each item is highly correlated with their specific factors respectively. For instance, the items of the "website quality" construct are loaded under Factor 1 (Website Quality), but they are not correlated with Factor 2 to Factor 6. This recommends the validity of the scale items. On the other hand, through the analysis, all of the factors have eigenvalues of greater than 1 (5.115, 3.469, 3.321,

3.254, 3.097, and 2.539) are considered significant. This indicates that each factor can explain more variance than a single variable. For instance, the first factor accounts for 14.614% of the variance, the second 9.912% and the third 9.488%. The cumulative percentage for the total 6 components is 59.413%. This means that 59.413% of the variance can be explained or accounted by the 35 items which are represented by 6 factors.

Through the above interpretation, it can be concluded that each set of items are unidimensional because they are strongly associated with each other and represent a single concept under one factor. In addition, each of the scale items are loaded highly on a single factor and this ensure the construct validity (Hair et al., 2006).

4.4 Reliability Test

After conducting the factor analysis, the data set obtained from the survey is then tested for its reliability. Reliability refers to the examination of the degree of consistency between multiple measurements of a variable (Hair et al., 2006). The measure of reliability used in this study is internal consistency, which assess the consistency among the constructs in a scale. The scale reliability is test by Cronbach's alpha coefficient. According to Sweet and Grace-Martin (2008), alpha score typically ranges from 0 to 1, with higher number indicating higher reliability. Then, the reliability test is conducted on each construct individually.

The reliability analysis of the scale items for every construct (Perceived Usefulness, Perceived Ease of Use, Trust, Social Influence, Perceived Behavioural Control, Website Quality and Intention to Adopt) is presented in Appendix B2. As observed, the Cronbach's alpha coefficient for all of the constructs range from 0.743 to 0.888, which are greater than 0.7. These values imply that every individual item of a scale is measuring the same construct and suggest that the scale items have high reliability and good internal consistency (Field, 2005; Sweet & Grace-Martin, 2008). Consequently, the construct reliability in this study is established.

The value under column "Cronbach's Alpha if Item is deleted" means the values of the new overall alpha for the particular construct if that item is eliminated from the analysis. For example, the overall Cronbach's Alpha score for Perceived Usefulness is 0.874, which is higher than any value under the "Cronbach's Alpha if Item is deleted" column. This suggests that removal of any item for this construct would not increase reliability, and thereby it is worth to retain all of the items for the Perceived Usefulness construct. It is same for all of the constructs developed for this study except Perceived Behavioural Control. As can be seen from the result, the deletion of PBC5 would improve from 0.835 to 0.853 on the overall Alpha score of Perceived Behavioural Control. Since the increment of the Alpha score is not dramatic (0.018) and the Alpha value of the entire PBC before PBC5 is deleted is above 0.7, hence this item is retained in the study.

On the other hand, the value under the column "corrected item – total correlation" indicates the correlations between each item and the rest of the values from every construct (Field, 2006). In order for one item to be correlated well with the rest of the items, the score should have greater than 0.3. As displayed in Appendix B2, each of the items for each construct obtained corrected item – total correlation score of over 0.3, thus it is concluded that the construct reliability is confirmed for this data set.

4.5 Correlation Analysis

Since the multiple-item method is used in the questionnaire, therefore the average score of a single construct is generated. This average score is employed in further analysis such as correlation analysis and multiple regression analysis (Park & Kim, 2003).

In order to investigate the relationship between two variables, Pearson correlation coefficient (r) is used to measure the strength of the relationship (Sweet & Grace-Martin, 2008). The correlation coefficient ranges from -1 to +1. A correlation of 0

implies that there is no relationship between the two variables, whereas the correlation of 0.30 is considered a "good" correlation, and a correlation above 0.40 is considered "strong" (Garson, 2011; Sweet & Grace-Martin, 2008). However, Garson (2011) recommends that the correlation coefficient should not exceed 0.80 in order to avoid multicollinearity.

Table 4.4: Pearson Correlation Coefficient

	PU	PEOU	T	SI	PBC	WQ	IA
PU	1						
PEOU	**0.354**	1					
T	**0.271**	**0.229**	1				
SI	**0.292**	**0.228**	**0.466**	1			
PBC	**0.187**	**0.473**	**0.186**	0.103	1		
WQ	**0.331**	**0.429**	**0.408**	**0.304**	**0.365**	1	
IA	**0.422**	**0.308**	**0.345**	**0.443**	**0.211**	**0.452**	1

Note: Figure in bold indicates the correlation is significant at the 0.01 level (2-tailed).

As observed, every pairs of the variables are significant at level 0.01, except for the relationship between Perceived Behavioural Control and Social Influence. However, the relationships of the proposed hypotheses developed in chapter 2 are found to be statistically significance at level 0.01. It means that the PU (r = 0.422), PEOU (r = 0.308), T (r = 0.345), SI (r = 0.443), PBC (r = 0.211) and WQ (r = 0.452) are correlated to IA significantly and positively. There is a 0.452 correlation between WQ and IA, which offers the strongest correlation among the other hypothesized relationships. It is followed by the correlation between SI and IA.

4.6 Multiple Regression

Multiple regression analysis is widely used to test and investigate the relationship between numerous independent variables and a dependent variable in social and

natural science research. It is employed in this study with several reasons. Firstly, it is able to generate a set of independent variables that could explain the proportion of the variance in a dependent variable at a significant level. Through the significance test of R-square, the significant level could be determined. Additionally, multiple regression analysis can provide the "net strength" of the relationship of each of the independent variable towards the dependent variable. In other words, by comparing beta weight, the researcher can examine how strong each independent variable influences the dependent variable (Garson, 2011).

4.6.1 Assumption for Multiple Regression

Before conducting multiple regression analysis, the following assumptions should be tested and met in order to provide the reliable results (Garson, 2011; Hair et al., 2006; Norusis, 2005; Osborne & Waters, 2002):

a. The normality of the error terms distribution

b. The relationship between the independent and dependent variables is linear

c. The error terms are independent

d. The independent variables are not correlated

4.6.1.1 Normally distributed error terms

According to Norusis (2005), the residuals (error terms) from the linear regression should be normally distributed. The normality of the residuals can be diagnosed by applying a histogram of residuals, as well as using normal probability plot.

Figure 4.1 presents the histogram of residuals, where the distribution is approximating normal distribution. The shape looks symmetrical and shows a bell-shaped curve. Besides, the normal probability plot in Figure 4.2 shows that the residual line closely follows the diagonal and it looks fairly straight. If the residuals are normally distributed, they should fall close to the diagonal line (Norusis, 2005). Since the result shows that the residual line is following the diagonal, the assumption on the normality of the error terms distribution is met.

Figure 4.1: Histogram

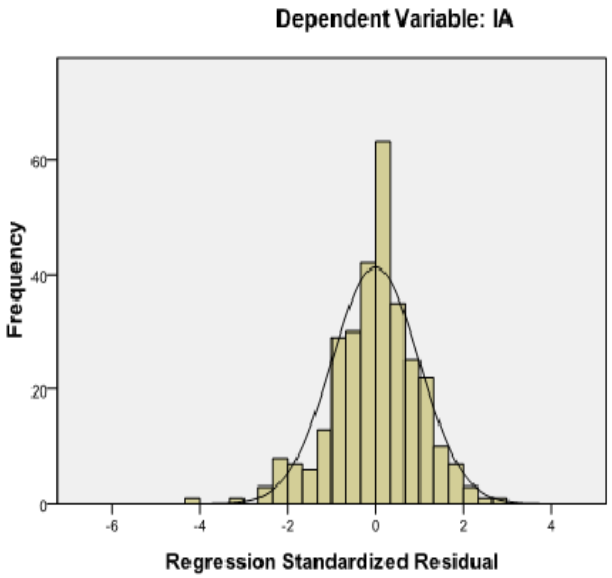
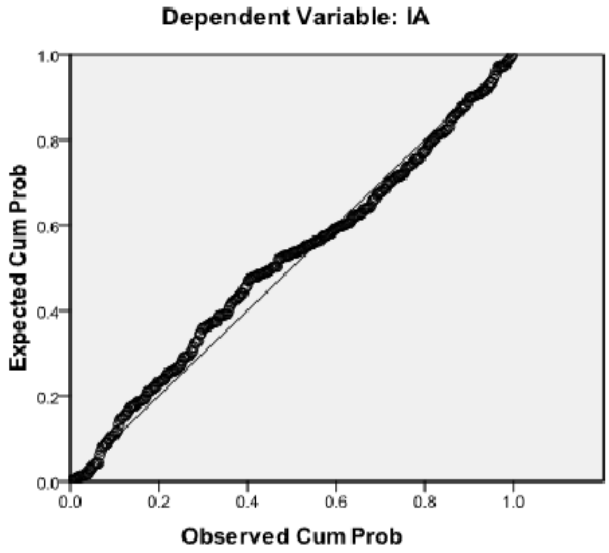


Figure 4.2: Normal P-P Plot of Regression Standardized Residual

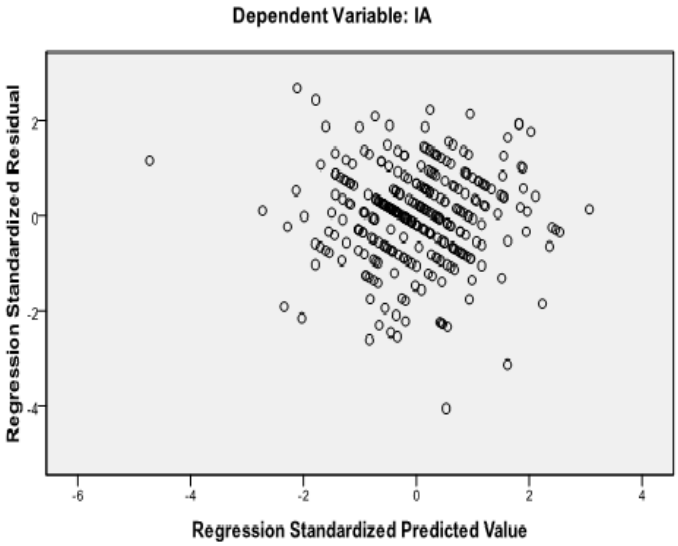


4.6.1.2 Linearity Assumption

Regression analysis is a linear procedure. It is assumed that the relationship between the independent variables and dependent variables is linear. According to Garson (2011), if the nonlinear relationships exist, the R-square and beta in the

multiple regression analysis will be underestimated. Therefore, it is crucial to examine the linearity relationship before running multiple regression analysis. Norusis (2005) suggests that the linearity relationship of the variables can be determined through residual plot. If the relationship is linear, the plot of residuals does not form any curve ("n" shape or "u" shape) (Osborne & Waters, 2002). Figure 4.3 illustrates the pattern of residuals that indicates the presence of the linear relationship as there is no curve exists. Hence, the linearity assumption of the multiple regression analysis is supported.

Figure 4.3: Residual Plot



4.6.1.3 Non-autocorrelation

In order to assess if the independence of the error terms is met, the Durbin-Watson statistic is used to test if autocorrelation is present (Garson, 2011). In other words, it tests whether the adjacent residuals are correlated. This statistic ranges in value from 0 to 4. The values close to 0 indicate the strong positive autocorrelation, which means the standard errors of beta are too small. On the other hand, the values close to 4 indicate strong negative autocorrelation which implies the large value for standard errors of beta (Garson, 2011). Norusis (2005) recommends that the Durbin-Watson statistic should be close to 2 if there is no correlation between error terms. Also, Garson (2011) provides the rule of thumb which is the Durbin-Watson coefficient should be fall between 1.5 and 2.5 to indicate the

independence of error terms. Table 4.5 reveals that the Durbin-Watson value is 1.988, which is close to 2. Thus there is no correlation between the error terms and the assumption of independence error has been met.

Table 4.5: Multiple Regression Results for IA and Independent Variables

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
				R Square Change	F Change	df1	df2	Sig. F Change	
0.601	0.361	0.348	0.5766	0.361	28.211	6	300	0.000	1.988

4.6.1.4 Multicollinearity

Multicollinearity occurs when two or more independent variables are highly correlated or when one independent variable has a large multiple correlation with the other independent variables (Field, 2006). Multicollinearity will reduce the predictive power of any single independent variable and thus result in the difficulty of evaluating the importance of the independent variables using beta coefficient (Garson, 2011). In order to maximize the predictive power of independent variables, it is recommended that the independent variables should have low multicollinearity with the other independent variables.

The simplest way of assessing multicollinearity is through the examination of the correlation matrix for the independent variables. If the Pearson correlation coefficient exceeds 0.80, it indicates that there is substantial multicollinearity. Referring to Table 4.4, it shows that the independent variables do not correlate highly with each other as the correlation coefficient does not go beyond 0.80.

In addition, the tolerance statistic value and variance inflation factor (VIF) are employed in order to identify multicollienarity. According to Hair et al. (2006), the most default threshold is a tolerance value of 0.10. For VIF however, it is suggests that VIF should greater than 1.0 in order to avoid multicollinearity problem (Garson, 2011). The collinearity statistic in Table 4.6 presents that both

tolerance value and VIF are above the recommended threshold for all the variables. It is therefore concluded that the assumption of non-collinearity of independent variables are not violated.

Table 4.6: Collinearity Statistics

Independent variables	Tolerance	VIF
PU	0.800	1.251
PEOU	0.656	1.524
T	0.698	1.432
SI	0.740	1.351
PBC	0.740	1.351
WQ	0.669	1.494

4.6.2 Hypothesis Testing

The proposed hypotheses developed in Chapter 2 will be tested by using multiple linear regression analysis. Under this procedure, the impact and importance of the independent variables in their relationship with the dependent variables are examined. According to Field (2006), the hypotheses are supported when the beta coefficients are significant (p-value less than 0.05) and the t-value is greater than 2.0. Additionally, the smaller the significant value (p-value) and the greater the t-value, the larger the predictive power of the independent variable. Besides, the standardized beta coefficient (β) indicates the nature of the relationship (positive or negative) between dependent variables and each independent variable.

Referring to the ANOVA table of multiple regression analysis as shown in Table 4.7, it reveals that the p-value is less than 0.001, which is smaller than 0.05. This means that at least one of the six independent variables can be applied to model the dependent variable which is Intention to Adopt.

Table 4.7: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	56.276	6	9.379	28.211	0.000
Residual	99.742	300	0.332		
Total	156.018	306			

Table 4.8 presents the result of the multiple regression analysis for the research model proposed in Chapter 2. Hypothesis 1 posits that there is positive relationship between Perceived Usefulness and customers' intention to adopt online shopping. As can be seen from Table 4.8, it is found it has significance positive relationship between Perceived Usefulness and Intention to Adopt (β = 0.232, t = 4.486, $p < 0.001$). Thus, the hypothesis 1 is supported in this study.

Hypothesis 2 predicts that there is positive relationship between Perceived Ease of Use on customers' intention to adopt online shopping in Malaysia. According to the result in Table 4.8, it shows that the relationship between PEOU and IA is not statistically significant although the standardised beta coefficient is positive (0.035). Given that the t-value is smaller than 2.0 and p-value is larger than 0.05, therefore hypothesis 2 is not supported.

On the other hand, hypothesis 3 investigates the trust concern of customers toward the intention to adopt online shopping in Malaysia. Surprisingly, the result shows that the t-value is below 2.0 and the p-value is above 0.05, which indicates that the relationship is not statistically significant. In other words, it means that trust has no influence on customers' intention to adopt online shopping. Thus, it leads to the rejection of hypothesis 3.

Hypothesis 4 predicts that the greater the social influence, the higher the online shopping intention. The result shows that there is positive relationship and it is statistically significant (β = 0.268, t = 5.001, $p < 0.001$). This hypothesis has the most significant relationship among the others. The standardised beta coefficient of 0.268 at the 0.05 level and the t-value of 5.001 reveal that social influence is significant independent variable to predict intention to adopt online shopping and thus hypothesis 4 is supported.

Next, hypothesis 5 examines the relationship of customers' ability to search for information on the website and intention to adopt online shopping. As noticed from Table 4.8, hypothesis 5 is not statistically significant as it has the p-value of more than 0.05 and t-value of 0.441 which is below the acceptable threshold. This means that hypothesis 5 is not supported in this study.

With respect to hypothesis 6 which predicts that there is positive relationship between website quality and intention to adopt online shopping, it is confirmed that it has significant effect towards customers' intention to adopt online shopping ($\beta = 0.253$, $t = 4.484$, $p < 0.001$). This offers support that website quality has considerable positive impact on customers' willingness to adopt online shopping and thus hypothesis 6 is supported.

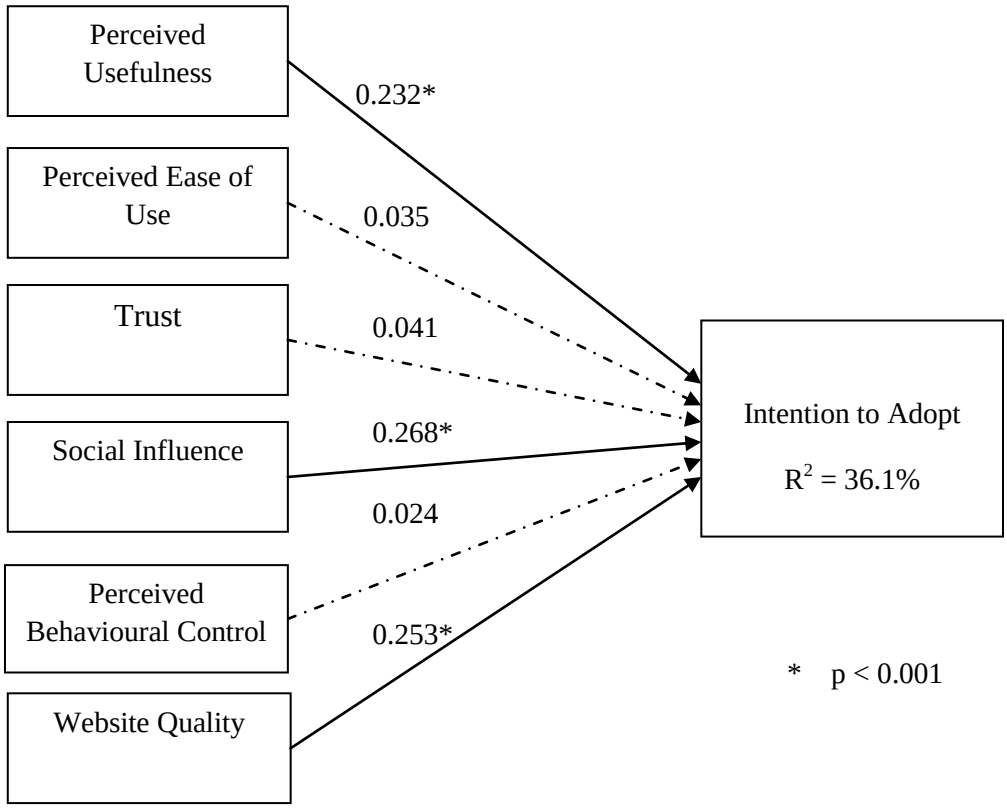
Table 4.8: Multiple Regression Analysis for Research Model

Hypothesis	Beta	t-value	Sig.
Hypothesis 1 Perceived usefulness is positively related to consumers' intention to adopt online apparel shopping.	0.232	4.486	0.000
Hypothesis 2 Perceived ease of use is positively related to consumers' intention to adopt online apparel shopping.	0.035	0.616	0.538
Hypothesis 3 Trust is positively related to consumers' intention to adopt online apparel shopping.	0.041	0.749	0.455
Hypothesis 4 Social influence is positively related to consumers' intention to adopt online apparel shopping.	0.268	5.001	0.000
Hypothesis 5 Perceived behavioural control is positive related to consumers' intention to adopt online apparel shopping.	0.024	0.441	0.660
Hypothesis 6 Website quality is positively related to consumers' intention to adopt online apparel shopping.	0.253	4.484	0.000

4.6.3 Summary of Model Analysis

The summary of the model analysis is illustrated in Figure 4.4. The standardized beta coefficient and the statistical significance of each coefficient are displayed in the figure. The result confirms that three hypotheses (H1, H4, and H6) have predictive power to explain the intention to adopt online shopping. Therefore they are accepted in this study. Conversely, the other three hypotheses (H2, H3, and H5) are rejected and their relationships are represented in dashed line in Figure 4.4. This means that perceived ease of use, trust and perceived behavioural control has no direct impact in online shopping adoption.

Figure 4.4: Final Research Model



The final research model presented in Figure 4.4 shows that Social Influence has the strongest positive relationship with online apparel shopping intention (β = 0.268). Meanwhile, Perceived Usefulness and Website Quality also have the

considerable impact on the intention to adopt online apparel shopping. Since all of the independent variables has positive relationships with IA, it indicates that increment of Perceived Usefulness, Social Influence and Website Quality, will lead to the increment of customers' intention to adopt online apparel shopping. In conclusion, these three independent variables account for 36.1 percent of the variance in customers' intention to adopt online apparel shopping.

4.7 Conclusions

This chapter presented the data analysis for the research. The data is collected using web-based survey with a response rate of 87.46 percent. The descriptive statistics of the data set is presented at the first section. The data is then tested for its validity and reliability through factor analysis and reliability analysis. Next, correlation analysis is adopted in order to examine the relationships between proposed hypotheses. Prior to the multiple regression analysis, four assumptions are tested for obtaining the reliable results.

Finally, the multiple regression analysis is conducted to test the six hypotheses developed from the literature review. The results revealed that there are three out of the six hypotheses supported, which are perceived usefulness, social influence and website quality. The discussions, implications of the findings will be discussed in next chapter. Besides, the limitations of this research are presented and the recommendations for further research are suggested at the end of the research.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1 Introduction

Previous chapter reports the results of the data analysis. In this chapter, the findings will be discussed and several implications of research findings will be presented. Subsequently, section 5.3 discusses the contributions and implications of the study. The next section presents the limitation and directions for future study. Finally, the overall conclusions of this research are draw and presented in the last section.

5.2 Discussion

The objective of this research is to investigate factors that influence the acceptance of online apparel shopping among Gen Y in Malaysia. Six hypotheses developed in Chapter 2 are tested through multiple regression analysis and the results are interpreted. As presented in Chapter 4, three of the factors influencing the intention to adopt online apparel shopping (Usefulness, Social Influence, and Website Quality) in this research received good support from both the literature review and the survey. The findings are similar to results found in prior studies. However, Perceived Ease of Use, Trust and Perceived Behavioural Control have no significant effect towards the intention to adopt online apparel shopping and therefore they were not supported in this research. The summary of the hypotheses result is presented in Table 5.1.

Table 5.1: Summary of Hypothesis Results

Hypothesis	Results
Hypothesis 1 Perceived usefulness is positively related to consumers' intention to adopt online apparel shopping.	Supported
Hypothesis 2 Perceived ease of use is positively related to consumers' intention to adopt online apparel shopping.	Not supported
Hypothesis 3 Trust is positively related to consumers' intention to adopt online apparel shopping.	Not supported
Hypothesis 4 Social influence is positively related to consumers' intention to adopt online apparel shopping.	Supported
Hypothesis 5 Perceived behavioural control is positive related to consumers' intention to adopt online apparel shopping.	Not supported
Hypothesis 6 Website quality is positively related to consumers' intention to adopt online apparel shopping.	Supported

5.2.1 Perceived Usefulness

In this research, the investigation of the linkage between Perceived Usefulness and the intention to adopt online apparel shopping is said to be consistent with prior studies. The results offer support to the researches that extended TAM in the context of online apparel shopping (Amin, 2007; Guriting & Ndubisi, 2006; Hu, et al., 2009; Peng et al., 2008) which predict that Perceived Usefulness is an important factor in determining users' acceptance of online shopping.

Referring to Appendix B2, it shows that the Gen Y consumers perceived that online apparel shopping is useful as it can save time (mean = 3.51). With online shopping, they can easily browse the website with products assortments and read the products information at any time. They can save the time by avoiding travel to the traditional store for choosing the products and comparing the product features

and prices by visiting every single shop. It is therefore concluded that if the online apparel shopping could help consumers to save time and provide large extend of convenience to support their shopping goal, they will perceive that online apparel shopping is useful and their intention to adopt online shopping will increase. As such, those apparel companies should provide the services that could fulfil consumers' needs in terms of time saving and improve their website performance by displaying the products information in a digestible format.

5.2.2 Perceived Ease of Use

H2 posits a positive relationship between Perceived Ease of Use and intention to adopt online apparel shopping. However, the result provides no evidence that Perceived Ease of Use has relationship with Gen Y consumers' intention to adopt online apparel shopping. The finding is different from the previous research (Moon & Kim, 2000; Peng et al., 2008) which contended that there is significant relationship between ease of use and acceptance of online shopping. However, it corresponds to the result of Tang and Chi (2005) which explore that there is no significant relationship between perceived ease of use and intention to adopt online shopping.

The insignificance relationship between perceived ease of use and intention to adopt might be caused by several reasons. Firstly, referring to Table 4.1, it is believes that Gen Y are generally computer literate and highly educated where 62.2 percent of them have attained at least diploma level, therefore they are able to learn fast and become skilful on using the new technologies. Apart from that, Gen Y has been exposed to various technologies since childhood and thus they are more comfortable with new innovation. As a result, they have good foundation of knowledge in adopting online shopping. The issue of ease of use or difficulty level on adopting the online apparel shopping might not arise due to the reasons above.

5.2.3 Trust

Trust has been identified as a critical factor in predicting the users' behavioural intention in using new technologies (Thatcher, Loughry, Lim, & McKnight, 2007;

Urban et al., 2009). It is rather critical in online shopping context as consumers feel greater uncertainty and risks in their online buying decisions due to the inability to touch and examine the products as well as the absence of face-to-face transaction (Ha & Stoel, 2009). However, the Trust construct developed in this research model provides that it has no significant relationship with intention to adopt online shopping. The result is contradictory with previous studies which found that trust plays a crucial role in influencing consumers' online shopping adoption (Kim, et al., 2010; Thatcher et al, 2007; Yao & Li, 2009) but consistent with Tang and Chi's (2005) study.

In the olden days when e-commerce was first introduced, the adoption rate of online shopping is low as there was lack of trust from potential customers (Chin, Khalifa Wafa, & Ooi, 2009). However, trust is not a barrier to transacting online today as the e-commerce is very common in today's business world (Urban et al., 2009). Besides, trust does not impede the adoption of online shopping because some of the consumers have tried online shopping and they find it is convenience and time-saving, as well as they could achieve their shopping goal through online shopping. Urban et al. (2009) propose that retailers could enhance consumer's trust by building relationship with consumers. As such, consumers who are satisfied with the products will tell others about the company and influence potential customers to buy from the retailers.

On the other hand, it is believe that trust does not influence consumers' online shopping adoption as they perceived that the e-retailers are trustworthy. The retailers might have utilised several channels to reach the consumers in terms of online channel and store channel, which in turn increased consumers' trust in buying apparel online. Apparently, the existence of traditional stores will increase consumers' confidence towards the retailer and reduce the uncertainty in their online buying decisions.

The emergence of social networking websites such as Facebook and Twitter has further helped businesses to tackle the public perception on trust issue. It is because the e-retailers could establish its strong brand name and good reputation through the comments and feedback of its customers on the social networking

website. As a result, consumers will feel more secure when they deciding to buy apparel through the particular retailer rather than buying from those retailers who does not have good reputation. The consumers also can easily search for company's information through Internet and it helps them to distinguish the trustworthiness of the retailers. Nevertheless, it is suggested that retailers who plan to provide online shopping service in the future to focus on building trust by enhancing the security and privacy of the consumers. They should invest more on security measures and tackles the problem of public perception.

5.2.4 Social Influence

It is discovered that social influence is greatly associated with the intention to adopt online apparel shopping. It is consistent with prior studies which argue that social influence has strong influence on consumers' willingness to adopt online shopping (Al-maghrabi & Dennis, 2010). Lu, Yao, and Yu (2005) suggest that Gen Y are in the lead segment and they are easily influence by peers, family, and mass media. Referring to Appendix B2, it indicates that printed advertisement has the greatest influence on their intention to adopt online shopping (mean = 3.02). This provides evidence to support Bhattacherjee's study (2000) which discovered that external influence in the form of news reports, popular press and mass media will affect the intention to adopt online shopping.

The great positive relationship between social influence and intention to adopt reveals that the importance of the peer pressure and family influences. It indicates that the positive words of mouth and recommendations by peers and family members will affect the intention of Gen Y consumers to adopt the online apparel shopping. They will easily accept the opinions or recommendations from the peers and family members if they believe that the online shopping could support their shopping goal.

The finding is relatively important for marketers as it suggests that the marketing tools such as advertisement in mass media plays important role in influencing the Gen Y consumers' intention to adopt online apparel shopping. In addition, this

finding also provide that the advertisement programs publishes in the form of printed advertisement or other mass media would motivate consumers to adopt online shopping. Therefore, marketers should consider the social influence factor to advocate the adoption of online apparel shopping in Malaysia.

5.2.5 Perceived Behavioural Control

With respect to Hypothesis 5, the finding provides insignificant influence between Perceived Behavioural Control and intention to adopt online shopping. This is contradictory to previous researches (Athiyaman, 2002; Limayem et al., 2002; Pavlou & Chai, 2002) which found that there is significant positive relationship between perceived behavioural control and intention to adopt online shopping in Malaysia. This means that the perceived behavioural control does not impede consumers' intention to adopt online shopping in Malaysia.

The insignificance relationship between perceived behavioural control and intention to adopt might be due to the Gen Y who are generally computer literate and able to navigate on the website without any help. They also have experienced in searching the information on the Internet. According to Gupta and Gupta (2009), Gen Y have more energy to prepare themselves following the changing demands. They are more flexible in having the new way of living as well as adapting with new technologies. Therefore they have the knowledge and ability to browse through websites and make online purchase.

Besides, Gen Y has the various resources necessary for online transaction such as computer with Internet access and credit cards. For marketers who wish to target on Gen Y, they should improve the accessible of websites in order to maximize consumer's interest to access the website and enhance self surfing ability to find information through Internet.

5.2.6 Website Quality

The Website Quality construct has been identified as an important factor to influence the acceptance of online shopping in prior researches. The result of this

research provides a strong positive relationship between website quality and intention to adopt online apparel shopping. This indicates that a well designed website would increase the adoption of online apparel shopping by Gen Y consumers. This result is consistent with previous studies (Djamasbi et al., 2010; Flavian et al., 2009; Kim & Niehm, 2009) which suggest the significant relationship between website quality and intention to adopt online shopping.

According to Appendix B2, the appearance of website graphics and pictures have the greatest influence on the consumers' intention to adopt online shopping (mean = 3.65). As discussed earlier in Chapter 2, consumers' ability to touch and feel a product as well as the information of a product is generally limited through online shopping, therefore the design of the website in an attractive manner is relatively important in enhancing customers shopping experiences and thus influence their intention to adopt online shopping. In order to encourage consumers to shop online, the web developers should create a unique virtual shopping environment by including 3D flash and electronic dressing rooms as well as displaying the products pictures and information in a schematic way. This could improve the consumers' enjoyment experience through online shopping and their expectation of the products quality and consequently attract them to engage in online apparel shopping.

5.3 Implication

The purpose of the research is to investigate factors that influencing Malaysian Gen Y consumers' intention to adopt online apparel shopping. Even though there were some empirical studies on factors influencing Malaysian consumers in buying products online, little researches were done in the context of apparel industry and little is known about the factors influencing consumers' online shopping intention.

According to Kim and Kim (2004), online apparel shopping is gaining in popularity. However, the findings show that only 31 percent of the respondents have online purchase experience. This implies that Malaysians show little interest

on shopping online for apparels. Nevertheless, the research findings have shed light on some of the factors which influence Gen Y consumers to adopt online shopping. The findings could provide valuable ideas to marketers and web developers in implementing online stores efficiently and effectively.

Since the Social Influence is the most significant factor among all of the constructs, this implies that the marketing tools such as advertisements in media and press play crucial roles in affecting consumers' intention on adopting the online apparel shopping as well as motivate them to adopt it frequently. Additionally, marketers should attract and reach more potential customers through various channels such as social network sites, word of mouth, and informal seminar (Lu et al., 2005).

Besides, the great impact of Website Quality in the study indicates that the optimal appearance of the website is important for businesses to create its competitive advantage by attracting consumers to access the online stores as well as retaining the existing customers. The good presentation of the product information can improve consumers' overall perceptions of the website and enhance their perceptions of the quality of the website information. This finding provides a guidance to web developers in designing a website that is easy to read and understand as well as provide content that is fun and entertaining. This will enhance consumers' online shopping experiences and eventually form consumers' intention to adopt online shopping.

Following the Website Quality, Perceived Usefulness was found to be other important predictor of the intention to adopt online apparel shopping. Therefore, businesses should develop the website with the contents and applications which provide a motivation for consumers to engage in online shopping. For example, the website should have fast loading speed and optimal layout for consumers to find the right product quickly. Furthermore, businesses could implement the online service personalisation to enhance consumers' transaction process satisfaction, and builds a relationship between the businesses and consumers (Lee & Park, 2009).

In conclusion, this study offers an understanding of the main factors that influencing Malaysian Gen Y consumers from buying apparel online. The findings are beneficial to marketers, web developers as well as telecommunication and Internet service provider. For instance, this study offers a body of knowledge to help marketers design and plan marketing strategies to entice consumers to buy online. In addition, these findings also contribute a good knowledge for telecommunication and Internet service providers to improve the penetration of the Internet in order to encourage e-commerce in Malaysia.

5.4 Limitations

Like any other researches, this research has several limitations that should be noted in future research. First, there is the possibility of obtaining biased results by employing self-reported scales in the research. The web-based survey offers faster and higher respond rate but the respondents may provide average answers instead of their own opinion. Besides, the self-reported demographic statistics and Internet usage might create possibilities of getting biased results.

Secondly, the literature regarding online apparel shopping in Malaysia is generally limited. Due to the lack of literature, this research adopted cross-cultural references and it may not completely appropriate in the Malaysian context and it may not reflect the actual situation in Malaysia.

Thirdly, the model in this research explains 36.1 percent of the variation of the intention to adopt online shopping, the approximately 64 percent of the variation remains unexplained. This means that the constructs derived in the research may not be sufficiently explained Gen Y consumers' adoption of online apparel shopping in Malaysia. It is possible that some important constructs are not included in the research model. Finally, the sample size of 307 which only limited to Gen Y could not represent Malaysian consumers as a whole.

5.5 Recommendations

Several recommendations are discussed in this section to address the limitations of the research. The self-reported scales that would result in obtaining biased results can be addressed by designing survey using the mixture of quantitative and qualitative measures for the research constructs (Moon & Kim, 2000; Vazquez & Xu, 2009). In addition, the quantitative and qualitative data collected could be used to explore new factors that influence online shopping behaviour as well as develop a new online shopping consumer behaviour model (Vazquez & Xu, 2009). However, researchers should pay more attention in interpreting or generalizing the findings when applying them to the overall population.

The research model of this research explains 36.1 percent of the variance in intention to adopt online shopping. Looking at the problem, further research could improve the model explanation power by adding new constructs or factors which have been validated in previous studies such as perceived playfulness (Moon & Kim, 2000), perceived benefits (Delafrooz et al., 2009), perceived risk (Kamarulzaman, 2007), and enjoyment (Ha & Stoel, 2009).

Concerning on the sample size of the research, it is suggested that the larger sample size is required in further research in order to improve the explanation power and reduce generalization of the derived results. Apart from that, this research is cross-sectional which means that it only measures the intention to adopt online shopping and it does not describe extensively on the online shopping behaviour (Moon & Kim, 2000). Thus there is a need for further longitudinal studies to better predict the online shopping behaviour and increase validity because longitudinal studies can measure both intention to adopt and actual adoption of consumers at the same time.

5.6 Conclusion

This research employed TAM model as a theoretical basis to build a conceptual model with four additional constructs which are Trust, Social Influence, Perceived Behavioural Control and Website Quality. Multiple regression analysis is used to analyse data and test the developed hypotheses. The extended TAM model has the explanation power of 36.1 percent with three hypotheses identified to be statistically significant for Malaysian Gen Y consumers in forming the intention to adopt online shopping.

Among all constructs, Social Influence has the greatest impact towards consumers' online shopping intention, followed by Website Quality and Perceived Usefulness. The implications of these important factors are discussed. Marketers are suggested to consider these factors if they would like to promote the adoption of online apparel shopping and increase sales through online channel.

This research provides a clear picture on Malaysian Gen Y consumers' perspective towards the online apparel shopping adoption. This is particularly important as the respondents are the visitors and purchasers who have high potential in becoming the customers for the apparel retailers. The strong social influence suggests that the marketers should use various promotional channels to reach the target market as well as identify the referent groups that influence Gen Y consumers' intention to adopt online shopping.

In sum, this research has created the foundation for further research on the area of online shopping behaviour. Researchers could use this research to target on specific group of samples based on gender, age, and education level. Additionally, this research provides better understanding of Gen Y's perception on online apparel shopping as well as their online behaviour which eventually creates an opportunity for those apparel retailers who wish to expand their businesses in online retailing to plan and execute effective marketing strategies that promote Gen Y to purchase apparel online. It is also believe that this research will be useful in promoting the further research as well as shaping the future of e-commerce in Malaysia.

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APPENDICES

APPENDIX A

QUESTIONNAIRE

You are invited to participate in the survey on online apparel shopping which aims to determine the **factors influencing the adoption of online shopping on apparel among Generation Y in Malaysia**. Generation Y refers to those born between year 1978 – 1995. There are 3 sections in this survey. Even if you have never bought apparel from the Internet, your feedback is valuable in shaping the future of e-commerce in Malaysia.

This survey asks for only general information and will take less than 15 minutes to fill out. It can be completed by those who browse Internet and visit the online apparel website as well as those who purchased apparel through Internet before.

As a postgraduate student at the Universiti Tunku Abdul Rahaman, I am conducting this research to discover people's perceptions, beliefs, and intentions about buying apparel online. All the information you provided would be used in combination with other respondents and your personal information will be kept strictly confidential. Results will be reported in general terms, with no specific individuals identified in the report.

Thanks for sharing your time and experiences.

Section A: Demographic Profile

1. Gender
   - ☐ Male
   - ☐ Female

2. Age
   - ☐ Under 20
   - ☐ 21 – 25 years
   - ☐ 26 – 30 years
   - ☐ 31 – 35 years

3. Marital status
   - ☐ Single
   - ☐ Married

4. What is your highest level of academic qualification?
   - ☐ SPM/STPM
   - ☐ Diploma/Advanced Diploma
   - ☐ Bachelor Degree/Professional Qualification
   - ☐ Master Degree
   - ☐ PhD Degree

5. Income
   - ☐ Under RM1000
   - ☐ RM 1001 – RM 2000
   - ☐ RM 2001 – RM 3000
   - ☐ RM 3001 – RM 4000
   - ☐ RM 4000 and above.

Section B: General Questions

1. How many hours a week do u spend on the Internet?

- ☐ Less than 5 hours
- ☐ 5 – 10 hours
- ☐ 10 – 20 hours
- ☐ More than 20 hours

2. How many times have you purchased apparel from the Internet?

- ☐ Never
- ☐ 1-2 times
- ☐ 3-5 times
- ☐ More than 5 times

3. What apparel website do you visited (or had made purchase) before? Please specify:

_____

Section C

Respondents are requested to indicate the extent to which they agreed or disagreed with each question using 5 scales

(1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree and 5 = strongly agree).

	Perceived Usefulness	**1**	**2**	**3**	**4**	**5**
1.)	Online shopping would improve my efficiency in purchasing apparel.	❑	❑	❑	❑	❑
2)	Online shopping would enhance my effectiveness in purchasing apparel.	❑	❑	❑	❑	❑
3)	It is easier to buy apparel through online shopping.	❑	❑	❑	❑	❑
4)	Online shopping would enable me to save time.	❑	❑	❑	❑	❑
5)	In general, I believe online apparel shopping will be useful.	❑	❑	❑	❑	❑

	Perceived Ease of Use	**1**	**2**	**3**	**4**	**5**
1)	It is easy to shop for apparels online.	❑	❑	❑	❑	❑
2)	It is easy to use online shopping website.	❑	❑	❑	❑	❑
3)	I would become confused when I do online shopping.	❑	❑	❑	❑	❑
4)	Learning to use the online shopping website will be easy for me.	❑	❑	❑	❑	❑
5)	It would be easy for me to become skillful at using the website.	❑	❑	❑	❑	❑

	Trust	**1**	**2**	**3**	**4**	**5**
1)	I feel save with my transaction with the website.	❑	❑	❑	❑	❑
2)	I believe that the payment made through the Internet is secure.	❑	❑	❑	❑	❑
3)	I believe the website administrator will keep my personal information safe.	❑	❑	❑	❑	❑
4)	Online shopping is trustworthy.	❑	❑	❑	❑	❑
5)	Overall, I feel that trusting online shopping is easy.	❑	❑	❑	❑	❑

	Social Influence	**1**	**2**	**3**	**4**	**5**
1)	The members of my family (e.g., parents, spouse, children) think that I should purchase apparel through Internet.	❑	❑	❑	❑	❑
2)	People who are important to me (e.g., friends or colleagues) think that I should purchase apparel through Internet.	❑	❑	❑	❑	❑
3)	The media (e.g., newspaper, articles, radio, TV advertisement) frequently suggest us to purchase apparel through the Internet.	❑	❑	❑	❑	❑
4)	I intent to adopt online apparel shopping after reading advertisements in printed sources highlighting the benefits of shop through apparel websites.	❑	❑	❑	❑	❑
5)	People in my society who adopt online apparel shopping have more prestige than those who do not.	❑	❑	❑	❑	❑

	Perceived Behavioral Control	**1**	**2**	**3**	**4**	**5**
1)	I am able to navigate on the web without any help.	❑	❑	❑	❑	❑
2)	I have the skill to find information in a web directory.	❑	❑	❑	❑	❑
3)	I have the resources required to buy apparel through Internet.	❑	❑	❑	❑	❑
4)	I have knowledge and ability necessary to purchase apparel through Internet.	❑	❑	❑	❑	❑
5)	A specific person or group (helpdesk) is available for assistance with system difficulties.	❑	❑	❑	❑	❑

	Website Quality	**1**	**2**	**3**	**4**	**5**
1)	The site has helpful graphics and pictures.	❑	❑	❑	❑	❑
2)	The information at this website is complete.	❑	❑	❑	❑	❑
3)	The website provides accurate information.	❑	❑	❑	❑	❑
4)	The website provides updated information.	❑	❑	❑	❑	❑
5)	The website provides in-depth information.	❑	❑	❑	❑	❑
6)	The information on the website is relevant to me.	❑	❑	❑	❑	❑
7)	The organization and layout of the website facilitates searching for products.	❑	❑	❑	❑	❑
8)	The site gives me enough information so that I can identify the item to the same degree as if I am in the store.	❑	❑	❑	❑	❑
9)	The site creates a memorable experience (e.g., 3D flash, electronic dressing rooms, soft music).	❑	❑	❑	❑	❑
10)	Overall, the layout of the website makes it easy to navigate.	❑	❑	❑	❑	❑

	Intention to Use	**1**	**2**	**3**	**4**	**5**
1)	I think it would be very good to purchase apparel through Internet in addition to traditional methods.	❑	❑	❑	❑	❑
2)	I will strongly recommend others to purchase apparel online.	❑	❑	❑	❑	❑
3)	I intend to purchase apparel online in the future.	❑	❑	❑	❑	❑
4)	I will adopt online shopping on a regular basis in the near future.	❑	❑	❑	❑	❑

------ End of Questions ------

Thank you so much for your assistance and cooperation.

Have a nice day! ☺

APPENDIX B1

FACTOR ANALYSIS: ROTATED COMPONENT MATRIX

Scale item	Component					
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
The apparel website provides in-depth information.	0.720					
The apparel website gives me enough information so that I can identify the item to the same degree as if I am in the store.	0.717					
The apparel website provides updated information.	0.717					
The organization and layout of the website facilitates searching for products.	0.687					
The information at the apparel website is complete.	0.681					
The apparel website provides accurate information.	0.677					
The information on the apparel website is relevant to me.	0.642					
The apparel website has helpful graphics and pictures.	0.640					
Overall, the layout of the apparel website makes it easy to navigate.	0.616					
The apparel website creates a memorable experience (e.g., 3D flash, electronic dressing rooms, soft music).	0.569					
Online shopping would enhance my effectiveness in purchasing apparel.		0.816				
Online apparel shopping would enable me to save time.		0.812				
It is easier to buy apparel through online shopping.		0.790				
Online shopping would improve my efficiency in purchasing apparel.		0.757				
In general, I believe online apparel shopping will be useful.		0.741				
I believe that the payment made through the internet is secure.			0.806			

I believe the website administrator will keep my personal information safe.			0.758			
I feel safe with my transaction with the website.			0.754			
Online shopping is trustworthy.			0.752			
Overall, I feel that trusting online shopping is easy.			0.677			
I have the skill to find information in a web directory.				0.826		
I have knowledge and ability necessary to purchase apparel through internet.				0.780		
I have the resources required to buy apparel through internet.				0.773		
I am able to navigate on the website without any help.				0.764		
A specific person or group (helpdesk) is available for assistance with system difficulties.				0.508		
It is easy to shop for apparel online.					0.744	
Learning to use the online shopping website will be easy for me.					0.738	
I would become confused when I do online shopping.					0.705	
It is easy to use online shopping website.					0.700	
It would be easy for me to become skillful at using the website.					0.696	
People who are important to me (e.g., friends or colleagues) think that I should purchase apparel through internet.						0.729
The media (e.g., newspaper, articles, radio, TV advertisement) frequently suggest us to purchase apparel through the internet.						0.681
People in my society who adopt online apparel shopping have more prestige than those who do not.						0.644
The members of my family (e.g., parents, spouse, children) think that I should purchase apparel through internet.						0.633
I intent to adopt online apparel shopping after reading advertisements in printed sources highlighting the benefits of shop through apparel websites.						0.622
Eigenvalues	5.115	3.469	3.321	3.254	3.097	2.539
Percentage of variance explained	14.614	9.912	9.488	9.297	8.849	7.254
Cumulative percentage	14.614	24.526	34.014	43.310	52.159	59.413

APPENDIX B2

RELIABILITY ANALYSIS

Construct	Scale items	Mean	Std. Deviation	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
Perceived usefulness	PU1	3.22	0.843	0.662	0.857	0.874
	PU2	3.19	0.850	0.737	0.839	
	PU3	3.28	0.914	0.711	0.846	
	PU4	3.51	0.951	0.734	0.840	
	PU5	3.38	0.825	0.673	0.855	
Perceived Ease of Use	PEOU1	3.47	0.777	0.634	0.821	0.847
	PEOU2	3.60	0.727	0.665	0.813	
	PEOU3	3.29	0.828	0.642	0.819	
	PEOU4	3.65	0.784	0.723	0.796	
	PEOU5	3.52	0.760	0.612	0.826	
Trust	T1	2.83	0.841	0.679	0.824	0.856
	T2	2.90	0.844	0.733	0.809	
	T3	2.91	0.834	0.661	0.829	
	T4	2.88	0.717	0.680	0.825	
	T5	2.97	0.794	0.607	0.842	
Social Influence	SI1	2.54	0.893	0.507	0.699	0.743
	SI2	2.76	0.834	0.630	0.651	
	SI3	2.91	0.825	0.456	0.717	
	SI4	3.02	0.794	0.471	0.711	
	SI5	2.86	0.806	0.474	0.710	
Perceived Behavioural Control	PBC1	3.62	0.879	0.634	0.804	0.835
	PBC2	3.74	0.831	0.739	0.771	
	PBC3	3.63	0.792	0.690	0.787	
	PBC4	3.62	0.780	0.694	0.786	
	PBC5	3.34	0.759	0.435	0.853	
Website Quality	WQ1	3.65	0.699	0.560	0.881	0.888
	WQ2	3.39	0.752	0.652	0.875	
	WQ3	3.23	0.755	0.645	0.875	
	WQ4	3.47	0.729	0.657	0.874	

	WQ5	3.20	0.752	0.656	0.874	
	WQ6	3.37	0.732	0.625	0.877	
	WQ7	3.50	0.678	0.627	0.877	
	WQ8	3.37	0.775	0.671	0.873	
	WQ9	3.21	0.777	0.513	0.885	
	WQ10	3.45	0.704	0.627	0.877	
Intention to Adopt	IA1	3.12	0.878	0.642	0.835	0.853
	IA2	3.01	0.846	0.728	0.798	
	IA3	3.21	0.828	0.721	0.801	
	IA4	3.07	0.877	0.686	0.816	

APPENDIX C1

SPSS OUTPUT: DEMOGRAPHIC INFORMATION

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	143	46.6	46.6	46.6
	Female	164	53.4	53.4	100.0
	Total	307	100.0	100.0	

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	16-20	104	33.9	33.9	33.9
	21 - 25 years	104	33.9	33.9	67.8
	26 - 30 years	90	29.3	29.3	97.1
	31 - 35 years	9	2.9	2.9	100.0
	Total	307	100.0	100.0	

Marital Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	290	94.5	94.5	94.5
	Married	17	5.5	5.5	100.0
	Total	307	100.0	100.0	

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SPM/STPM	116	37.8	37.8	37.8
	Diploma/Advanced Diploma	32	10.4	10.4	48.2
	Bachelor Degree/Professional Qualification	141	45.9	45.9	94.1
	Master Degree	18	5.9	5.9	100.0
	Total	307	100.0	100.0	

Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below RM 1000	153	49.8	49.8	49.8
	RM 1001 - RM 2000	23	7.5	7.5	57.3
	RM 2001 - RM 3000	59	19.2	19.2	76.5
	RM 3001 - RM 4000	35	11.4	11.4	87.9
	RM 4000 and above	37	12.1	12.1	100.0
	Total	307	100.0	100.0	

Hours Spent on the Internet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 5 hours	67	21.8	21.8	21.8
	5 - 10 hours	78	25.4	25.4	47.2
	10 - 20 hours	77	25.1	25.1	72.3
	More than 20 hours	85	27.7	27.7	100.0
	Total	307	100.0	100.0	

Frequency of Purchase

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	212	69.1	69.1	69.1
	1-2 times	53	17.3	17.3	86.3
	3-5 times	11	3.6	3.6	89.9
	More than 5 times	31	10.1	10.1	100.0
	Total	307	100.0	100.0	

APPENDIX C2

SPSS OUTPUT: FACTOR ANALYSIS

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.884
Bartlett's Test of Sphericity	Approx. Chi-Square	5112.016
	df	595
	Sig.	.000

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
PU1	307	1	5	3.22	.843
PU2	307	1	5	3.19	.850
PU3	307	1	5	3.28	.914
PU4	307	1	5	3.51	.951
PU5	307	1	5	3.38	.825
PEOU1	307	1	5	3.47	.777
PEOU2	307	1	5	3.60	.727
PEOU3	307	1	5	3.29	.828
PEOU4	307	1	5	3.65	.784
PEOU5	307	2	5	3.52	.760
T1	307	1	5	2.83	.841
T2	307	1	5	2.90	.844
T3	307	1	5	2.91	.834
T4	307	1	5	2.88	.717
T5	307	1	5	2.97	.794
SI1	307	1	5	2.54	.893
SI2	307	1	5	2.76	.834
SI3	307	1	5	2.91	.825
SI4	307	1	5	3.02	.794
SI5	307	1	5	2.86	.806
PBC1	307	1	5	3.62	.879
PBC2	307	1	5	3.74	.831
PBC3	307	1	5	3.63	.792
PBC4	307	1	5	3.62	.780
PBC5	307	1	5	3.34	.759
WQ1	307	1	5	3.65	.699
WQ2	307	1	5	3.39	.752
WQ3	307	1	5	3.23	.755
WQ4	307	1	5	3.47	.729
WQ5	307	1	5	3.20	.752
WQ6	307	1	5	3.37	.732
WQ7	307	1	5	3.50	.678
WQ8	307	1	5	3.37	.775
WQ9	307	1	5	3.21	.777
WQ10	307	1	5	3.45	.704
IA1	307	1	5	3.12	.878
IA2	307	1	5	3.01	.846
IA3	307	1	5	3.21	.828
IA4	307	1	5	3.07	.877
Valid N (listwise)	307				

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.105	26.014	26.014	9.105	26.014	26.014	5.115	14.614	14.614
2	3.448	9.853	35.867	3.448	9.853	35.867	3.469	9.912	24.526
3	2.722	7.778	43.645	2.722	7.778	43.645	3.321	9.488	34.014
4	2.374	6.783	50.428	2.374	6.783	50.428	3.254	9.297	43.310
5	1.675	4.785	55.213	1.675	4.785	55.213	3.097	8.849	52.159
6	1.470	4.201	59.413	1.470	4.201	59.413	2.539	7.254	59.413
7	.993	2.838	62.251						
8	.905	2.587	64.838						
9	.847	2.420	67.258						
10	.768	2.194	69.452						
11	.738	2.108	71.560						
12	.716	2.045	73.605						
13	.676	1.932	75.537						
14	.638	1.824	77.361						
15	.605	1.729	79.090						
16	.550	1.572	80.662						
17	.538	1.538	82.200						
18	.505	1.443	83.643						
19	.481	1.374	85.017						
20	.465	1.329	86.346						
21	.457	1.304	87.650						
22	.453	1.295	88.946						
23	.431	1.230	90.176						
24	.399	1.140	91.316						
25	.355	1.014	92.330						
26	.349	.996	93.326						
27	.329	.939	94.266						
28	.311	.889	95.155						
29	.309	.882	96.037						
30	.271	.775	96.812						
31	.256	.730	97.542						
32	.237	.677	98.219						
33	.233	.666	98.885						
34	.204	.583	99.469						
35	.186	.531	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix

	Component					
	1	2	3	4	5	6
WQ5	.720					
WQ8	.717					
WQ4	.717					
WQ7	.687					
WQ2	.681					
WQ3	.677					
WQ6	.642					
WQ1	.640					
WQ10	.616					
WQ9	.569					
PU2		.816				
PU4		.812				
PU3		.790				
PU1		.757				
PU5		.741				
T2			.806			
T3			.758			
T1			.754			
T4			.752			
T5			.677			
PBC2				.826		
PBC4				.780		
PBC3				.773		
PBC1				.764		
PBC5				.508		
PEOU1					.744	
PEOU4					.738	
PEOU3					.705	
PEOU2					.700	
PEOU5					.696	
SI2						.729
SI3						.681
SI5						.644
SI1						.633
SI4						.622

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

APPENDIX C3

SPSS OUTPUT: RELIABILITY TEST

Perceived Usefulness

Cronbach's Alpha	N of Items
.874	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PU1	13.36	8.801	.662	.857
PU2	13.40	8.457	.737	.839
PU3	13.31	8.254	.711	.846
PU4	13.07	7.978	.734	.840
PU5	13.21	8.839	.673	.855

Perceived Ease of Use

Cronbach's Alpha	N of Items
.847	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PEOU1	14.06	6.254	.634	.821
PEOU2	13.93	6.355	.665	.813
PEOU3	14.24	6.027	.642	.819
PEOU4	13.89	5.944	.723	.796
PEOU5	14.01	6.392	.612	.826

Trust

Cronbach's Alpha	N of Items
.856	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
T1	11.66	6.677	.679	.824
T2	11.59	6.477	.733	.809
T3	11.58	6.774	.661	.829
T4	11.62	7.205	.680	.825
T5	11.52	7.133	.607	.842

Social Influence

Cronbach's Alpha	N of Items
.743	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SI1	11.54	5.583	.507	.699
SI2	11.32	5.389	.630	.651
SI3	11.17	6.000	.456	.717
SI4	11.06	6.052	.471	.711
SI5	11.22	6.001	.474	.710

Perceived Behavioural Control

Cronbach's Alpha	N of Items
.835	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PBC1	14.32	6.298	.634	.804
PBC2	14.21	6.131	.739	.771
PBC3	14.32	6.460	.690	.787
PBC4	14.32	6.494	.694	.786
PBC5	14.61	7.481	.435	.853

Website Quality

Cronbach's Alpha	N of Items
.888	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
WQ1	30.19	22.727	.560	.881
WQ2	30.45	21.797	.652	.875
WQ3	30.61	21.821	.645	.875
WQ4	30.37	21.934	.657	.874
WQ5	30.64	21.780	.656	.874
WQ6	30.47	22.106	.625	.877
WQ7	30.35	22.456	.627	.877
WQ8	30.47	21.524	.671	.873
WQ9	30.63	22.554	.513	.885
WQ10	30.39	22.279	.627	.877

Intention to Adopt

Cronbach's Alpha	N of Items
.853	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
IA1	9.29	4.894	.642	.835
IA2	9.40	4.757	.728	.798
IA3	9.20	4.844	.721	.801
IA4	9.34	4.762	.686	.816

APPENDIX C4

SPSS OUTPUT: CORRELATION ANALYSIS

Correlations

		PU	PEOU	T	SI	PBC	WQ	IA
PU	Pearson Correlation	1	.354**	.271**	.292**	.187**	.331**	.422**
	Sig. (2-tailed)		.000	.000	.000	.001	.000	.000
	N	307	307	307	307	307	307	307
PEOU	Pearson Correlation	.354**	1	.229**	.228**	.473**	.429**	.308**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
	N	307	307	307	307	307	307	307
T	Pearson Correlation	.271**	.229**	1	.466**	.186**	.408**	.345**
	Sig. (2-tailed)	.000	.000		.000	.001	.000	.000
	N	307	307	307	307	307	307	307
SI	Pearson Correlation	.292**	.228**	.466**	1	.103	.304**	.443**
	Sig. (2-tailed)	.000	.000	.000		.070	.000	.000
	N	307	307	307	307	307	307	307
PBC	Pearson Correlation	.187**	.473**	.186**	.103	1	.365**	.211**
	Sig. (2-tailed)	.001	.000	.001	.070		.000	.000
	N	307	307	307	307	307	307	307
WQ	Pearson Correlation	.331**	.429**	.408**	.304**	.365**	1	.452**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
	N	307	307	307	307	307	307	307
IA	Pearson Correlation	.422**	.308**	.345**	.443**	.211**	.452**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	307	307	307	307	307	307	307

**. Correlation is significant at the 0.01 level (2-tailed).

APPENDIX C5

SPSS OUTPUT: MULTIPLE REGRESSION ANALYSIS

Descriptive Statistics

	Mean	Std. Deviation	N
IA	3.1026	.71405	307
PU	3.3179	.71623	307
PEOU	3.5068	.61062	307
T	2.8984	.64298	307
SI	2.8156	.58389	307
PBC	3.5889	.62811	307
WQ	3.3840	.51909	307

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.601[a]	.361	.348	.57660	.361	28.211	6	300	.000	1.988

a. Predictors: (Constant), WQ, SI, PBC, PU, T, PEOU

b. Dependent Variable: IA

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	56.276	6	9.379	28.211	.000[a]
	Residual	99.742	300	.332		
	Total	156.018	306			

a. Predictors: (Constant), WQ, SI, PBC, PU, T, PEOU

b. Dependent Variable: IA

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.138	.277		-.500	.618		
	PU	.231	.051	.232	4.486	.000	.800	1.251
	PEOU	.041	.067	.035	.616	.538	.656	1.524
	T	.046	.061	.041	.749	.455	.698	1.432
	SI	.328	.066	.268	5.001	.000	.740	1.351
	PBC	.027	.061	.024	.441	.660	.740	1.351
	WQ	.348	.078	.253	4.484	.000	.669	1.494

a. Dependent Variable: IA