RELATIONSHIP BETWEEN PERCEIVED BENEFITS AND UNDERGRADUATES' ONLINE SHOPPING DECISIONS IN MALAYSIA

BY

IVONNE CHAN YI WEN
LEE HOOI LING
LEONG HUI YING
TAN SIOK HIANG
TEOH SOOK KUAN

A research project submitted in partial fulfillment of the requirement for the degree of

BACHELOR OF COMMERCE (HONS) ACCOUNTING

UNIVERSITI TUNKU ABDUL RAHMAN

FACULTY OF BUSINESS AND FINANCE
DEPARTMENT OF COMMERCE AND ACCOUNTANCY

MAY 2012

DECLARATION

We hereby declare that:

(1) This undergraduate research project is the end result of our 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) Equal contribution has been made by each group member in completing the research project.

(4) The word count of this research report is 10495 words.

Name of Student:	Student ID:	Signature:
1. Ivonne Chan Yi Wen	09ABB07105	
2. Lee Hooi Ling	09ABB06533	
3. Leong Hui Ying	09ABB07718	
4. Tan Siok Hiang	09ABB05647	
5. Teoh Sook Kuan	09ABB06558	

Date: 23 MARCH 2012

ACKNOWLEDGEMENT

We sincerely appreciate that given this chance to express our greatest gratitude to all people who have made this research project possible. We are grateful and truly appreciate for their kindness in giving us thoughtful advices, guidance, suggestions and encouragement to assist us to complete our research project.

Firstly, we are deeply grateful to our supervisor, Mr. Khor, who guides, supports, and assists us throughout the entire research. His patience, useful comments, and valuable feedback had helped us a lot in carrying out our research project. Moreover, he is willing to provide us with timely, insightful, and thoughtful advices during our research process. This has lead us to learning and broadening up our view towards the right way.

Furthermore, we also appreciate all the respondents who spend their precious time and patience in helping us to complete the survey questionnaires. We would have been impossible to complete our research project without their honest contribution and help. These saved us a lot of time in completing the process of collecting data.

Beside, gratefulness is also paid to our group members. We are fully co-operating with each other and willing to sacrifice our valuable time to enable smooth processes in our research project. Without patient, co-operation, contribution, sacrifice, concern, and understanding with each other, we are unable to complete our research project on time with pleasure and glee. Once again, we truly, gratefully, and honestly cherish everyone who assisted us in our research project.

DEDICATION

We would like to dedicate our precious work to our family, friends, and relatives for giving their unlimited support, encouragement, help, and motivation throughout the completion of this research project.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

LIST OF ABBREVIATIONS

CN	Convenience
CS	Customer Service
MMU	Multimedia University
MONASH	Monash University Malaysia
OS	Online Shopping Decision
OUM	Open University Malaysia
PC	Product Choice
PQ	Product Quality
PR	Price
SPSS	Statistical Package for Social Science
TAYLOR	Taylor's University College
UNISEL	Universiti Industri Selangor
UniTAR	Universiti Tun Abdul Razak
UNiTEN	Universiti Tenage Nasional
UNM	University of Nottingham Malaysia
UTAR	Universiti Tunku Abdul Rahman
UTP	Universiti Teknologi PETRONAS
WD	Webpage Design

PREFACE

Online shopping generally refers to online transactions where products or services are sold to consumers via Internet. Increased Internet usage in Malaysia had encouraged the development of E-commerce in the Malaysia. Thus, this has caused a tremendous change in traditional business methods which require physical stores to conduct a business instead of virtual shopping environment.

After exploring into the vast literature on the concept of online shopping, a few theoretical frameworks of past studies were selected to test in our local context. For instance, in adopting Kim, Cho and Rao (2000) valence framework, this study seek to explore its variables of perceived benefits. It is chosen as we wish to further understand how perceived benefits variables affect the online shopping decisions in Malaysia.

Perceived benefits means consumer's belief in which aspects they will be beneficial of from the online transactions with certain Websites. The examples of perceived benefits variables are Websites design, product choice, price, convenience, customer service and product quality.

In other words, this research explore how does a consumer believe in he or she will be benefit from conducting online shopping and to what extent that what they believe affected their decision.

ABSTRACT

The increase usage of Internet has brought opportunities to E-commerce application in Malaysia. This research is conducted based on valence framework to investigate the relationship of perceived benefits and Malaysian undergraduates' online shopping decision. A better understanding on the influential effects in perceived benefits towards online shopping will be beneficial to Entrepreneurs, investors, and E-marketers since it is useful in determining their strategy towards E-commerce establishment. This research also contributes to academicians and future researcher to have more in-depth knowledge on the potential market share for E-commerce. The independent variables include Webpage design, product choices, prices, convenience, customer service, and product choices. Online shopping decision is the dependent variable of this study. Quota sampling is used to collect data of 500 target undergraduates from 10 private universities in Malaysia. Normality test, reliability test, Pearson Correlation, and Multiple Linear Regression analysis are being conducted on the variables of this research. This research aims to provide more persuasive information on which perceived benefits variables will give the greatest impact on the E-commerce implementation.

CHAPTER 1: RESEARCH OVERVIEW

1.0 Introduction

In this chapter, background of the study will be discussed. Besides, the purposes and objectives of the study can also be found in problem statement, research questions and objectives. Furthermore, the importance and contribution of this study will be explained in significance of the study. There is also a brief outlines for each chapters in the study.

1.1 Research Background

The rapid growth of Internet usage is no doubt in this information technology era. In Malaysia, the growth of Internet users is 356.8 % since 2000. The internet penetration as at March 31, 2011 is 58.8% (Internet World Stats, 2011). The extensive uses of Internet have resulted in mounting popularity in online shopping. In the world history, there is no other industry which has accomplished a rapid growth in as short a time as E-commerce (Khatibi, Thyagarajan, & Seetharaman, 2003). Due to this rapid growth, it grabs the attention for further research (Osman, Chan, & Bei, 2010).

Online shopping typically refers to online transactions where products or services are sold to consumers via Internet. As the largest shopping mall globally, the Internet allows consumers today to make online transactions from anywhere at anytime by just a few clicks (Kim, Lee, & Kim, 2004). The traditional boundaries will soon be replaced by a new intermediary for purchasing goods and services (Paynter & Lim, 2001).

Students are the largest group of Internet users (Lichtenstein & Swatman, 1997). They are the most important because they would be the main purchasing force in future. Thus, their purchasing power and drivers of their purchasing decision

cannot be overlooked. Understanding these will contribute to further development of marketing strategies in online shopping context (Delafrooz, Paim, & Khatibi, 2010).

1.2 Problem Statement

In the latest era of technology, Internet has become a major component in the business environment. As a result, Internet is used as a tool to enhance businesses. In 2001, 48.9% of Internet users have online purchasing experience, with three quarters of the online buyers expect that they purchase online for at least 10 times in a year. More than 627 million people in the world have the experience in shopping online (Delafrooz, 2009).

Despite having rapid growth in online shopping industry, there is undeniable evidence that there are customers who may make decision of not to buy online even if they have made several searches throughout the retail Websites. 81% of those who browse Websites for goods and services do not actually purchase online (Delafrooz, 2009).

According to the survey by BizRate.com on 9500 shoppers, 55% online shoppers abandon their purposes when they are searching for products while 32% of them discard when making payment (Sim, Eastlick, Lotz, & Warrington, 2004). However, the result cannot be generalized as it was done overseas and it does not represent Malaysian online shoppers. Closer examination is needed on specific countries because there are differences between countries in the context of culture and other factors.

Different researchers have different perspective on the factors influencing online shopping decision significantly. Ranganthan and Ganapathy (2002) argued that security or privacy is the main considerations of the consumers; whereas Shergill and Chen (2005) argued that the key factor is Website design.

As online consumers tend to be better educated, younger, and more affluent than the general population, this segment is extremely attractive to marketers (Berkowitz, Kerin, Hartley, & Rudelius, 2000). With the expansion of educational services in Malaysia, undergraduates are becoming one of the most important market segments as they are the ones who have online shopping interest and high purchasing power (Delafrooz, 2009). Furthermore, E-commerce in Malaysia is still at the early stage of development (Yulihasri, Islam, & Daud, 2011). Hence, online retailers need to have an understanding on this channel.

1.3 Research Objectives

1.3.1 General Objective

The general objective of this study is to investigate the perceived benefits which affect undergraduates' online shopping decision.

1.3.1 Specific Objectives

The objectives of this research are:

1. To investigate the relationship between Webpage design and online shopping decision.
2. To investigate the relationship between product choice and online shopping decision.
3. To investigate the relationship between price and online shopping decision.
4. To investigate the relationship between convenience and online shopping decision.
5. To investigate the relationship between customer service and online shopping decision.

6. To investigate the relationship between product quality and online shopping decision.
7. To investigate which element of perceived benefits has the largest influence on online shopping decision.

1.4 Research Questions

1.4.1 General Question

What are the elements of perceived benefits which affect undergraduates to make decision to shop online?

1.4.2 Specific Questions

1. Is there a significant relationship between Webpage design and online shopping decision?
2. Is there a significant relationship between product choice and online shopping decision?
3. Is there a significant relationship between price and online shopping decision?
4. Is there a significant relationship between convenience and online shopping decision?
5. Is there a significant relationship between customer service and online shopping decision?
6. Is there a significant relationship between product quality and online shopping decision?
7. Which element of perceived benefits has the largest influence on online shopping decision?

1.5 Hypotheses of the Study

H_1 : There is a significant relationship between Webpage design and undergraduates' online shopping decision.

H_2 : There is a significant relationship between product choices and undergraduates' online shopping decision.

H_3 : There is a significant relationship between prices and undergraduates' online shopping decision.

H_4 : There is a significant relationship between convenience and undergraduates' online shopping decision.

H_5 : There is a significant relationship between customer service and undergraduates' online shopping decision.

H_6 : There is a significant relationship between product quality and undergraduates' online shopping decision.

1.6 Significance of the Study

With a better understanding of the relationship between perceived benefits and online shopping decisions, managers can analyse and amend their strategies to boost up online shopping business. Interested parties such as entrepreneurs and investors that have the intention to march into the E-commerce business can also gain benefits through this study as to identify the largest influential effect of perceived benefits which will affect the undergraduates' online purchase decision. They can focus on the significant factor and stay alert about the trends and factors of online shopping.

E-marketers can also have a better knowledge on perception of students on benefits gained on purchasing decisions. They can know how to market their Websites in order to attract students. An improved insight can also be developed to improve their perspective on the factors affecting the decisions.

As no study has been conducted on the direct relationship between perceived benefits and online purchase decisions in Malaysia, this study can be used as a reference for future researcher. Moreover, academician can use this research to have further understanding and study.

1.7 Chapter Layout

In Chapter One, purposes and objectives of this study can be found. The reason of conducting this study and how future researches benefit from this study is also explained. In Chapter Two, valence framework is explained. Past studies on the independent variables are reviewed. Conceptual framework is built and hypotheses are formed to test in this research. Sampling techniques and data collection method are explained in Chapter Three. The way to analyze data is also planned and explained in this chapter. In Chapter Four, there will be the analysis of data that collected from the questionnaire that distributed to 500 target respondents in this study. Descriptive analysis and inferential analysis will be carried out. Lastly, Chapter Five will focus on the discussion of the results and limitations in this study. Besides, recommendations and implications will also be provided for the reference of future researchers and practitioners respectively.

1.8 Conclusion

In conclusion, this chapter studies the background of online shopping in recent years. Also, it identifies the purpose, objectives, hypotheses and significance of this research. In next chapter, researcher will review on the related past studies which study on the influences of perceived benefits factors on the consumers' buying decision. Then, the researcher will propose a conceptual framework based on the past review on other researchers' studies. Also, hypotheses will be developed based on this framework.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

In previous chapter, current trend of online shopping are exposed. The major perceived benefits affecting online shopping are identified. Their relationship is studied in this research. This chapter documents the comprehensive review of the past studies conducted on the perceived benefits. A conceptual framework is proposed and hypotheses are formed.

2.1 Review of the Literature

Nowadays, the usage of Internet is very common. It acts as the channel to search for information and to shop online. Taylor Nelson Sofres' Report 2001 (as cited in Hannula & Chuck, 2003) stated that the percentage of worldwide online shoppers has increased by 50% from 2000 to 2001. Consumers' perceived benefits comprises of the sum of online shopping advantages or satisfactions that meet their demands (Wu, 2003). There are six perceived benefits considered in this research, which are Webpage design, product choice, price, convenience, customer service, and product quality.

2.1.1 Webpage Design

According to Zhang, Dran, Small, and Barcellos (1999, 2000) and Zhang and Dran (2000) (as cited in Li & Zhang, 2002), Website design has two features, which are hygiene and motivator elements. These elements contribute to user dissatisfaction and satisfaction. Hygiene elements are those features making the website functional. Its absence will cause user

dissatisfaction. Motivator elements add value to the Website. For E-retailing, Webpage design is crucial as it acts as the marketplaces.

Ho and Wu (1999) (as cited in Shergill et al., 2005) stated that Webpage design is a major reason affecting customer satisfactions towards online shopping. Shergill et al. (2005) found that Webpage design is the second most important element emphasized by most online shopper. There was also a positive relationship between Webpage and online shopping's attitude (Delafrooz et al., 2010). Liang and Lai (2001) found that consumers prefer to shop at well-designed Website. These findings prove that there is a significant relationship between online shopping attitudes and Webpage design.

2.1.2 Product Choice

Dillon and Reif (2004) state that product choices are important as it provides shoppers with the opportunity to compare, contrast, and select from multiple potential solutions which meet their needs.

Harn, Khatibi, and Ismail (2006) stated that there are wider product choices over the Internet since there is no physical space limit. This shows that Malaysians are looking for wider choices of goods when shopping online. According to Simon, Palma, and Thisse (1992), consumer choice is greatly dependent on product differentiation. Differentiations will motivate consumer to shop online (Delafrooz, Paim, & Khatibi, 2011). Finding in Han, Bullington, and Case (2006) shows that product variety is important to online shoppers. Similar results of these studies prove that wider product choice will increase online shopping frequency.

2.1.3 Price

Price is defined as total monetary cost to purchase (Dillon et al., 2004). All consumers perceived that online purchasing is cheaper than offline (Goldsmith & Goldsmith, 2002). In Rowley (2000) (as cited in Harn et al., 2006), price is the dominant factor that influences consumers' decision to shop online.

Harn et al. (2006) proves that online shoppers in Malaysia look forward for cheaper product. Su and Huang (2011) also proved that online shopping intention for undergraduates is significantly influenced by prices. Similarly, Ahuja, Gupta, and Raman (2003) proved that price is the second strongest motivator for students to shop online. In earlier research by Goldsmith and Bridges (2000), lower price was a positive attribute that encourages online buying.

2.1.4 Convenience

According to Hanson (1999) (as cited in Harn et al., 2006), convenience is measured in form of time consumed, location to shop and purchasing process. It motivates consumers to shop online.

Harn et al. (2006) stated that the usage of Internet is much more convenient than other traditional methods of purchasing. They mentioned that the 24-hour availability of online shopping and accessibility makes online shopping more convenient.

Girard, Korgaonkar, and Silverblatt (2003) said that convenience is a stronger motivator to shop online (as cited in Amoroso & Hunsinger, 2008). Result shows that convenience tends to influence E-Loyalty significantly (Amoroso et al., 2008). It is consistent with the findings in Ahuja et al. (2003). Lastly, Chiger (2001) and Supphellen and Nysveen

(2001) (as cited in Kim & Kim, 2004) found that convenience play significant roles in intention to revisit certain site.

2.1.5 Customer Service

Customer service means the ability of customer to reach the vendor if they face problem while shopping and post-purchase service problems (Ahuja et al., 2003). Good customer service led to customer satisfaction would result in consumer loyalty (Shergill et al., 2005).

Less attention is given on the customer services elements. However, Delafrooz et al. (2010, 2011) showed significant correlation between shopping intention and customer service. This is same with the results in Harn et al. (2006) and Ahuja et al. (2003), which perceived that customer services influence the buying behavior significantly.

2.1.6 Product Quality

Product quality means actual functionality of product, consistency between the quality specification of Internet shopping mall and real quality of the physical product (Ahn, Ryu, & Han, 2004). Product quality was found positively affecting consumers' online shopping intention (Ahn et al., 2004; Han et al, 2006).

In Arnold, Handelman, and Tiger (1996) and Baker, Levy, and Grewal (1992) (as cited in Dillon et al., 2004), product quality has the highest influential effect on online shoppers. Dillon et al. (2004) also proved that students who tend to shop online are likely to be affected by the product quality. Han et al, (2006) studied product quality as it is one of the motivators derived by other online research firm.

In conclusion, the past results showed that the above elements are the most common elements motivating online purchase. Conflicts arose in past researches. Thus, a research on perceived benefits should be conducted to clarify and find out which element has the largest influence on online shopping decision.

2.2 Review of Relevant Theoretical Models

According to Goodwin (1996), the ideas of valence framework is primarily derived from economics and psychology literature (as cited in Kim, Ferrin, & Rao, 2003). Valence framework considers both perceived benefits and perceived risks (Lu, Cao, Wang, & Yang, 2011).

Perceived benefit refers to consumer's belief in the aspects where they will be beneficial of from the online transaction with a certain Website (Kim, Ferrin & Rao, 2008). Also, Kim et al. (2008) defined perceived risk as a consumer’s belief in the possible negative effects from conducting online purchasing.

The basic ideas of valence framework have been adopted in the game research (Harrington & Hess, 1996) and marketing research (Peter & Tarpey, 1975) even though it has not been established. The marketing research investigates consumer’s behaviors in views of these two perceptions toward risks and benefits (Peter et al., 1975).

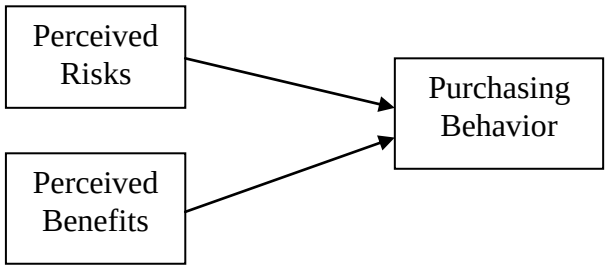
Several marketing management researches (Jacoby & Kaplan, 1972; Petter & Ryan, 1976; Zikmund & Scott, 1973) are done on the purchasing behavior of consumers in perception of risks (as cited in Kim, Cho, & Rao, 2000). However, perception of risks is not the only factor influencing purchasing behavior. Wilkie and Pessemier (1973) showed significant result that consumers regard perceived benefits as fundamental reason for the purchasing behavior.

The concept of this framework was originated from Peter et al. (1975) (as cited in Lu et al., 2011), which assumes that consumer perceived the products to have both

positive (perceived benefits) and negative (perceived risks) traits, and the purchasing decision made is according to the maximised net valence of these two attributes. Peter et al. (1975) (as cited in Kim et al., 2000) recognized three fundamentals concept for consumer decision making, which are perceived risks, perceived benefits, and net valence.

In short, Peter et al. (1975) stated that perceived benefits and perceived risks are fundamental aspects to influence consumers' purchasing behavior (as cited in Kim et al., 2003).

Figure 2.1: Valence Framework



Adapted from: Kim, D.J., Cho, B., & Rao, H.R. (2000). Effects of consumer lifestyle on purchasing behavior on the Internet: a conceptual framework and empirical validation. *Proceeding of the ICIS'00 Proceedings of the twenty first international conference on information system*, 688-695.

Valence framework is applied in Kim et al. (2000) as well. Figure 2.1 shows the basic theoretical framework of the study. In Kim et al. (2000), the primary concept is that consumers' purchasing decisions are based on the perception of risk and benefits regarding online shopping. This is relevant to the study on relationship between perceived benefits factors towards undergraduates' online shopping behavior.

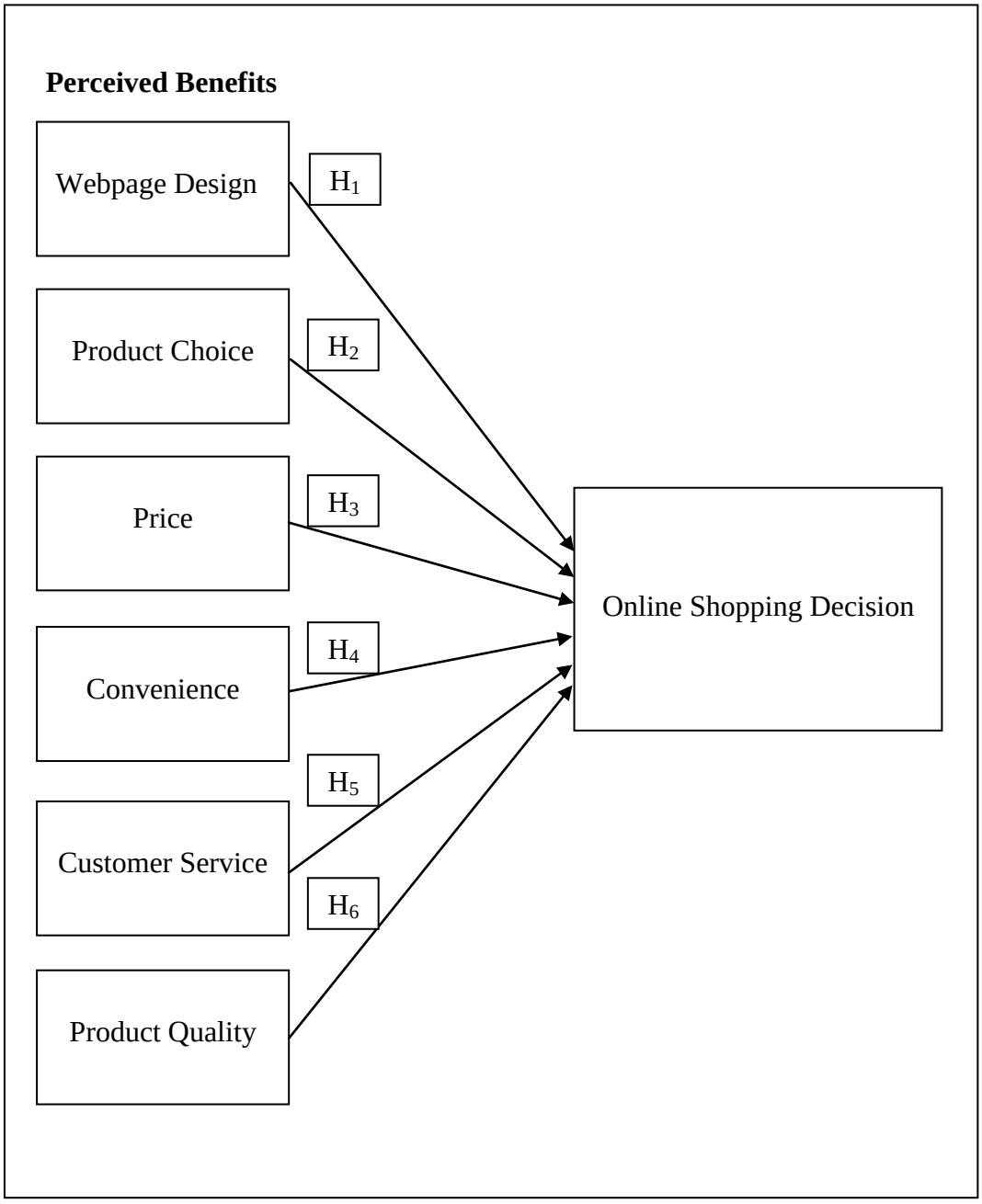
The underlying logic is consumer's buying behavior is influenced by perceived risks and benefits. However, researchers' primary concern is to study on how the perceived benefits attributes would influence online buying decisions of undergraduates in Malaysia. This can be done by further investigating into each perceived benefits, which includes Webpage design, product choice, price,

convenience, customer service, and product quality. Thus, valence framework is chosen in this study to conduct a test on the relationship between perceived benefits and decisions to shop online.

2.3 Proposed Theoretical Framework

The proposed framework is illustrated in Figure 2.2 and the hypotheses of this study are formed based on this framework.

Figure 2.2: Relationship between Perceived Benefits and Online Shopping Decision



Adapted from: Delafrooz, N., Paim, L.H., & Khatibi, A. (2010). Students' Online Shopping Behavior: An Empirical Study. *Journal of American Science, 6*(1), 137-147.

2.4 Hypotheses Development

Hypotheses of this study are explained in Table 2.1.

Table 2.1: Hypotheses of the Study and Explanation

Hypotheses	Explanation
H_1: There is a significant relationship between Webpage design and undergraduates' online shopping decision.	Webpage of the online retailers may affect undergraduates' decision. They will purchase from the retailer that provide an attractive and user friendly Webpage.
H_2: There is a significant relationship between product choice and undergraduates' online shopping decision.	Product choice will drive the decision of undergraduates during purchasing online. An online retailer that provides wider selection on the product will attract undergraduates to buy from them.
H_3: There is a significant relationship between price and undergraduates' online shopping decision.	Price will affect undergraduates' decision on online shopping. Given a same type of product, student will choose to buy the product with lower price due to limited cost.
H_4: There is a significant relationship between convenience and undergraduates' online shopping decision.	Convenience will be a factor that affects undergraduates' online shopping decision. Online retailer that can make undergraduates save time and money will be chosen.
H_5: There is a significant relationship between a customer service and undergraduates' online shopping decision.	Undergraduates' decision will be affected by customer service such as e-form inquiry and customer comment provided by online retailers, a retailer that provides better customer service will be chosen by undergraduates.
H_6: There is a significant relationship between product quality and undergraduates' online shopping decision.	Undergraduates will make decision based on the quality of product that the online retailers sold. The retailer that offer good quality product will be undergraduates' choice.

2.5 Conclusion

This chapter reviews the relevant past studies on the influences of six perceived benefits towards consumers' purchasing decision. Valence framework is chosen as the theoretical model for this research. This study only focuses on perceived benefits attributes in valence framework. Lastly, hypotheses are being developed from the proposed framework. After reviewing and developing the framework, researcher would decide on how to conduct the research in next chapter.

CHAPTER 3: RESEARCH METHODOLOGY

3.0 Introduction

In this chapter, the research design in term of quantitative research and cross sectional study design will be described. Besides, the population, sample and sampling method would also be determined. The method to collect data from target respondents would be explained. Furthermore, the measurement of variables and the technique for analysis of data would be discussed.

3.1 Research Design

3.1.1 Quantitative Research

Quantitative research is a business research that adopts empirical assessments involving numerical measurement and analysis in order to address research objectives (Zikmund, Babin, Carr, & Griffin, 2010). This research uses the information from sample being studied as the result of analysis. Therefore, it is classified as quantitative research.

3.1.2 Cross Sectional Study Design

This research is a cross sectional study. Data collected from the sample is representing a point of time only where it only determines the relationship between independent variables and the dependent variable (Olsen & St. George, 2004). Cross sectional study is used because it allows the comparison of many different variables in a same time (Gibson, 2009).

3.2 Data Collection Method

3.2.1 Primary Data

Primary data collection method in the form of self-administrated questionnaire is chosen to collect data from respondents. Respondents are required to answer all questions in the questionnaire. The questionnaires are distributed to the target respondents by hand and are collected back once they have answered.

3.3 Sampling Design

3.3.1 Target Population

The unit of analysis in this research is undergraduates of private universities in Malaysia. Online consumers are better educated, younger, and more affluent which makes them an attractive market to explore (Berkowitz et al. 2000). Gardyn (2002) (as cited in Delafrooz et al., 2010) state that undergraduates access the Internet 90% daily. According to Sabri, MacDonald, Masud, Paim, Hira, and Othman (2008) (as cited in Delafrooz et al., 2010), with the expansion of education level, undergraduates have became common consumers in Malaysia.

3.3.2 Sampling Frame and Sampling Location

Table 3.1 shows the universities chosen as the sampling location and the sample distribution in each university. Sampling method is used due to budget and time constraints. It is impracticable to reach all private

universities in Malaysia (Saunders, Lewis, & Thornhill, 2003). It is impossible to obtain names of all students in all universities.

Table 3.1: Sampling Location and Sample Distribution

Universities	Sample Size
Multimedia University (MMU)	50
Universiti Tenaga Nasional (UNiTEN)	50
Open University Malaysia (OUM)	50
University of Nottingham Malaysia (UNM)	50
Universiti Teknologi PETRONAS (UTP)	50
Taylor's University College (Taylor)	50
Universiti Tunku Abdul Rahman (UTAR)	50
Universiti Tun Abdul Razak (UniTAR)	50
Monash University Malaysia (Monash)	50
Universiti Industri Selangor (Unisel)	50

3.3.3 Sampling Elements

500 undergraduates between the ages of 18 to 26 from top ten local and international private universities in Malaysia is the sample chosen. These huge samples are needed to provide an adequate level of confidence to the study (Delafrooz et al., 2011).

3.3.4 Sampling Technique

Non-probability sampling is adopted because the probability of each case to be selected from the population is unknown (Saunders et al., 2003). Also, it is lower cost, speedy in collecting the data and more convenient (Zikmund et al., 2010). Quota sampling is used in this research. Data is collected in the ten chosen universities until each university has reached 50 cases.

3.3.5 Sampling Size

A total of 500 samples will be chosen where each universities accounts for 50 samples. According to Sekaran (2003), 30-500 samples are most suitable for most research. The sample must possess certain similar characteristics to the populations (Jackson, 2008). Respondents from ten universities are chosen to avoid bias by surveying from only one university. The sample selections are arbitrary as researcher relied on personal judgement. By accumulating all 50 cases from ten universities, a representative samples from the populations will be generated (Zikmund, 2003).

Barlett, Kotrlik, and Higgins (2001) used two factors, the margin of error and the alpha level, to estimate the reliability of the sample size. 5% of margin of error is acceptable (Barlett et al., 2001). Therefore, the sample size of 500 respondents is considered appropriate as it produces only 4.5% margin of error (Margin of error = $1/\sqrt{N}$). The result obtained has 95.5% of accuracy. In order to test reliability of the sample size, Cochran's formula can be used by inserting selected alpha value for utilizing t-value. Generally, most research accepts an alpha level of 0.05. Thus, for the sample size of more than 120, the t-value will be around 1.96 for alpha value of 0.05 (Barlett et al., 2001).

3.4 Research Instrument

3.4.1 Questionnaire Survey

Questionnaire is used because it is an efficient way to collect responses from large sample where each respondent is asked to answer on the same set of questions (Saunders, Lewis, & Thornhill, 2009). It is absolutely necessary that the layout of the questionnaire is made simple so that the respondents can easily understand, and answer them without taking much of their time. The reason is because the form of questions asked, the language used, and the length of the questionnaire will affect the response rate.

The questionnaire of this research was sequenced accordingly into three sections namely Section A, B, and C. In the first part, respondents are asked to answer questions about their socio-demographic background such as gender, race, and education. The other two parts are closed-ended questions about perceived benefits and online purchasing decision.

3.4.2 Pilot Test

A pilot test is conducted prior to the survey. According to Kim et al. (2004), pre-test of questionnaire is to ensure that the questionnaire items are readable and in logical arrangement. Besides, pre-test may help to ensure that the items suit the study's requirement (Osman et al., 2010). According to Neuman (1997), only small set of respondents is needed for pilot test. Monette, Sullivan, and DeJong (2002) suggested that 20 people from the sample should be contacted randomly for testing. After collecting the answered questionnaires, reliability test is carried out. Cronbach Alpha which gives a value of 0.7 or greater, shows the scale has good reliability. The suggestions and comments from these respondents are then evaluated

and incorporated into the questionnaire. Finally, the revised questionnaires are sent to the 500 target respondents by hands.

3.5 Constructs Measurement

3.5.1 Independent Variables and Measurement

Each of the independent variable is measured by five or six items (Refer to Appendix 3.3). Respondents are requested to rate all items by five-point Likert's scale. Five-point Likert's scale is used as it is simple to develop and less time consuming (Salkind, 2007). The scale is ranged from strongly disagree (1) to strongly agree (5). All independent variables are interval data.

3.5.1.1 Webpage Design

The six items to measure Webpage design are adapted from Chai, Eze, and Ndubisi (2011), Forsythe, Petee, and Jai (2003), Delafrooz, Paim, and Khatibi (2009a), and Rishi (2008).

3.5.1.2 Product Choice

The five items to measure product choice are developed from different researches, which are Osman et al. (2010), Robin (2009), Forsythe et al. (2003), Kim et al. (2004), and Chan and Chow (2010).

3.5.1.3 Price

Adapted from Osman et al., (2010), Chai et al. (2011), Dabhade (2008), and Tak and Wan (2006) are the six items to measure price.

3.5.1.4 Convenience

Researches of Robin (2009), Forsythe et al. (2003), Osman et al. (2010), and Kim et al. (2004) has developed the six items used to measure the variable of convenience in this research.

3.5.1.5 Customer Service

The five items to measure customer service are adapted from Chai et al. (2011), Chan et al. (2010), and Delafrooz et al. (2009a).

3.5.1.6 Product Quality

The five items to measure product quality are adapted from Torkzadeh and Dhillon (2002), Chai et al. (2011), Dabhade (2008), and Osman et al. (2010).

The reason for the items adapted from these studies is because these researches also focus on online shopping.

3.5.2 Dependent Variable and Measurement

The dependent variable is measured by five items (Refer to Appendix 3.3). Respondents are requested to rate all items by five-point Likert's scale. The scale is ranged from strongly disagree (1) to strongly agree (5). The dependent variable is interval data.

3.5.2.1 Online Shopping Decision

There are five items to measure online shopping decision. These five items are adapted from Delafrooz, Paim, and Khatibi (2009b), Goldsmith (2002), Chan et al. (2010), and Osman et al., (2010).

3.6 Data Processing

The questionnaires would be analysed once they are collected from the respondents. Before the analysis of data, steps of checking, editing, coding, and transcribing, as well as specifying any special or unusual treatments of data would be carried out.

3.6.1 Data Checking

Data checking is carried out at first to ensure no omission on all questionnaires. Before the distribution, pilot test had been conducted by distributing to twenty respondents. Then, reliability test is conducted to ensure the reliability of data.

3.6.2 Data Editing

Each questionnaire is then be reviewed and edited. Any incomplete, inconsistent, unsatisfactory, or ambiguous answers would be discarded to minimise the response bias and the precision of the data can be reinforced.

3.6.3 Data Coding

The third step is assigning a code to represent a specific response of a specific question (Malhotra, 2004).

For the first question in Section A of the questionnaire, "18-20" years old is coded as 1, "21-23" years old is coded as 2, "24-26" years old is coded as 3, and "26 and above" is coded as 4. As for question 2, "Male" is coded as 1 and "Female" is coded as 2. For question 3, "Malay" is coded as 1, "Chinese" is coded as 2, "Indian" is coded as 3, and "Others" is coded as 4. For question 4, "MMU" is coded as 1, "UNiTEN" is coded as 2, "OUM" is coded as 3, "UNM" is coded as 4, "UTP" is coded as 5, "Taylor" is coded as 6, "UTAR" is coded as 7, "UniTAR" is coded as 8, "Monash" is coded as 9, "Unisel" is coded as 10, and "Others" is coded as 11.

For question 5, "Business" is coded as 1, "Engineering" is coded as 2, "Social Science" is coded as 3, "Science" is coded as 4, "Arts and Design" is coded as 5, "Language and Linguistics" is coded as 6, and "Others" is coded as 7. For the last question, "Never" is coded as 1, "1-5" is coded as 2, "6-10" is coded as 3, "11-15" is coded as 4, and "15 and above" is coded as 5.

For every question in Section B and C, "Strongly Disagree" is coded as 1, "Disagree" is coded as 2, "Neutral" is coded as 3, "Agree" is coded as 4, and "Strongly Agree" is coded as 5.

To complete this research, the Statistical Package for Social Science (SPSS) software would be used for data coding and data transcribing.

3.6.4 Data Transcribing

The final step is keypunching the coded data from the questionnaires into computers (Malhotra, 1993). Coded data would be transcribed into SPSS version 16.0 for data analysis.

3.7 Data Analysis

3.7.1 Descriptive Analysis

Descriptive statistic analysis is conducted to conclude and profile the sample characteristics (Dabhade, 2008). The respondents' feedback is summarised by descriptive analytical tools such as mean and standard deviation (Chai et al., 2010). Mean is used to measure the central tendency of the data while standard deviation measures the variability that will give a quantitative index of the dispersion of the distributions (Zikmund et al., 2010). According to Cao and Mokhtarian (2005), descriptive analysis is showing what happened for a particular sample at a particular time, which provides a clear picture of observed behavior.

3.7.2 Scale Measurement

3.7.2.1 Internal Consistency Reliability Test

Reliability test should be conducted. It is a test on the consistency of raw data collected and if there is transparency in how the data is made up (Saunders et al., 2009). Cronbach Alpha can be used as it is one of the most frequently reported internal consistency estimates (Brown, 2002). According to Shergill et al. (2005), the nearer the reliability coefficient to value of 1, the better the reliability measures it is. The construct are said to be reliable when the Cronbach's Alpha for the model constructs are at or above the recommended threshold of 0.7 (Chan et al., 2010).

3.6.2.2 Normality Test

Besides, normality test is needed to be conducted to ensure that samples are normally distributed. This study has a sample size of 500, which is large enough to employ Central Limit Theorem. Therefore, the data should be normally distributed (Alam & Yasin, 2009).

3.7.3 Inferential Analysis

Inferential analysis is conducted to project the characteristics from a sample to entire population (Zikmund et al., 2010).

3.7.3.1 Pearson's Correlation Analysis

A correlation analysis is conducted to investigate the specific hypothesis about whether a certain variable affects dependent variable. It is also used to explore the magnitude of the influence towards the dependent variable (Cao et al., 2005). Thus, Pearson Correlation is used in this study as this correlation test is able to express the strength of the relationship between variables.

3.7.3.2 Multiple Regression Analysis

There is a need to conduct a multiple regression test to measure the relationship between several independent variables and the dependent variable (Delafrooz et al., 2010). To test the hypothesis, the independent variable is said to have relationship with dependent variable when the p-value of regression coefficient is less than the significant level of 0.05. Otherwise, there is no relationship between variables (Chan et al., 2010).

3.8 Conclusion

In conclusion, this is a quantitative study and a cross sectional study. The population in this research is undergraduates of private universities in Malaysia while 500 undergraduates between the ages of 18 to 26 from top ten local and international private universities in Malaysia is the sample chosen. Quota sampling of is used. Primary data collection method in the form of self-administrated questionnaire is conducted to collect data from the target respondents. Each independent variable is measured by five or six items and rated by five-point Likert's scale. Descriptive analysis and inferential analysis are used in this research. These will be discussed further in next chapter.

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

Data of this research are collected by using methods stated in previous chapter. In this chapter, data are analysed according to analysis techniques stated in previous chapter. The discussion in this chapter includes descriptive analysis (demographic profile of the respondents and central tendencies measurement of constructs), scale measurement (internal consistency reliability test and normality test), and inferential analysis (Pearsons' correlation analysis and multiple regression analysis).

4.1 Descriptive analysis

4.1.1 Demographic Profile of the Respondents

In the questionnaire survey, there are several questions raised for each respondent. These are gender, age, ethic group, university, and field of study and also the experience of online shopping. In this part, it provides analysis on the respondent demographic profile based on frequencies.

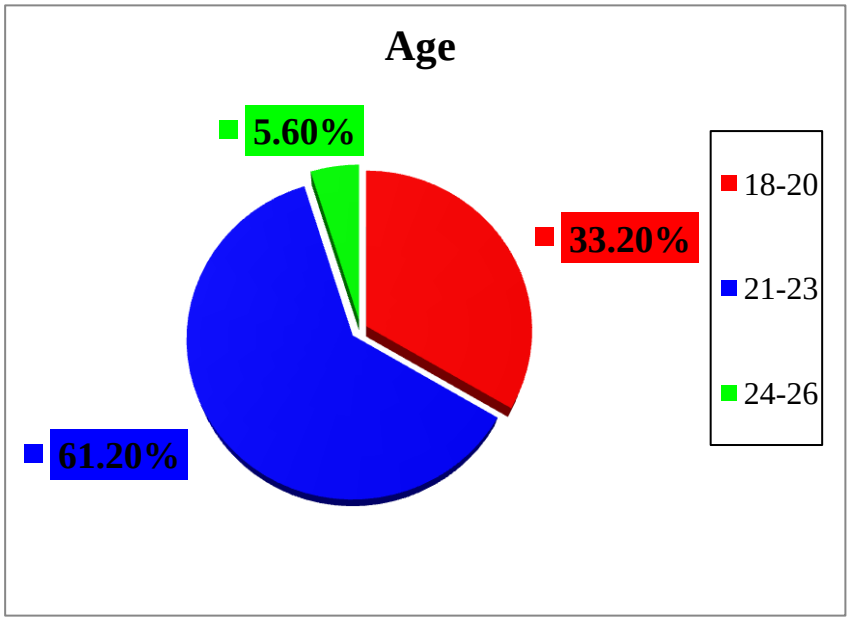
4.1.1.1 Age

Table 4.1: Age of the Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-20	166	33.2	33.2	33.2
	21-23	306	61.2	61.2	94.4
	24-26	28	5.6	5.6	100.0
	Total	500	100.0	100.0	

Source: Data developed for research

Figure 4.1 Age of the Respondents



Source: Data developed for research

Table 4.1 shown presents the analysis of the age group of 500 respondents. Among the 500 undergraduates, 306 undergraduates fall under the age group of 21-23. This means that a majority of 61.20% of the undergraduates are under age 21-23. Next, the age group that has a significant number of undergraduates is 18-20. In this age group, it has a total number of 166 undergraduates. In

other words, 33.20% of the undergraduates represent the age group of 18-20. Nevertheless, there is a small portion of undergraduates fall under the age group of 24-26 which is 5.6% or 24 undergraduates. Hence, majority of the undergraduates (respondents) fall under the age group of 21-23 as the common age of fresh graduates are within this range.

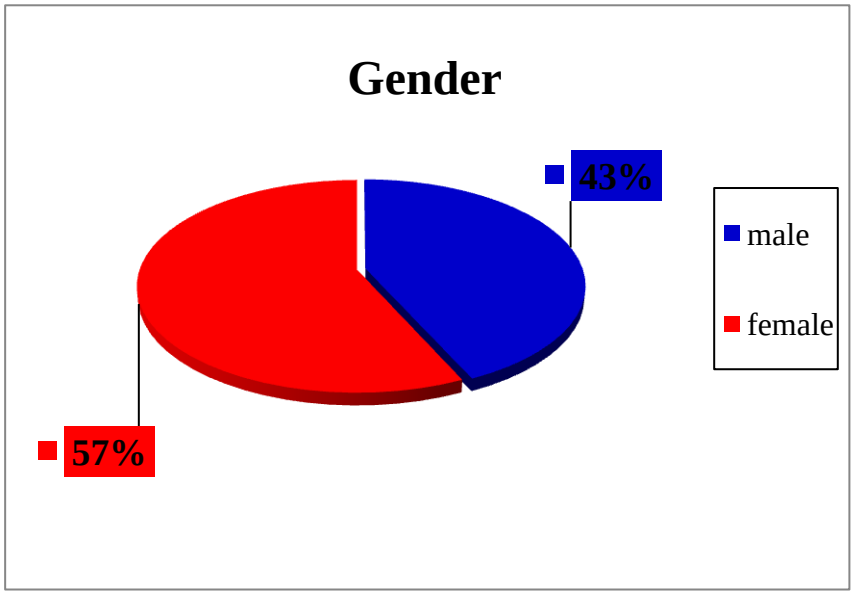
4.1.1.2 Gender

Table 4.2: Gender of the Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	216	43.2	43.2	43.2
	Female	284	56.8	56.8	100.0
	Total	500	100.0	100.0	

Source: Data developed for research

Figure 4.2 Gender of the Respondents



Source: Data developed for research

Table 4.2 presents the composition of gender among 500 respondents. Firstly, 284 out of 500 respondents are female undergraduates. This comprises 57% of the respondents. On the other hand, male respondents comprise 43% of it. In other words, there are 216 male undergraduates.

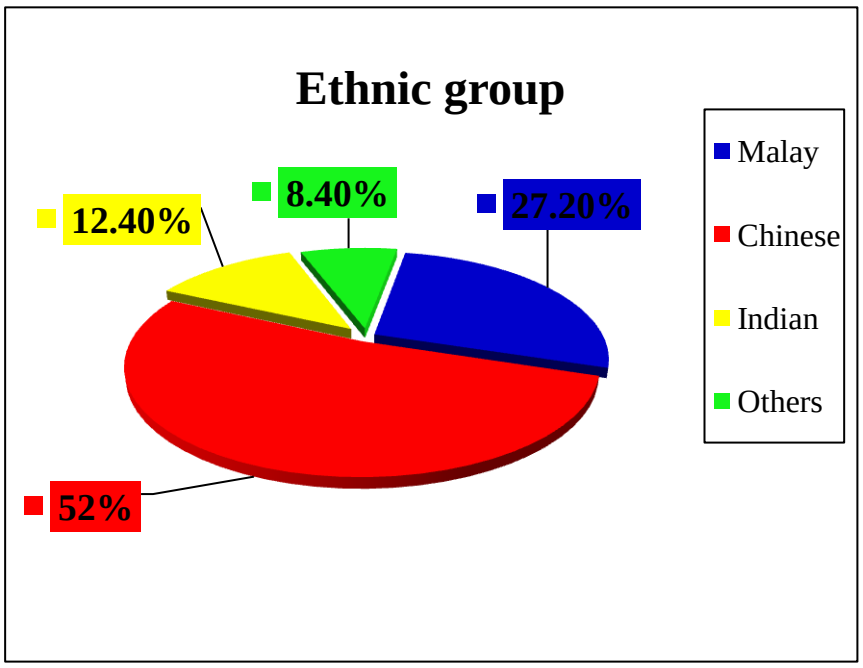
4.1.1.3 Ethnic Group

Table 4.3: Ethnic groups of the Respondent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Malay	136	27.2	27.2	27.2
	Chinese	260	52.0	52.0	79.2
	Indian	62	12.4	12.4	91.6
	Others	42	8.4	8.4	100.0
	Total	500	100.0	100.0	

Source: Data developed for research

Figure 4.3 Ethnic Groups of the Respondents



Source: Data developed for research

In table 4.3, it shows that most of the respondents are Chinese which comprises 52% or 260 respondents, followed by Malay, 27.2% or 136 respondents; Indian ,12.4% or 62 respondents and other ethnic groups ,8.4% 42 respondents. From the survey, some ethnic

group such as Iban, Kadazan, Punjabi and others are identified and categorized under other ethnic groups.

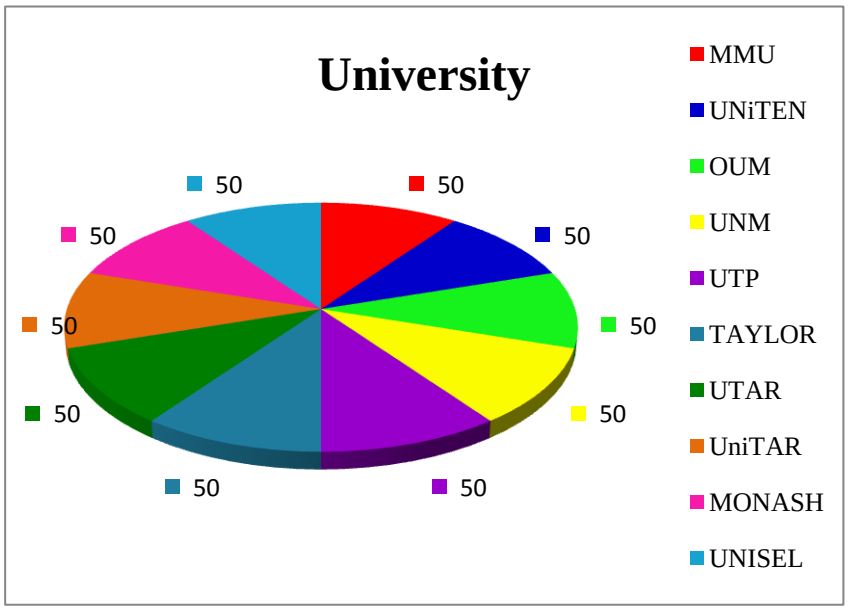
4.1.1.4 University

Table 4.4: Universities of the Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MMU	50	10.0	10.0	10.0
	UNiTEN	50	10.0	10.0	20.0
	OUM	50	10.0	10.0	30.0
	UNM	50	10.0	10.0	40.0
	UTP	50	10.0	10.0	50.0
	TAYLOR	50	10.0	10.0	60.0
	UTAR	50	10.0	10.0	70.0
	UniTAR	50	10.0	10.0	80.0
	MONASH	50	10.0	10.0	90.0
	UNISEL	50	10.0	10.0	100.0
	TOTAL	500	100.0	100.0	

Source: Data developed for research

Figure 4.4: Universities of the Respondents



Source: Data developed for research

Table 4.4 shows the proportion of the respondents selected from ten targeted universities. The ten targeted universities are Multimedia University (MMU), University Tenaga National (UNiTEN), Open University Malaysia (OUM), University of Nottingham Malaysia (UNM), University Teknologi PETRONAS (UTP), Taylor's University College (TAYLOR), University of Tunku Abdul Rahman (UTAR), Univesity of Tun Abdul Razak (UniTAR), Monash University Malaysia (MONASH), Universiti Industri Selangor (UNISEL). 50 undergraduates are selected evenly from each of these universities to carry out the survey. The total number of respondents selected to complete the survey is 500 respondents.

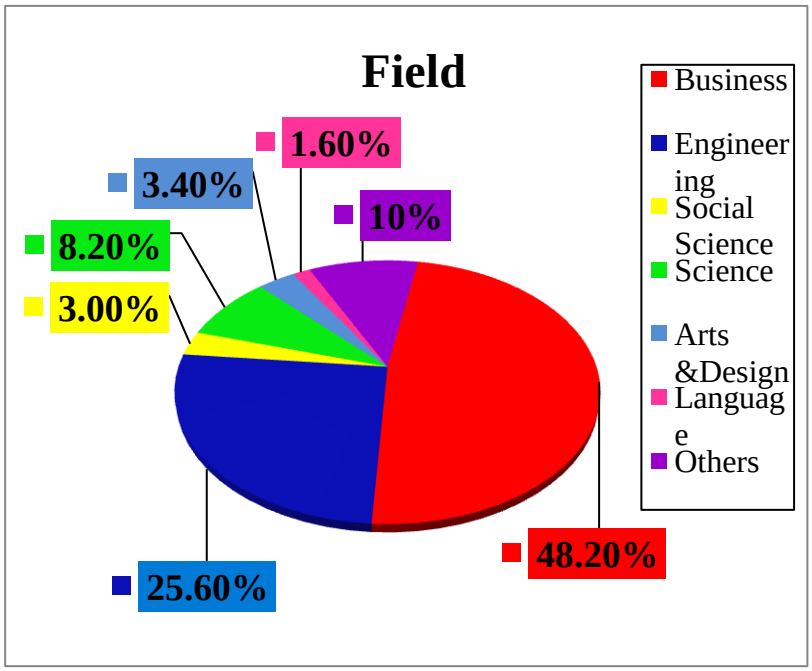
4.1.1.5 Field of Study

Table 4.5: Field of Study of the Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Business	241	48.2	48.2	48.2
	Engineering	128	25.6	25.6	73.8
	Social Science	15	3.0	3.0	76.8
	Science	41	8.2	8.2	85.0
	Arts&design	17	3.4	3.4	88.4
	Language	8	1.6	1.6	90.0
	Others	50	10.0	10.0	100.0
	Total	500	100.0	100.0	

Source: Data developed for research

Figure 4.5 Field of Study of the Respondents



Source: Data developed for research

In the questionnaire, question 5 is asked to identify the field that each respondent is enrolled to. The fields that are stated in the questionnaire are business, engineering, social sciences, sciences, arts and design, language and linguistics and also others. Business course is identified as the field of study that majority of the respondents are enrolled to. It comprises of 48.2% (241 respondents).

Next, engineering course is ranked second with 25.6% (128 respondents), followed by courses that are categorized as others with 10% (50 respondents). Courses that are categorized as others are Public Relations, Hotel Management, and others that are not stated in the questionnaire.

The next field of study that is ranked third is science courses (8.2% or 41 respondents); followed by arts and design (3.4% or 17 respondents), social science (3% or 15 respondents) and last but not least language and linguistic (1.6% or 8 respondents).

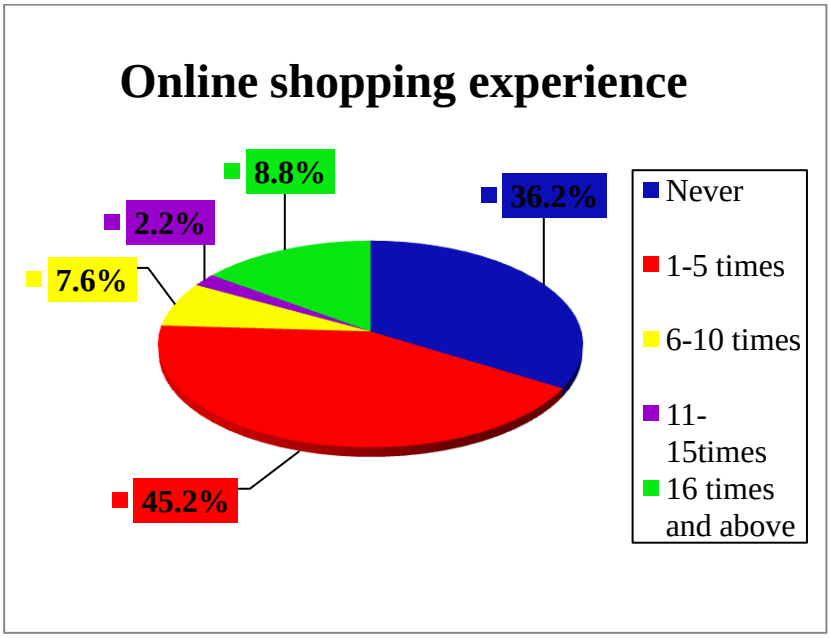
4.1.1.6 Online Shopping Experience

Table 4.6: Online Shopping Experience of the Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	181	36.2	36.2	36.2
	1-5 times	226	45.2	45.2	81.4
	6-10 times	38	7.6	7.6	89.0
	11-15 times	11	2.2	2.2	91.2
	16 times and above	44	8.8	8.8	100.0
	Total	500	100.0	100.0	

Source: Data developed for research

Figure 4.6: Online Shopping Experience of the Respondents



Source: Data developed for research

From the survey, the online shopping experiences of the respondents are identified. Majority of the respondents have the experience of shopping online. This is because 45.2% or 226

respondents have at least 1 -5 times of online shopping experience followed by 8.8% or 44 respondents have shop online for more than 16 times.

Next, 7.6% or 38 respondents also have shop online for 6-10 times and likewise, 2.2% or 11 respondents have 11-15 times of online shopping experience. In total, 63.8% of the respondents have the experience of online shopping. In other words, 319 respondents have shop online before.

Nevertheless, there are 36.2% or 181 respondents do not shop online before.

4.1.2 Central Tendencies Measurement of Constructs

A total of 38 items (questions) with particular mean score and standard deviation were obtained from the SPSS output. All of the items/questions are being asked using 5-point Likert scale with 1 indicating Strongly Disagree, 2 indicating Disagree, 3 indicating Neutral, 4 indicating Agree, and 5 indicating Strongly Agree.

Table 4.7: Central Tendencies Measurement of Constructs: Webpage Design

Items	Description	SD	D	N	A	SA	Mean	Standard Deviation
WD1	I prefer to purchase from Websites which are user friendly.	3.2%	7.2%	30%	35.2%	24.4%	3.70	1.017
WD2	I prefer to purchase from Websites with great functionality (payment option, product filter option, product customization, etc.)	2.4%	8.0%	24.2%	42%	23.4%	3.76	0.978
WD3	I prefer to purchase from Websites that are updated frequently.	2.0%	6.4%	17.8%	44.2%	29.6%	3.93	0.952
WD4	I prefer to purchase from Websites that provide detailed product information.	2.0%	4.0%	13.0%	38.8%	42.2%	4.15	0.933
WD5	Websites which display products by pictures and purchase button together will make my shopping easier.	2.4%	3.4%	17.2%	38.8%	38.2%	4.07	0.950
WD6	I prefer to purchase from Websites with attractive design.	3.2%	8.8%	29.0%	36.4%	22.6%	3.66	1.022

Source: Data Developed for research

Table 4.7 presents the percentage, mean, standard deviation for each of the item for webpage design.

Majority of the respondents (59.6%) agreed with item WD1, while 30% are neutral with the statement. Secondly, 65.4% of the respondents agreed with WD2 whereas 10.4 % of the respondents disagreed with the statement. There are 30% of the undergraduates standing neutral in position.

For WD3, 73.8% agreed with the statement and 8.4% does not stand with the statement. 81% of the sample agreed that they would like to purchase from Website that provides detailed product information. 6.0% of it did not agreed with the statement. In addition, 13% of the target respondents stayed neutral.

77% of the target respondents agreed that display product pictures and purchase button together make their shopping easier. However, 5.6% of the undergraduates did not agree with it and 17.2% of the undergraduates remain neutral. Lastly, 59% of the sample likes to purchase Websites with attractive design whereas 12% do not prefer to purchase from attractive Website. 29% of the undergraduates are neutral with the statement.

The item with the highest mean is WD4 (4.15). The item ranked second is WD5, with 4.07, followed by WD3 which has a mean record of 3.93. The next item is WD2 with mean record of 3.76, followed by WD1 with the mean of 3.70. WD6 has the lowest mean, which is 3.66.

The item with the highest standard deviation is WD6, with 1.022. WD1 has the second highest standard deviation, 1.017. The item with the lowest standard deviation is WD4, with 0.933.

Table 4.8: Central Tendencies Measurement of Constructs: Product Choice

Items	Description	SD	D	N	A	SA	Mean	Standard Deviation
PC1	Selection of goods available on the internet is very broad.	1.2%	5.2%	28.4%	41.6%	23.6%	3.81	0.896
PC2	I will be able to access many brands and retailers when I shop online.	1.8%	11.2%	27.2%	39.6%	20.2%	3.65	0.982
PC3	Items from different countries are easily available.	2.0%	8.4%	30.8%	39.2%	19.6%	3.66	0.952
PC4	Online shopping allows inter-comparable information.	0.8%	5.0%	25.6%	46.0%	22.6%	3.85	0.855
PC5	I can get specialized products through online shopping.	1.6%	6.0%	29.4%	42.4%	20.6%	3.74	0.906

Source: Data Developed for research

Table 4.8 shows the percentage, mean, standard deviation for each of the item for product choice.

For PC1, 65.2% of the undergraduates agreed with the statement while 6.4% of them do not agree with the statement. 59.8% of the sample group agreed with PC2 whereas 13% disagreed with it. 58.8% of the sample group has the same opinion as PC3 while 10.4% of the sample group disagreed with it. 68.6% of the respondents agreed with PC4 while 5.8% does not have the same opinion. Lastly, 63% of the respondents agreed with PC5 while there is 7.6% of the respondents do not agreed with it.

PC4 has the highest mean value (3.85) and is followed by PC1 (3.81). PC2 has the lowest mean, which is 3.65. Furthermore, PC2 also has the highest standard deviation, which is 0.982. PC3 (0.952) has the second highest standard deviation. The item with the lowest standard deviation value is PC1, which is 0.896.

Table 4.9: Central Tendencies Measurement of Constructs: Price

Items	Description	SD	D	N	A	SA	Mean	Standard Deviation
PR1	I will prefer online shopping only if online prices are lower.	37.2%	34.6%	20.8%	6.2%	1.2%	2.00	0.968
PR2	I believe that online retailers always offer the lowest price.	11.0%	24.0%	37.6%	23.0%	4.4%	2.86	1.033
PR3	I pay a lot of attention to prices.	40.6%	36.2%	18.0%	4.2%	1.0%	1.89	0.913
PR4	I shop a lot for special deals.	20.0%	32.6%	32.0%	12.6%	2.8%	2.46	1.035
PR5	It is easy to compare prices from different online retailers.	20.4%	44.2%	26.4%	8.2%	0.8%	2.25	0.899
PR6	Online shopping allows ones to look for the best price before purchasing.	21.4%	46.6%	24.8%	5.8%	1.4%	2.19	0.886

Source: Data Developed for research

Table 4.9 shows the percentage, mean, standard deviation for each of the item for price of the product.

There is only 7.4% of the respondents agree with PR1. Majority of the respondents (71.8%) do not agree with it. 27.4% of the respondents agreed with PR2. However, 35% of the respondents do not agree. Next, 76.8 % of the undergraduates agreed with PR3 while 5.2% of them disagreed. For PR4, 15.4% of the sample agreed while 52.6% disagreed. Only 9% of the students agreed with PR5. 64.6% do not agree with it. Last but not least, 7.2% of undergraduates actually agreed with PR6 while 68% have the opposite opinion.

For mean calculation, PR2 has the highest value of mean (2.86), followed by PR4, with 2.46. Nevertheless, PR3 has the lowest mean, which is 1.89. For standard deviation, PR4 (1.035) is the highest, followed by PR2, with 1.033. PR6 has the lowest value, which is 0.886.

Table 4.10: Central Tendencies Measurement of Constructs: Convenience

Items	Description	SD	D	N	A	SA	Mean	Standard Deviation
CN1	I don't have to leave home for shopping.	4.6%	10.4%	21.4%	35.0%	28.6%	3.73	1.121
CN2	I can shop whenever I want.	1.0%	6.8%	21.0%	42.8%	28.4%	3.91	0.922
CN3	I can save the effort of visiting stores.	2.6%	7.0%	23.6%	38.8%	28.0%	3.83	1.001
CN4	I can shop in the privacy of home.	2.0%	6.0%	25.0%	38.4%	28.6%	3.86	0.968
CN5	Shopping over the Web would allow me to do my shopping more quickly.	4.4%	13.0%	25.2%	38.2%	19.2%	3.55	1.076
CN6	I can use online shopping Website to search for product information.	1.0%	6.0%	23.0%	44.0%	26.0%	3.88	0.898

Source: Data Developed for research

Table 4.10 shows the percentage, mean, standard deviation for each of the item for convenience.

63.6% of the undergraduates agreed with CN1 while 15% of the undergraduates do not agree with the statement. There are 71.2% of targeted respondents agreed that they can shop whenever they want while only 7.8% do not agree with the statement. In addition, 66.8% of the respondents have the same opinion that online shopping save the effort of visiting stores while 9.6% of the respondents do not agreed with it. Next, 67% of our sample group agreed that online shopping enable them to shop in the privacy of home while 8% of the sample opposes the statement. 57.4% of the sample has the opinion that shopping over the Web allows them to do shopping more quickly whereas 17.4% do not has the same opinion. Lastly, 70% of the respondents said that they can use online shopping Website to search for product information while 7% did not agree.

CN2 has the highest mean value, which is 3.91, followed by CN6, which is 3.88. Nevertheless, CN5 (3.55) has the lowest mean value. CN1 has the highest standard deviation, which is 1.121 while the item that has the lowest standard deviation is CN6, with 0.898.

Table 4.11: Central Tendencies Measurement of Constructs: Customer Service

Items	Description	SD	D	N	A	SA	Mean	Standard Deviation
CS1	Greater value-added services (pre-sales service, post-sales service) provided on the Websites would attract me to shop online.	1.2%	8.8%	36.2%	38.0%	15.8%	3.58	0.899
CS2	I will purchase products/services online, if it is easy to make changes even after I made the payment.	1.0%	9.6%	27.0%	39.8%	22.6%	3.73	0.949
CS3	I can find specific person or group for help when I have difficulties in the online shopping Website.	3.6%	16.0%	35.8%	33.8%	10.8%	3.32	0.986
CS4	Online shopping would provide me with a timely response to my request.	2.0%	14.2%	39.4%	30.8%	13.6%	3.40	0.958
CS5	I prefer Website with customer support such as e-form inquiry, order status tracing and customer comment.	1.0%	5.0%	29.2%	39.0%	25.8%	3.84	0.903

Source: Data Developed for research

Table 4.11 shows the percentage, mean, standard deviation for each of the item for customer service.

A total percentage of 53.8% of undergraduates agreed with greater value-added services provided on the Websites would attract them to shop online while 10% has the opposite opinion. 62.4% of undergraduates have the opinion that they will purchase products/services online, if it is easy to make changes even after payment while 10.6% of it does not. 44.6% of the respondents agreed that they can find specific person or group for help when I have difficulties in the online shopping Website while 19.6% of the respondents do not agree. Next, 44.4% of the respondents agree that online shopping would provide a timely response to their request. On the other hand, 16.2% of the respondents do not agree. A majority of 64.8% of the respondents prefer Website with customer support such as e-form inquiry, order status tracing and customer comment while only 6% of it do not has the same opinion.

Item CS5 has the highest mean value, which is 3.84, followed by item CS2, which is 3.73. However, CS3 has the lowest mean value (3.32). Meanwhile, CS3 has the highest standard deviation, which is 0.986 whereas CS1 has the lowest standard deviation, which is 0.899.

Table 4.12: Central Tendencies Measurement of Constructs: Product Quality

Items	Description	SD	D	N	A	SA	Mean	Standard Deviation
PQ1	It is important to ensure quality of product.	1.8%	4.4%	11.4%	31.8%	50.6%	4.25	0.947
PQ2	I will purchase online from Websites that offer quality products or services.	1.0%	2.4%	17.6%	38.4%	40.6%	4.15	0.864
PQ3	A well-known brand implies good quality.	2.2%	10.4%	28.8%	34.6%	24.0%	3.68	1.020
PQ4	I believe that I can get quality products through online shopping.	3.8%	18.0%	43.2%	23.8%	11.2%	3.21	0.989
PQ5	I believe that the product features shown on the Website are the same with real products that I purchase online.	8.2%	23.4%	36.8%	22.4%	9.2%	3.01	1.075

Source: Data Developed for research

Table 4.12 shows the percentage, mean, standard deviation for each of the item for product quality.

A majority of 82.4% of the respondents supports the statement "It is important to ensure quality of product." while only 6.2% of the respondents do not support the statement. 79% of the respondents agreed that they will purchase online from Websites that offer quality products or service while 3.4% do not agree. Subsequently, there are 58.6% of the respondents agreed with the statement "A well-known brand implies good quality" whereas there is 12.6% of the respondents do not agree with it. 35% of the respondents believe that they can get quality products through online shopping while 21.8% of the respondents do not have the same opinion. Last but not least, 31.6% of the respondents believe that the product features shown on the Website are the same with real products that I purchase online while 31.6% of the group has the opposite opinion.

PQ1 has the highest mean, which is 4.25. It is followed by item PQ2 which achieved 4.15. PQ5 has the lowest mean, which is 3.01. PQ5 also has the highest standard deviation (1.075) while the item with the lowest standard deviation is PQ2, which is 0.864.

Table 4.13: Central Tendencies Measurement of Constructs: Online Shopping Decision

Items	Description	SD	D	N	A	SA	Mean	Standard Deviation
OS1	Online shopping is different from traditional shopping.	1.0%	2.2%	19.8%	47.4%	29.6%	4.02	0.820
OS2	If I heard a new product that I am interested in is available over the Internet, I would be interested to buy it.	1.8%	9.4%	33.6%	40.6%	14.6%	3.57	0.914
OS3	I intend to purchase goods on the Internet.	3.4%	15.85	44.25	26.0%	10.6%	3.25	0.959
OS4	The possibility that I will purchase goods on the Internet in the future is high.	4.6%	10.8%	38.6%	31.8%	14.2%	3.40	1.009
OS5	I prefer online shopping than traditional shopping.	12.0%	21.0%	41.0%	16.8%	9.2%	2.90	1.104

Source: Data Developed for research

Table 4.13 shows the percentage, mean, standard deviation for each of the item for online shopping decision.

A total of 77% of the sample group has the opinion that online shopping is different from traditional shopping whereas there is only 3.2% of the group does not have the same opinion. There is 55.2% of the group agreed with the statement "If I heard a new product that I am interested in is available over the Internet, I would be interested to buy it". On the other hand, 11.2% of the group does not agree with it. Next, 36.6% of the respondents have the intention to purchase goods on the Internet while 19.25% of the group does not. Furthermore, 46% agreed that the possibility that they will purchase goods on the Internet in the future is high while 15.4% do not agree. Last but not least, there are 26% of the respondents prefer online shopping compare to traditional shopping whereas 33% of the respondents prefer traditional shopping compare to online shopping.

OS1 has the highest mean, 4.02 and is followed by item OS2, which is 3.57. The item OS5 has the lowest mean value, which is 2.90. In addition, referring to the same item, it has the highest standard deviation, which is 1.104. Nevertheless, item OS1 has the lowest standard deviation (0.820).

4.2 Scale Measurement

4.2.1 Internal Consistency Reliability Test

Table 4.14: Internal Consistency Reliability Test

Variables	Cronbach's Alpha	N of items
Webpage Design	0.865	6
Product Choices	0.791	5
Prices	0.707	6
Convenience	0.855	6
Customer Service	0.728	5
Product Quality	0.703	5
Online Shopping Decision	0.780	5

Source: Data developed for research

Reliability test was conducted to test the internal consistency of the data. According to Chan et al. (2010), when the Cronbach's Alpha for a variable is more than 0.7, the data is said to be reliable. The result of reliability test was recorded in table 4.14.

The variable of Webpage design is measured by 6 items and has a Cronbach's Alpha of 0.865. Measured by 5 items, the variable of product choices has a Cronbach's Alpha of 0.791. The variable of prices a Cronbach's Alpha of 0.707 and is measured by 6 items. The variable of convenience, which is also measured by 6 items, has a Cronbach's Alpha of 0.855. Each measured by 5 items, the variables of customer service and product quality have Cronbach's Alpha of 0.728 and 0.703 respectively. Finally, the dependent variable, online shopping decision, has a Cronbach's Alpha of 0.780, is measured by 5 items.

The Cronbach's Alpha of all the six independent variables and the dependent variables are more than 0.7. In other words, the data collected for all these variables are reliable.

4.2.2 Normality Test

Table 4.15: Normality Test: Descriptives

			Statistic	Std. Error
OS	Mean		3.4284	.03150
	95% Confidence Interval for Mean	Lower Bound	3.3665	
		Upper Bound	3.4903	
	5% Trimmed Mean		3.4320	
	Median		3.4000	
	Variance		.496	
	Std. Deviation		.70435	
	Minimum		1.40	
	Maximum		5.00	
	Range		3.60	
	Interquartile Range		1.00	
	Skewness		-.039	.109
	Kurtosis		-.116	.218

Source: Data developed for research

According to Zhang(2000), Kaynak (2003), and Jun, Cai, and Shin (2006), the data is said to be normally distributed when the skewness and kurtosis score of all variables do not exceed the value of ±1 (as cited in Sit, Ooi, Lin, & Chong, 2009). From table 4.15, the skewness score (-0.039) and kurtosis score (-0.116) did not exceed the value of ±1. Thus, the data of this research is said to be normally distributed.

Besides that, Alam et al. (2009) stated that according to Central Limit Theorem, regardless of the distribution of population, the distribution of sample is assumed to be approximately normal when the sample size is large enough. They further suggested that a sample size of more than 30 samples is large enough for such an assumption.

In this research, the sample size is 500. According to Central Limit Theorem, sample size of 500 is large enough to make an assumption that this sample is normally distributed.

4.3 Inferential Analysis

4.3.1 Pearson's Correlation Analysis

Table 4.16: Correlations between Independent Variables and Dependent Variable

		WD	PC	PR	CN	CS	PQ	OS
WD	Pearson Correlation	1						
	Sig. (2-tailed)							
	N	500						
PC	Pearson Correlation	.508**	1					
	Sig. (2-tailed)	.000						
	N	500	500					
PR	Pearson Correlation	-.456**	-.462**	1				
	Sig. (2-tailed)	.000	.000					
	N	500	500	500				
CN	Pearson Correlation	.462**	.464**	-.500**	1			
	Sig. (2-tailed)	.000	.000	.000				
	N	500	500	500	500			
CS	Pearson Correlation	.492**	.499**	-.509**	.531**	1		
	Sig. (2-tailed)	.000	.000	.000	.000			
	N	500	500	500	500	500		
PQ	Pearson Correlation	.384**	.348**	-.406**	.435**	.510**	1	
	Sig. (2-tailed)	.000	.000	.000	.000	.000		
	N	500	500	500	500	500	500	
OS	Pearson Correlation	.378**	.362**	-.456**	.509**	.503**	.504**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	500	500	500	500	500	500	500

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

Source: Data developed for research

According to Harber, Marriott, and Idrus (1991), multicollinearity occurs when a score of 0.8 is achieved for a bivariate correlation.

In this research, the correlations between each variable are tested by conducting Pearson's correlation test in SPSS 16.0. Results of the test are shown in table 4.16. The correlations between Webpage design and product choice (0.508), price (0.456), convenience (0.462), customer service (0.492), product quality (0.384), and online shopping decision (0.378) are below 0.8. The construct of product choice has correlation of less than 0.8 with price (0.462), convenience (0.464), customer service (0.492), product quality (0.348), and online shopping decision (0.362). The correlation of price with convenience (0.500), customer service (0.509), product quality (0.406), and online shopping decision (0.456) are also below 0.8. Convenience also has correlation of lower than 0.8 with customer service (0.531), product quality (0.435), and online shopping decision (0.509). The correlation of customer service with product quality (0.510) and online shopping decision (0.503) are below 0.8. Lastly, the correlation of product quality and online shopping decision is 0.504, which is below 0.8. The negative sign of the correlation is ignored in this situation as the direction of relation is not important here.

In conclusion, the correlations among all independent variables are below the level of 0.8. Multicollinearity problem does not occur in this research.

4.3.2 Multiple Regression Analysis

Multiple Regression test is conducted by using SPSS 16.0. The results are shown in table 4.17, table 4.18, and table 4.19.

Table 4.17: Multiple Regression Test: Model Summary

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.634[a]	.402	.395	.54791

a. Predictors: (Constant), Webpage Design, Product Choice, Price, Convenience, Customer Service, Product Quality

b. Dependent Variable: Online Shopping Decision

Source: Data developed for research

Table 4.17 indicates that the value of R Square of the six independent variables (Webpage design, product choice, price, convenience, customer service, and product quality) is 0.402. The value of 0.402 indicates that the six independent variables can explain 40.2% of the variation of the dependent variable (online shopping decision). However, there is 59.8% of variation of the dependent variable left unexplained in this research. In other words, based on valence framework, the factor of perceived risks and some other elements of perceived benefits also contribute in explaining online shopping decision, which are not considered in this research.

Table 4.18: Multiple Regression Test: ANOVA

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	99.558	6	16.593	55.273	.000[a]
	Residual	147.999	493	.300		
	Total	247.557	499			

a. Predictors: (Constant), Webpage Design, Product Choice, Price, Convenience, Customer Service, Product Quality

b. Dependent Variable: Online Shopping Decision

Source: Data developed for research

From table 4.18, the p-value of 0.000 in this research is less than alpha value of 0.05. This means that as a whole, the relationship between independent variables (Webpage design, product choice, price, convenience, customer service, and product quality) and dependent variable (online shopping decision) in this research is significant.

Table 4.19: Multiple Regression Test: Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.262	.307		4.111	.000
	WD	.025	.041	.027	.608	.543
	PC	.010	.046	.009	.210	.834
	PR	-.163	.051	-.141	-3.183	.002
	CN	.207	.042	.224	4.950	.000
	CS	.179	.052	.166	3.468	.001
	PQ	.267	.045	.251	5.965	.000

a. Dependent Variable: Online Shopping Decision

Source: Data developed for research

The six independent variables in this research are the elements of perceived benefits, which affect the dependent variable (online shopping decision). This relationship can be represented by the following equation:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6$$

Where,

Y = Online Shopping Decision (OS)

a = Regression Constant

b_1 = Unstandardized Coefficients (Beta) of Webpage Design

b_2 = Unstandardized Coefficients (Beta) of Product Choice

b_3 = Unstandardized Coefficients (Beta) of Price

b_4 = Unstandardized Coefficients (Beta) of Convenience

b_5 = Unstandardized Coefficients (Beta) of Customer Service

b_6 = Unstandardized Coefficients (Beta) of Product Quality

X_1 = Webpage Design

X_2 = Product Choice

X_3 = Price

X_4 = Convenience

X_5 = Customer Service

X_6 = Product Quality

Based on table 4.19, the regression equation for online shopping decision is as below:

$$OS = 1.262 + 0.025(WD) + 0.010(PC) - 0.163(PR) + 0.207(CN) + 0.179(CS) + 0.267(PQ)$$

Where,

OS = Online Shopping Decision

WD = Webpage Design

PC = Product Choice

PR = Price

CN = Convenience

CS = Customer Service

PQ = Product Quality

From the results in table 4.19, product quality has the most significant relationship with online shopping decision, as the unstandardized coefficients (Beta) of product quality (0.267) is the highest among all independent variables.

Hypothesis 1

H_0 : There is no significant relationship between Webpage design and undergraduates' online shopping decision.

H_1 : There is a significant relationship between Webpage design and undergraduates' online shopping decision.

Based on the results shown in table 4.19, the p-value of Webpage design (0.543) is more than the alpha value of 0.05. Therefore, null hypothesis (H_0) is not rejected. Alternative hypothesis (H_1) is rejected. In conclusion, there is no significant relationship between Webpage design and undergraduates' online shopping decision.

Hypothesis 2

H_0 : There is no significant relationship between product choices and undergraduates' online shopping decision.

H_1 : There is a significant relationship between product choices and undergraduates' online shopping decision.

Based on the results shown in table 4.19, the p-value of product choices (0.834) is more than the alpha value of 0.05. Therefore, null hypothesis (H_0) is not rejected. Alternative hypothesis (H_1) is rejected. In conclusion, there is no significant relationship between product choices and undergraduates' online shopping decision.

Hypothesis 3

H_0 : There is no significant relationship between prices and undergraduates' online shopping decision.

H_1 : There is a significant relationship between prices and undergraduates' online shopping decision.

Based on the results shown in table 4.19, the p-value of prices (0.002) is more than the alpha value of 0.05. Therefore, null hypothesis (H_0) is rejected. Alternative hypothesis (H_1) is accepted. In conclusion, there is a significant relationship between prices and undergraduates' online shopping decision.

Hypothesis 4

H_0 : There is no significant relationship between convenience and undergraduates' online shopping decision.

H_1 : There is a significant relationship between convenience and undergraduates' online shopping decision.

Based on the results shown in table 4.19, the p-value of convenience (0.000) is more than the alpha value of 0.05. Therefore, null hypothesis (H_0) is rejected. Alternative hypothesis (H_1) is accepted. In conclusion, there is a significant relationship between convenience and undergraduates' online shopping decision.

Hypothesis 5

H_0 : There is no significant relationship between customer service and undergraduates' online shopping decision.

H_1 : There is a significant relationship between customer service and undergraduates' online shopping decision.

Based on the results shown in table 4.19, the p-value of customer service (0.001) is more than the alpha value of 0.05. Therefore, null hypothesis (H_0) is rejected. Alternative hypothesis (H_1) is accepted. In conclusion, there is a significant relationship between customer service and undergraduates' online shopping decision.

Hypothesis 6

H_0 : There is no significant relationship between product quality and undergraduates' online shopping decision.

H_1 : There is a significant relationship between product quality and undergraduates' online shopping decision.

Based on the results shown in table 4.19, the p-value of product quality (0.000) is more than the alpha value of 0.05. Therefore, null hypothesis (H_0) is rejected. Alternative hypothesis (H_1) is accepted. In conclusion, there is a significant relationship between product quality and undergraduates' online shopping decision.

4.4 Conclusion

Results of data collected from questionnaire survey were generated by using SPSS 16.0. The generated results were analyzed and interpreted. The analysis was conducted in three parts, which are descriptive analysis, scale measurement, and inferential analysis. Discussions, conclusion and implications in next chapter would be derived according to these analyzed results and interpretation.

CHAPTER 5: DISCUSSION, CONCLUSION AND IMPLICATIONS

5.0 Introduction

In this chapter, the results of the previous chapters on descriptive and inferential analysis are summarized. The discussions on the findings are supported with evidence. Moreover, contribution to academicians and practitioners are explained. Limitations of the research and recommendations are also provided. Finally, it ends with a conclusion of this research.

5.1 Summary of Statistical Analysis

5.1.1 Descriptive Analysis

5.1.1.1 Demographic Profile of the Respondents

In this research, the respondents are mainly female (61.2%). In addition, majority of the respondents fall under the age group of 21-23 years old. The respondents are mainly Chinese (52%) and are pursuing business related courses (48.2%). Lastly, 45.2% of the undergraduates have 1-5 times online shopping experience.

5.1.1.2 Central Tendencies Measurement of Construct

Table 5.1: Webpage Design

Items	Description
WD1	I prefer to purchase from Websites which are user friendly.
WD2	I prefer to purchase from Websites with great functionality (payment option, product filter option, product customization, etc.)
WD3	I prefer to purchase from Websites that are updated frequently.
WD4	I prefer to purchase from Websites that provide detailed product information.
WD5	Websites which display products by pictures and purchase button together will make my shopping easier.
WD6	I prefer to purchase from Websites with attractive design.

WD4 has the highest mean (4.15). WD6 has the lowest mean (3.66). The item with the highest standard deviation is WD6 (1.022). Nevertheless, the item with the lowest standard deviation (0.933) is WD4.

Table 5.2: Product Choice

Items	Description
PC1	Selection of goods available on the internet is very broad.
PC2	I will be able to access many brands and retailers when I shop online.
PC3	Items from different countries are easily available.
PC4	Online shopping allows inter-comparable information.
PC5	I can get specialized products through online shopping.

PC4 has the highest mean value (3.85) while PC2 has the lowest mean (3.65). PC2 has the highest standard deviation value (0.982).

Nonetheless, the item that has the lowest standard deviation value is PC1, which is 0.896.

Table 5.3: Price

Items	Description
PR1	I will prefer online shopping only if online prices are lower.
PR2	I believe that online retailers always offer the lowest price.
PR3	I pay a lot of attention to prices.
PR4	I shop a lot for special deals.
PR5	It is easy to compare prices from different online retailers.
PR6	Online shopping allows ones to look for the best price before purchasing.

PR2 (2.86) has the highest value of mean while PR3 has the lowest mean (1.89). Standard deviation of PR4 (1.035) is the highest value while it is the lowest for PR6 (0.886).

Table 5.4: Convenience

Items	Description
CN1	I don't have to leave home for shopping.
CN2	I can shop whenever I want.
CN3	I can save the effort of visiting stores.
CN4	I can shop in the privacy of home.
CN5	Shopping over the Web would allow me to do my shopping more quickly.
CN6	I can use online shopping Website to search for product information.

Mean of CN2 is the highest, which is 3.91. CN5 with 3.55 is the lowest mean. CN1 has the highest standard deviation, which is

1.121 while the item with the lowest standard deviation is CN6 (0.898).

Table 5.5: Customer Service

Items	Description
CS1	Greater value-added services (pre-sales service, post-sales service) provided on the Websites would attract me to shop online.
CS2	I will purchase products/services online, if it is easy to make changes even after I made the payment.
CS3	I can find specific person or group for help when I have difficulties in the online shopping Website.
CS4	Online shopping would provide me with a timely response to my request.
CS5	Online shopping would provide me with customer support such as e-form inquiry, order status tracing and customer comment.

CS5 has the highest mean, which is 3.84. Mean of CS3 (3.32) is the lowest. CS3 also has the highest standard deviation, which is 0.986. CS1 (0.899) has the lowest standard deviation.

Table 5.6: Product Quality

Items	Description
PQ1	It is important to ensure quality of product.
PQ2	I will purchase online from Websites that offer quality products or services.
PQ3	A well-known brand implies good quality.
PQ4	I believe that I can get quality products through online shopping.
PQ5	I believe that product features shown are what I will get if I conduct the purchase through online.

PQ1 has the highest mean, which is 4.25. PQ5 (3.01) has the lowest mean. In addition, PQ5 has the highest standard deviation, which is 1.075. The item with the lowest standard deviation is PQ2 (0.864).

Table 5.7: Online Shopping Decision

Items	Description
OS1	Online shopping is different from traditional shopping.
OS2	If I heard a new product that I am interested in is available over the Internet, I would be interested to buy it.
OS3	I intend to purchase goods on the Internet.
OS4	The possibility that I will purchase goods on the Internet in the future is high.
OS5	I prefer online shopping than traditional shopping.

OS1 has the highest mean, 4.02. The mean of OS5 (2.90) is the lowest. In addition, OS5 has the highest standard deviation, which is 1.104. Nevertheless, OS1 has the lowest standard deviation, which is 0.820.

5.1.2 Scale Measurement

5.1.2.1 Internal Consistency Reliability Test

Reliability test is performed to examine 38 items/questions in the questionnaire survey for internal reliability of scales. According to Chan et al. (2010), Cronbach's Alpha of 0.7 or higher is acceptable. The alpha coefficient of independent variables, Webpage design (0.865), product choice (0.791), price (0.707), convenience (0.855), customer service (0.728), and product quality (0.703), and

dependent variable, online shopping decision (0.780) are more than 0.7. Thus, data is said to be reliable.

5.1.2.2 Normality Test

According to Zhang (2000), Kaynak (2003), and Jun et al. (2006), the data is normally distributed when the skewness and kurtosis score of all variables do not exceed the value of ±1 (as cited in Sit et al., 2009). Data of this research is normally distributed as the skewness score (-0.039) and kurtosis score (-0.116) fulfill the above condition.

According to Central Limit Theorem, the distribution of sample is approximately normal when the sample size is more than 30. Therefore, a sample of 500 is normally distributed.

5.1.3 Inferential Analysis

5.1.3.1 Pearson's Correlation Analysis

According to Harber et al. (1991), multicollinearity problem occurs when a score of 0.8 is achieved for a bivariate correlation. Since the coefficient values of the independent variables and dependent variable are less than 0.8, multicollinearity problem does not occur.

5.1.3.2 Multiple Regression Analysis

In multiple regression analysis, R^2 of this research (0.401) shows that 40.1% of the variation in online shopping decision is explained

by Webpage design, product choice, price, convenience, customer service and product quality.

When the p-value of regression coefficient is less than 0.05 (significant level), there is a significant relationship between the independent variables and dependent variable. Otherwise, there is no relationship between variables.

The multiple regression equation is as follows:

$$OS = 1.262 + 0.025(WD) + 0.010(PC) - 0.163(PR) + 0.207(CN) + 0.179(CS) + 0.267(PQ)$$

Where,

OS = Online Shopping Decision

WD = Webpage Design

PC = Product Choice

PR = Price

CN = Convenience

CS = Customer Service

PQ = Product Quality

5.2 Discussions of Major Findings

Table 5.8: Results of Hypotheses Testing

Hypotheses	Supported	Not Supported
H_1 : There is a significant relationship between Webpage design and undergraduates' online shopping decision.		p = 0.543 (>0.05)
H_2 : There is a significant relationship between product choice and undergraduates' online shopping decision.		p = 0.834 (>0.05)
H_3 : There is a significant relationship between price and undergraduates' online shopping decision.	p = 0.002 (<0.05)	
H_4 : There is a significant relationship between convenience and undergraduates' online shopping decision.	p = 0.000 (<0.05)	
H_5 : There is a significant relationship between customer service and undergraduates' online shopping decision.	p = 0.001 (<0.05)	
H_6 : There is a significant relationship between product quality and undergraduates' online shopping decision.	p = 0.000 (<0.05)	

Source: Data developed for research

As shown in table 5.8, among the six hypotheses developed, there are four hypotheses supported by the results of this research.

5.2.1 Webpage Design

The result of this research showed that Webpage design and undergraduates' online shopping decision do not have any relationship. Delafrooz et al. (2010) has obtained the same result for this hypothesis in their research. The research result of Han et al. (2006) has also proven that Website design does not have a significant relationship with online purchasing decision.

5.2.2 Product Choice

The result of this research showed that product choice and undergraduates' online shopping decision do not have any relationship. Young shoppers prefer to shop online not because of wider product selection (Chang & Samuel, 2006). They choose to shop online due to other perceived benefits.

5.2.3 Price

The result of this research showed that prices and undergraduates' online shopping decision has a significant relationship. Su et al. (2011) have proven that price has influence in online shopping intention. According to Goldsmith et al. (2002), consumers think that online shopping is cheaper than traditional shopping. E-consumers today are alert about the prices offered to them (Raman & Annamalai, 2011).

Shoppers would like to buy products at lowest price or get the best value for what they paid (Zhou, Dai, & Zhang, 2007). Consumers always want to fully utilize every cent they spend. Thus, price of a product always affect their decision in purchasing. Harn et al. (2006) proved that price is an important factor in determining the decision to purchase online.

5.2.4 Convenience

The result of this research showed that convenience and undergraduates' online shopping decision has a significant relationship. Proven by the research results, convenience would cause buyers to purchase online (Delafrooz et al., 2011; Kim et al., 2004). Research of Ahuja et al. (2003) also shows that convenience is influencing consumers' online purchase decision.

Busy consumers can shop in convenience online as the online retailers would serve their needs contrarily (Harn et al., 2006). Therefore, convenience is one of the factors considered by consumers to shop online.

5.2.5 Customer Service

The result of this research showed that customer service and undergraduates' online shopping decision has a significant relationship. Delafrooz et al. (2011) proved that customer service is a dominant factor of online purchasing. Customer service is important for consumers to make their online shopping decision (Shergill et al., 2005). Online purchasing decision is affected by customer service personnel (Lin, 2009).

5.2.6 Product Quality

The result of this research showed that product quality and undergraduates' online shopping decision has a significant relationship. Dillon et al. (2004) found that product quality is affecting the decision of consumers to buy online. Product quality was proved to be positively influencing customers' intention to purchase online (Ahn et al., 2004; Han et al., 2006).

5.3 Implications of the Study

5.3.1 Theoretical Implications

The conceptual framework that is applied in this research only take the variables in perceived benefits and the online shopping decision into consideration while the valence framework test whether perceived benefits and perceived risks affect the decisions. This framework expansion on perceived benefits can bring further understanding on how would the variables in perceived benefits affect the decision making without including the perceived risks.

5.3.2 Managerial Implications

As the result shown, most of the benefits perceived by the undergraduates are positively related to their online purchase decision, which means that they will affect their decision to shop online. Product quality is the most significant component that affects online shopping decision. Thus, the online retailers should ensure the products are in good quality before they are sold. By having Certificate of Authenticity can help to enhance the confidence of the consumers.

The second most significant perceived benefit is convenience. Students demand more on time and effort saving. This result is consistent with Delafrooz et al. (2006) and Girard et al. (2003. Online retailers should consistently maintain their server to prevent server breakdown during peak hours. Customer service comes after convenience. According to Shergill et al. (2005), good customer service can improve customer satisfaction and thus customer's loyalty. Hence, E-marketers should assist the customers during purchase and update the status of purchase or delivery to enhance the contentment of the customers.

The negative relationship between decision and price proved that the lower the price, the higher the possibility for one to purchase online. According to Paynter (2001), Websites without promotional activities do not attract customer. Online retailers should occasionally review and compare with their competitors' price. The product choice and Webpage design showed the most inferior influence. However, they should not be neglected. Delafrooz et al. (2009b, 2010, & 2011) proved that online purchasers prefer user friendly Websites with wider product selection. Online retailers should maintain their Webpage accessibility to be friendly and with wider choices.

In conclusion, online retailers should constantly review competitors' Websites to compare the price, Webpage design and product choice. Services and maintenance of Websites are also important to be successful in the E-market.

5.4 Limitations of the Study

There are limitations in this study. Firstly, this research only examines relationship between perceived benefits and online shopping decision but in valence framework, perceived risks and perceived benefits would affect online shopping decision. Thus, the result of 40.2% influential effect only covers a portion of causes which affect online purchase decision.

Other than that, the target respondents are only undergraduates from private universities. The results may not be suitable to conclude the perception of all undergraduates in Malaysia about the degree of benefits that eventually affect their decision in online shopping.

The causal effect relationship is absent in this study as it is not the objective to test the effect of decisions without factors. Moreover, this study is based on individuals' beliefs in the benefits enjoyed. The situational factors are ignored.

Even though individual factors played an important role, there are still arguments that environmental factors will impair one's decision.

5.5 Recommendations for Future Research

Future researchers can include perceived risks and other variables of perceived benefits in view of further expanding the theoretical framework in the research if they are adopting valence framework. This can further prove this study and identify more significant factors that will affect the decisions.

Other than that, future researches should try to target other group of respondents that have the significant influence in the online shopping industry. This can assist the online retailers to get to know their consumer groups and levels. It also helps fresh E-marketers to understand the target groups for their products.

Future researchers can include the objective of investigating the causal effect of the variables in their study. Furthermore, they can also include situational factors to improve the preciseness and reliability of the data tested. This kind of research can test on how the individual responds to the environmental changes and eventually affects the final decision. It helps the E-marketers in comprehending how the consumers respond to the changes.

5.6 Conclusion

In this study, it is made known that perceived benefits (Webpage design, product choice, convenience, customer service, and product quality) are positively related to online shopping decisions except for the price which is negatively related. The most significant variable is the product choice, followed by convenience and customer service. The price is after customer service, then Webpage design and lastly product choice. Although in valence framework consists of perceived risks which are not tested in this research, this study still proves that these variables

have significant effects on the decisions. It is recommended to include perceived risks in the future research.

REFERENCES

Ahn, T., Ryu, S., & Han, T. (2004). The impact of the online and offline features on the user acceptance of internet shopping malls. *Electronic Commerce Research and Applications, 3*(4), 405-420.

Ahuja, M., Gupta, B., & Raman, P. (2003). An Empirical Investigation of Online Consumer Purchasing Behavior. *Communications of the ACM, 46*(12), 145-151.

Alam, S.S. & Yasin, N.M. (2009). An investigation of into the antecedents of customer satisfaction of online shopping, *ANZMAC*, 1-9.

Amoroso, D.L. & Hunsinger, D.S. (2008). Analysis of the Factors that Influence Online Purchasing. *Pueblo. B. 2008 EDSIG*, 1-16.

Arnold, S.J., Handelman, J., & Tiger, D.J. (1996). Organizational legitimacy and retail store patronage. *Journal of Business Research, 35*, 229-239.

Ary, D., Jacobs, L.C., & Razavieh, A. (1996). Introduction to research in education. Fort Worth, TX: Harcourt Brace College Publishers.

Baker, J., Levy, M., & Grewal, D. (1992). An experimental approach to making retail store environment decisions. *Journal of Retailing, 64*(4), 445-460.

Bartlett, J.E., Hotrlik, J.W., & Higgins, C.C. (2001). Organizational Research: Determining Appropriate Sample Size in Survey Research. *Information Technology, Learning, and Performance Journal, 19*(1), 1-8.

Berkowitz, E.N., Kerin, R.A., Hartley, S.W., & Rudelius, W. (2000). *Interactive Marketing and Electronic Commerce, Marketing*. Boston: Irwin, McGraw-Hill.

Brown, J.D. (2002). Statistics Corner: Questions and Answers about Language Testing Statistics: The Cronbach Alpha Reliabilty Estimate. Shiken: JALT Testing & Evaluation SIG Newsletter, pp. 17,18.

Cao, X. & Mokhtarian, P.L. (2005). The Intended and Actual Adoption of Online Purchasing: A Brief Review of Recent Literature. *University of California.* Retrieved from: http://www.escholarship.org/uc/item/45q5p1vb

Chai, H.L., Eze, U.C., & Ndubisi, N.O. (2011). Analyzing key determinants of online repurchase intentions. *Asia Pacific Journal of Marketing and Logistics, 23*(2), 200-221.

Chan, W.M.A. & Chow, W.Y.S. (2010). *Factors affecting web-users to shop online*. Unpublished honours degree's project, Hong Kong Baptist University, Hong Kong.

Chang, J., & Samuel, N. (2006). Why Purchase Online? An Empirical Study of Australian Internet Shoppers. *Studies in Business and Economics, 12*(1), 69-79.

Chiger, S. (2001). Consumer shopping survey: part 2. *Catalog Age, 18*(11), pp.47-51.

Creative Research System. (2011). *Significance in Statistics & Surveys*. Retrieved August 5, 2011, from http://www.surveysystem.com/signif.htm

Cronin, M.J. (1996). *Global advantage on the World Wide Web*. New York: Van Nostrand Reinhold.

Dabhade, A. (2008). *Antecedents of Older Consumers' Internet Shopping for Apparel Products: Perceived Risk and Benefits and Shopping Orientation.* Unpublished master's thesis, Auburn University, Auburn, Alabama, United States.

Delafrooz, N. (2009). *Factors affecting students' online shopping attitude and purchase intention.* Unpublished Doctoral dissertation, University of Putra Malaysia.

Delafrooz, N., Paim, L.H., & Khatibi, A. (2009a). Developing an Instrument for Measurement of Attitude Toward Online Shopping. *European Journal of Social Sciences, 7*(3), 166-177.

Delafrooz, N., Paim, L.H., & Khatibi, A. (2009b). Students' Online Shopping Behavior: An Empirical Study. *Journal of American Science*, 5(8), 39-49.

Delafrooz, N., Paim, L.H., & Khatibi, A. (2010). Students' Online Shopping Behavior: An Empirical Study. *Journal of American Science, 6*(1), 137-147.

Delafrooz, N., Paim, L.H., & Khatibi, A. (2011). Understanding consumer's internet purchase intention in Malaysia. *Afr. J. Bus. Manag., 3*(5), 2837-2846.

Dillon, T.W. & Reif, H.L. (2004). Factors Influencing Consumers' E-Commerce Commodity Purchases. *Information Technology, Learning, and Performance Journal, 22*(2).

Forsythe, S., Petee, T., & Jai, O.K. (2003). Modeling Consumer Behavior in Online Environments: Scale Validation. (Research Project, Auburn University, 2003). *NTC Project*, S02-AC23.

Gardyn, R. (2002). Educated consumers. *American Demographics, 24*(10), 18-19.

Gibson, J. (2009). At Work Issue 55. *Winter 2009: Institute for Work & Health.*

Girard, T., Korgaonkar, P., & Silverblatt, R. (2003). Relationship of Type of Product, Shopping Orientations, and Demographics with Preference for Shopping on the Internet. *Journal of Business and Psychology, 18*(1).

Goldsmith, R.E. & Bridges, E. (2000). E-tailing versus retailing: using attitudes to predict online buying behavior. *Quarterly Journal of Electronic Commerce, 1*, 245-253.

Goldsmith, R.E. & Goldsmith, E.B. (2002). Buying apparel over the Internet. *Journal of Product and Brand Management, 11*, 89–100.

Goldsmith. (2002). Explaining and predicting consumer intention to purchase over the Internet: An exploratory study. *Journal of Marketing Theory and Practice*

Goodwin. (1996). Economic Meanings of Trust and Responsibility. The University of Michigan Press, Ann Arbor, MI.

Han, H.J., Bullington J., & Case T. (2006). A survey of Online Purchasing Decision Factors and shopping purchasing behaviors of University students. *Proceedings of the 2006 Southern Association for Information Systems Conference*, 56-65.

Hannula, M. & Chuck, C. (2003). Students' online buying behavior: a comparative study between Finland and The USA. *E-Business Research Center, Research Report 7.*

Hanson, W. (1999). *Principles of Internet Marketing*. Ohio: South-Western College Publishing.

Harber, D., Marriott, F., & Idrus, N. (1991). Employee Participation in TQC: The Effect of Job Levels on Participation and Job Satisfaction. *International Journal of Quality & Reliability Management, 8*(5), 35-54.

Harn, A.C.P., Khatibi, A., & Ismail, H. (2006). E-commerce: A study on online shopping in Malaysia. *Journal of Social Science, 13*(3), 232-242.

Harrington, J. & Hess, G. (1996). A spatial theory of positive and negative campaigning. *Games and Economic Behavior,* 17, 209-229.

Ho, C.F. & Wu, W.H. (1999). Antecedents of Customer Satisfaction on The Internet: An empirical study of online shopping. *Proceedings of 32nd Hawaii International Conference on System Sciences, Institute of Electrical and Electronics Engineers (IEEE),* 1-9

Internet World Stats. (2011). Retrieved July 29, 2011, from http://www.internetworldstats.com/

Jackson, S.L. (2008). Descriptive Methods. *Research Methods and Statistics: A Critical Thinking Approach* (3rd ed.). 79-99.

Jacoby, J., and Kaplan, L. (1972). The Components of Perceived Risk. *Advances in Consumer Research,* 3, 382-383.

Jun, M., Cai, S., & Shin, H. (2006). TQM practice in Maquiladora: antecedents of employee satisfaction and loyalty. *Journal of Operations Management, 24,* 791-812.

Kaynak, H. (2003). The relationship between total quality management practices and their effects on firm performance. *Journal of Operations Management, 21,* 405-35.

Khatibi, A., Thyagarajan, V., & Seetharaman, A. (2003). E-commerce in Malaysia: Perceived Benefits and Barriers. *Vikalpa, 28*(3), 77-82.

Kim, D.J., Cho, B., & Rao, H.R. (2000). Effects of consumer lifestyle on purchasing behavior on the Internet: a conceptual framework and empirical validation. *Proceeding of the ICIS'00 Proceedings of the twenty first international conference on information system*, 688-695.

Kim, D.J., Ferrin, D.L., & Rao, H.R. (2003). Trust and satisfaction, two stepping stones for successful E-Commerce relationships: a longitudinal exploration. *Information System Research*.

Kim, D.J., Ferrin, D.L., & Rao, H.R. (2008). A trust-based consumer decision-making model in electronic commerce: the role of trust, perceived risk, and their antecedents. *Decision Support System, 44,* 544-564.

Kim, E.Y. & Kim, Y.K. (2004). Predicting online purchase intentions for clothing products. *Eur. J. Mark., 38*(7), 883-97.

Kim, J.I., Lee, H.C., & Kim, H.J. (2004). Factors Affecting Online Search Intention and Online Purchase Intention. *Seoul Journal of Business, 10*(2), 27-48.

Li, N. & Zhang, P. (2002). Consumer Online Shopping Attitudes and Behavior: An Assessment of Research. *Eighth Americas Conference on Information Systems*, 508-517.

Liang, T.P. & Lai, H.J. (2001). Effect of Store Design on Consumer Purchases: van empirical study of on-line bookstores. *Information & Management, 39*(2002), 431-444.

Lichtenstein, S., & Swatman, P.M.C. (1997). Internet Acceptable Usage Policy: Arguments and Perils. *PAWEC'97, the 1st Pacific Asia Workshop on Electronic Commerce, Brisbane, Queensland.*

Lin, P.J. (2009). *Factors Influencing Purchase Intention for Online Travel Products – Case Study of Taiwanese Consumers*. Unpublished doctoral dissertation, University of Wales Institute, Cardiff, United Kingdom.

Lu, Y., Cao, Y., Wang, B., & Yang, S. (2011). A study on factors that affect users' behavioral intention to transfer usage from the offline to the online channel. *Computers in Human Behavior, 27,* 355-364.

Malhotra, N.K. (1993). *Marketing Research: An Applied Orientation*. Englewood Cliffs, NJ: Prentice Hall.

Malhotra, N.K. (2004). *Marketing Research: An Applied Orientation* (4th ed.). Upper Saddle River, NJ: Prentice Hall.

Monette, D.R., Sullivan, T.J., & DeJong, C.R. (2002). *Applied Social Research*. Orlando, FLA: Harcourt Press.

Monsuwe, T.P., Dellaert, B.G.C., & Ruyter, K.R. (2004). What drives consumers to shop online? A literature review. *International Journal of Services industry Management, 15*(1), 102-121.

Neuman, W.L. (1997). Social Research Methods: Qualitative and Quantitative Approaches. 3rd ed. Boston: Allyn and Bacon.

Olsen & St. George. (2004). Cross-Sectional Study Design and Data Analysis. Retrieved August 31, 2011, from http://www.collegeboard.com/prod_downloads/yes/4297_MODULE_05.pdf

Osman, S., Chan, B.Y.F., & Bei, H.C. (2010). Undergraduates and Online Purchasing Behavior. *Asian Social Science, 6*(10), 133-146.

Paynter, J., & Lim, J. (2001). Drivers and Impediments to E-Commerce in Malaysia. *Malaysian Journal of Library & Information Science*, *6*(2), 1-19.

Peter, P.J. & Tarpey, L.X. (1975). A comparative analysis of three consumer decision strategies. *Journal of Consumer Research, 2*(1), 29-37.

Petter, J.P., & Ryan, M. (1976). An Investigation of Perceived Risk at the Brand Level," Journal of Marketing Research, 13, 184-188.

Raman, A. & Annamalai, V. (2011). Web Services and e-Shopping Decisions: A Study on Malaysian e-Consumer. *Wireless Information Networks & Business Information System.*

Ranganathan, C., & Ganapathy, S. (2002). Key dimensions of business-to-consumer web sites. Information and Management, 39(6), 457-465.

Rishi. (2008). An empirical study of online shopping behavior: A factor analysis approach. *Journal of Marketing & Communication, 3*(3).

Robin, R.P.D. (2009). The Impact of Perceived Value on Purchase Intension. *Consumer Behavior Research on Online Shopping*, 1-22.

Rowley, J. (2000). Product Search in E-shopping: A Review and Research Propositions. *Journal of Consumer Marketing, 17*(1), 124-135.

Sabri, M.F., MacDonald, M., Masud, J., Paim, L., Hira, T.K., & Othman, M.A. (2008). Financial Behavior and Problems among College Students in Malaysia: Research and Education Implication. *Consumer Interests Annual, 54.*

Salkind, N.J. (2007). Exploring Research (6^{th} ed.). New Jersey. Pearson Prentice Hall.pp.134.

Saunders, M., Lewis, P., & Thornhill, A. (2003). *Research methods for business students* (5th ed.). United Kingdom: Prentice Hall.

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students* (5th ed.). United Kingdom: Prentice Hall.

Sekaran, U. (2003). *Research methods for business: A skill building approach* (4th ed.). New York: John Wiley & Sons Inc.

Shergill, G.S. & Chen, Z. (2005). Web-based shopping: Consumers' attitudes towards online shopping in New Zealand. *J. Elect. Com. Res.*, *6*(2), 78-92.

Sim, S., Eastlick, M.A., Lotz, S.L., & Warrington, P. (2001). An Online Prepurchase Intentions Model: The Role of Intention to Search. *Journal of Retailing*, *77*, 397-416.

Simon, P.A., Palma, A., & Thisse, J.F. (1992). Discrete Choice Theory of Product Differentiation. *Cambridge, Mass.: MIT press 1992*. Retrieved July 29, 2011, from http://books.google.com/books/about/Discrete_choice_theory_of_product_differ.html?id=xiXGtz47p5oC

Sit, W.Y., Ooi, K.B., Lin, B.S., & Chong, A.Y.L. (2009). TQM and customer satisfaction in Malaysia's service sector. *Industrial Management & Data Systems*, *109*(7), 957-975.

Su, D. & Huang, X. (2011). Research on online shopping intention of undergraduate consumer in China: based on the theory of planned behavior. *International Business Research*, *4*(1), 1-7.

Supphellen, M. & Nysveen, H. (2001). Drivers of intention to revisit the Web sites of well-known companies. *International Journal of Market Research*, *43*(3), pp. 341-52.

Syed, S.A., Bakar, Z., Ismail, H., & Ahsan, M. N. (2008). Young consumers online shopping: empirical study. *Journal of Internet Business*, (5), 81-98.

Tak & Wan. (2006). Factors affecting Internet shopping behaviour in Singapore: gender and educational issues. *International Journal of Consumer Studies*, 310-316.

The Taylor Nelson Sofres Interactive. Global E-Commerce Report 2001. Retrieved 25 July 2011, from http://www.tnsofres.com/ger2001/pressoffice/index.cfm

Top 50 Ranking Universiti Terbaik Malaysia 2011. (2011). Retrieved 25 July 2011, from http://beritasemasa.com/ranking-universiti

Torkzadeh, G. & Dhillon, G. (2002). Measuring Factors that Influence the Success of Internet Commerce. *Information Systems Research, 13*(2), 187-204.

Wilkie, W.L. & Pessimier, E.A. (1973). Issues in marketing's use of multi-attribute attitude models. *Journal of Marketing Research, 10*(4), 428-441.

Wolfinbarger, M. & Gilly, M.C. (2001). Shopping Online for Freedom, Control, and Fun. *California Management Review, 43*(2), *34-55.*

Wu, S.I. (2003). The relationship between consumer characteristics and attitude toward online shopping. *Management Intelligence & Planing, 21*(1), 37-44.

Yulihasri, Islam, A., & Daud. (2011). Factors that Influence Customers' Buying Intention on Shopping Online. *Intemational Joumal of Marketing Studies, 3*(1).

Zhang, P. & von Dran, G.M. (2000). Satisfactor and dissatisfactorers: A two-factor model for website design and evaluation. *Journal of the American Society for Information Science, 51*(4), 1253-1268.

Zhang, P., von Dran, G.M., Small, R.V., & Barcellos, S. (1999). Websites that satisfy users: a theoretical framework for web user interface design and evaluation. *Proceedings of the 32nd Annual Hawaii International Conference on System Sciences (HICSS32)*, 1-8.

Zhang, P., von Dran, G.M., Small, R.V., & Barcellos, S. (2000). A two-factor theory for website design. *Proceedings of the 33rd Annual Hawaii International Conference on System Sciences (HICSS33),* 1-10

Zhang, Z.H. (2000). *Implementation of total quality management: an empirical study of Chinese manufacturing forms*. Unpublished doctoral thesis, University of Groningen, Groningen.

Zhou, L., Dai, L.W., & Zhang, D.S. (2007). Online Shopping Acceptance Model — A Critical Survey of Consumer Factors in Online Shopping. *Journal of Electronic Commerce Research, 8*(1), 41-62.

Zikmund, W. G. (2003). Business Research Methods, (8th ed.). Thomson-South-Western, Ohio.

Zikmund, W., & Scott, J. (1973). A Factor Analysis of the Multi-dimensional Nature of Perceived Risk. Proceedings of the Southern Marketing Association, Houston, TX, 1036.

Zikmund, W.G., Babin, B.J., Carr, J.C., & Griffin, M. (2010). *Business Research Method (8th ed.).* USA: South Western Cengage Learning.

APPENDICES

Appendix 2.1: Summary of Past Empirical Studies

Study	Country	Data	Major Findings
Ahn, Tony, Ryu, & Han, 2004	Korea	Web-based survey was conducted to user of Internet shopping malls where banner related to the questionnaires was linked to 6 Internet shopping malls.	Online quality such as system quality, information quality and service quality have a positive impact on perceived ease of use and usefulness, while offline quality like product quality and delivery service only have a positive impact on usefulness.
Ahuja, Gupta & Raman, 2003	US	Two distinct groups of population: student (n=190) and non students (n=75) are surveyed.	Convenience (28%) and lower prices (25%) are strongest motivators for online purchasing if present. However, security and privacy concerns (28%) were the biggest barriers to online shopping.
Amoroso & Hunsinger, 2008	US, Australia	Online survey conducted over 1850 undergraduate student in US and Australia.	Significant correlations were also found between E-Loyalty and the following constructs: Inertia (r=.452), Convenience (r=.565), E-Satisfaction (r=.555), and Per-ceived Value (r=.529), providing support for H7, H8, H9, and 10a.
Delafrooz, Paim & Khatibi, 2010	Malaysia	500 questionnaires distributed among postgraduate students from a public university in Malaysia only 370 were analyzed.	The most influential determinants of user's online shopping attitudes are convenience, price and wider selection. All of them have a significantly positive impact on users' attitude toward online shopping.

Study	Country	Data	Major Findings
Delafrooz, Paim & Khatibi, 2011	Malaysia	370 surveys distributed to student enrolled in public university located in Selangor.	There are significant correlations between purchase convenience, price, wider selection, utilitarian orientation, customer service, and buying attitudes. Meanwhile, the attitude towards online shopping had no significant relationship with hedonic orientation, homepage and fun/entertaining webpage.
Dillon & Reif, 2004	US	Survey conducted with 142 of business major students and 27 integrated science students.	Specific factors that were more influential to students that have made e-commerce purchases include the product perception (price and quality), and the positive aspects of the shopping experience (lifestyle compatibility and enjoyment).
Goldsmith, & Goldsmith, 2002	US	Survey of 566 students at large southern university in US.	Both online purchaser and non-purchaser perceived that online shopping is cheaper and more fun.
Han, Bullington & Case, 2006	US	More than 400 recruited students from medium size, residential and public university in Southeast were asked to complete an online (WEbcT) survey in their computer related classes.	Out of ten factors considered, only product variety and quality were considered to be more important for online shoppers. It is followed by price, delivery time, and customer service. Others are positively related to attitudes of online buyer but with insignificant amount.
Harn, Khatibi & Ismail, 2006	Malaysia	360 survey questionnaires conducted through email or face-to-face interview with current internet users in Klang Valley.	The most important and dominant factors that influenced online consumers to shop online are "Convenience" with mean value of 3.83, "cannot get items elsewhere" with mean value of 3.83 and "cheaper price" with mean of 3.73.
Kim & Kim, 2004	US	Mailing survey conducted on 303 adults with a computer at home and had Internet access in the US.	Online privacy, convenience and prices play an important role in online purchasing of clothing products.

Study	Country	Data	Major Findings
Liang & Lai, 2001	Taiwan	Thirty student volunteers (21 males, 9 females) recruited to participate in experiment.	Findings show that design quality is as important as product price and consumers are more likely to buy at well-designed websites.
Shergill & Chen, 2005	New Zealand	Mail intercept survey of 102 respondents in Auckland's shopping mall with Web shop experience.	New Zealand's buyer viewed security as the most important aspect to buying online followed by website design. They are found to be satisfied with the customer services.
Su & Huang, 2011	China	70 questionnaires distributed by email and QQ to undergraduates but 60 are usable.	Price advantage affects the most due to limited income of the undergraduates. Computer literacy affects online shopping. Other factors(convenience, security) do not significantly affect intention.
Wu, 2003	Taiwan	Interview 600 randomly selected Internet users in Taiwan.	All consumer benefits perception factors are showing positive influence ($p<0.05$) on online shopping's attitudes. Relevant factors are purchase convenience, information abundance, service, quality, homepage design and selection.

Appendix 3.1: Permission Letter to Conduct Survey

UNIVERSITI TUNKU ABDUL RAHMAN

29th August 2011

To Whom It May Concern

Dear Sir/Madam

Permission to Conduct Survey

This is to confirm that the following students are currently pursuing their *Bachelor of Commerce (HONS) Accounting* program at the Faculty of Business and Finance, Universiti Tunku Abdul Rahman (UTAR) Perak Campus.

I would be most grateful if you could assist them by allowing them to conduct their research at your institution. All information collected will be kept confidential and used only for academic purposes.

The students are as follows:

Name of Student	**Student ID**
Tan Siok Hiang	09ABB05647
Ivonne Chan Yi Wen	09ABB07105
Lee Hooi Ling	09ABB06533
Leong Hui Ying	09ABB07718
Teoh Sook Kuan	09ABB06558

If you need further verification, please do not hesitate to contact me.

Thank you.

Yours sincerely

Leong Lai Ying
Head of Department,
Faculty of Business and Finance
Email: leongly@utar.edu.my

Khor Heng Ghee
Supervisor,
Faculty of Business and Finance
Email: khorhg@utar.edu.my

Address: 13, Jalan 13/6, 46200 Petaling Jaya, Selangor Darul Ehsan. Malaysia **Postal Address:** P O Box 11384, 50744 Kuala Lumpur, Malaysia.
Tel: (603) 7958 2628 **Fax:** (603) 7956 1923 **Homepage:** http://www.utar.edu.my

Appendix 3.2: Survey Questionnaire

UNIVERSITI TUNKU ABDUL RAHMAN
FACULTY OF BUSINESS AND FINANCE

BACHELOR OF COMMERCE (HONS) ACCOUNTING

FINAL YEAR PROJECT

TITLE OF TOPIC : Relationship between Perceived Benefits and Undergraduates' Online Shopping Decisions in Malaysia

Survey Questionnaire

Dear respondent,

We are final year undergraduate students of Bachelor of Commerce (Hons) Accounting, from Universiti Tunku Abdul Rahman (UTAR). The **purpose** of this survey is to investigate the relationship between perceived benefits and undergraduates' online shopping decisions in Malaysia.

Thank you for your participation.

Instructions:

1) There are **THREE** (3) sections in this questionnaire. Please answer ALL questions in ALL sections.

2) Completion of this form will take you approximately 10 to 15 minutes.

3) Please feel free to share your comment in the space provided. The contents of this questionnaire will be kept **strictly confidential**.

Section A: Demographic

Please tick at the most appropriate box and fill in the blank (if relevant) for the following questions.

1. Age
   - □ 18-20
   - □ 21-23
   - □ 24-26
   - □ > 26

2. Gender
   - □ Male
   - □ Female

3. Ethnic Group
   - □ Malay
   - □ Chinese
   - □ Indian
   - □ Others (Please specify : _____)

4. University
   - □ Multimedia University (MMU)
   - □ Universiti Tenaga Nasional (UNiTEN)
   - □ Open University Malaysia (OUM)
   - □ University of Nottingham Malaysia (UNM)
   - □ Universiti Teknologi PETRONAS (UTP)
   - □ Taylor's University College (Taylor)
   - □ Universiti Tunku Abdul Rahman (UTAR)
   - □ Universiti Tun Abdul Razak (UniTAR)
   - □ Monash University Malaysia (Monash)
   - □ Universiti Industri Selangor (Unisel)
   - □ Others (Please specify : _____)

5. Field of study
   - □ Business
   - □ Engineering
   - □ Social Sciences (eg. Psychology)
   - □ Sciences (eg. Chemistry, Biomedical Science)
   - □ Arts & Design
   - □ Language & Linguistics
   - □ Others (Please specify : _____)

6. How many times have you shopped online before?
   - □ Never
   - □ 1-5 times
   - □ 6-10 times
   - □ 11-15 times
   - □ > 15 times

Section B: Perceived Benefits

Please circle the most appropriate rate for each of the following questions.

Items	Description	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Webpage Design						
WD1	I prefer to purchase from Websites which are user friendly.	1	2	3	4	5
WD2	I prefer to purchase from Websites with great functionality (payment option, product filter option, product customization, etc.)	1	2	3	4	5
WD3	I prefer to purchase from Websites that are updated frequently.	1	2	3	4	5
WD4	I prefer to purchase from Websites that provide detailed product information.	1	2	3	4	5
WD5	Websites which display products by pictures and purchase button together will make my shopping easier.	1	2	3	4	5
WD6	I prefer to purchase from Websites with attractive design.	1	2	3	4	5
Product Choice						
PC1	Selection of goods available on the internet is very broad.	1	2	3	4	5
PC2	I will be able to access many brands and retailers when I shop online.	1	2	3	4	5
PC3	Items from different countries are easily available.	1	2	3	4	5
PC4	Online shopping allows inter-comparable information.	1	2	3	4	5
PC5	I can get specialized products through online shopping.	1	2	3	4	5
Price						
PR1	I will prefer online shopping only if online prices are lower.	1	2	3	4	5
PR2	I believe that online retailers always offer the lowest price.	1	2	3	4	5
PR3	I pay a lot of attention to price.	1	2	3	4	5
PR4	I shop a lot for special deals.	1	2	3	4	5
PR5	It is easy to compare prices from different online retailers.	1	2	3	4	5
PR6	Online shopping allows ones to look for the best price before purchasing.	1	2	3	4	5

Items	Description	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Convenience						
CN1	I don't have to leave home for shopping.	1	2	3	4	5
CN2	I can shop whenever I want.	1	2	3	4	5
CN3	I can save the effort of visiting stores.	1	2	3	4	5
CN4	I can shop in the privacy of home.	1	2	3	4	5
CN5	Shopping over the Web would allow me to do my shopping more quickly.	1	2	3	4	5
CN6	I can use online shopping Website to search for product information.	1	2	3	4	5
Customer Service						
CS1	Greater value-added services (pre-sales service, post-sales service) provided on the Websites would attract me to shop online.	1	2	3	4	5
CS2	I will purchase products/services online, if it is easy to make changes even after I paid.	1	2	3	4	5
CS3	I can find specific person or group for help when I have difficulties in the online shopping Website.	1	2	3	4	5
CS4	Online shopping would provide me with a timely response to my request.	1	2	3	4	5
CS5	I prefer Website with customer support such as e-form inquiry, order status tracing and customer comment.	1	2	3	4	5
Product Quality						
PQ1	It is important to ensure quality of product.	1	2	3	4	5
PQ2	I will purchase online from Websites that offer quality products or services.	1	2	3	4	5
PQ3	A well-known brand implies good quality.	1	2	3	4	5
PQ4	I believe that I can get quality products through online shopping.	1	2	3	4	5
PQ5	I believe that the product features shown on the Website are the same with real products that I purchase online.	1	2	3	4	5

Section C: Online Shopping Decision

Please circle the most appropriate rate for each of the following questions.

Items	Description	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Online Shopping Decision						
OS1	Online shopping is different from traditional shopping.	1	2	3	4	5
OS2	If I heard a new product that I am interested in is available over the Internet, I would be interested to buy it.	1	2	3	4	5
OS3	I intend to purchase goods on the Internet.	1	2	3	4	5
OS4	The possibility that I will purchase goods on the Internet in the future is high.	1	2	3	4	5
OS5	I prefer online shopping than traditional shopping.	1	2	3	4	5

Comments and Suggestions:

.....

.....

.....

.....

.....

.....

Appendix 3.3: Variables and Measurement

Variables	Items	Description	References	Measurement
Independent Variables				
Webpage Design	WD1	I prefer to purchase from Websites which are user friendly.	Chai, Eze, and Ndubisi 2011	Interval
	WD2	I prefer to purchase from Websites with great functionality (payment option, product filter option, product customization, etc.)		
	WD3	I prefer to purchase from Websites that are updated frequently.		
	WD4	I prefer to purchase from Websites that provide detailed product information.	Forsythe, Petee, and Jai 2003	
	WD5	Websites which display products by pictures and purchase button together will make my shopping easier.	Delafrooz, Paim, and Khatibi 2009a	
	WD6	I prefer to purchase from Websites with attractive design.	Rishi 2008	
Product Choice	PC1	Selection of goods available on the internet is very broad.	Osman, Chan, and Bei 2010	Interval
	PC2	I will be able to access to many brands and retailers when I shop online.	Robin 2009	
	PC3	Items from different countries are easily available.	Forsythe, Petee, and Jai 2003	
	PC4	Online shopping allows inter-comparable information.	Kim, Lee, and Kim 2004	
	PC5	I can get specialized products through online shopping.	Chan and Chow 2010	

Variables	Items	Description	References	Measurement
Independent Variables				
Price	PR1	I will prefer online shopping only if online prices are lower.	Osman, Chan, and Bei 2010	Interval
	PR2	I believe that online retailers always offer the lowest price.	Chai, Eze, and Ndubisi 2011	
	PR3	I pay a lot of attention to price.	Dabhade 2008	
	PR4	I shop a lot for special deals.		
	PR5	It is easy to compare prices from different online retailers.		
	PR6	Online shopping allows ones to look for the best price before purchasing.	Tak and Wan 2006	
Convenience	CN1	I don't have to leave home for shopping.	Robin 2009	Interval
	CN2	I can shop whenever I want.		
	CN3	I can save the effort of visiting stores.		
	CN4	I can shop in the privacy of home.	Forsythe, Petee, and Jai 2003	
	CN5	Shopping over the Web would allow me to do my shopping more quickly.	Osman, Chan, and Bei 2010	
	CN6	I can use online shopping Website to search for product information.	Kim, Lee, and Kim 2004	
Customer Service	CS1	Greater value-added services (pre-sales service, post-sales service) provided on the Websites would attract me to shop online.	Chai, Eze, and Ndubisi 2011	Interval
	CS2	I will purchase products/services online, if it is easy to make changes even after I paid.		
	CS3	I can find specific person or group for help when I have difficulties in the online shopping Website.	Chan and Chow 2010	
	CS4	Online shopping would provide me with a timely response to my request.	Delafrooz, Paim, and Khatibi 2009a	
	CS5	I prefer Website with customer support such as e-form inquiry, order status tracing and customer comment.		

Variables	Items	Description	References	Measurement
Independent Variables				
Product Quality	PQ1	It is important to ensure quality of product.	Torkzadeh and Dhillon 2002	Interval
	PQ2	I will purchase online from Websites that offer quality products or services.	Chai, Eze, and Ndubisi 2011	
	PQ3	A well-known brand implies good quality.	Dabhade 2008	
	PQ4	I believe that I can get quality products through online shopping.		
	PQ5	I believe that the product features shown on the Website are the same with real products that I purchase online.	Osman, Chan, and Bei 2010	
Dependent Variable				
Online Shopping Decision	OS1	Online shopping is different from traditional shopping.	Delafrooz, Paim, and Khatibi 2009b	Interval
	OS2	If I heard a new product that I am interested in is available over the Internet, I would be interested to buy it.	Goldsmith 2002	
	OS3	I intend to purchase goods on the Internet.	Chan and Chow 2010	
	OS4	The possibility that I will purchase goods on the Internet in the future is high.		
	OS5	I prefer online shopping than traditional shopping.	Osman, Chan, and Bei 2010	