

ONLINE BANKING IN MALAYSIA FROM
CONSUMER PERCEPTION
ON RISK

BY

ANG HUI TING
FOONG SOOK KUEN
GAN LEE XIEN
LIM YIN YING
WONG SIOW YEW

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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.
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Name of Student:	Student ID:	Signature:
1. ANG HUI TING	10ABB02926	_____
2. FOONG SOOK KUEN	10ABB03055	_____
3. GAN LEE XIEN	10ABB03011	_____
4. LIM YIN YING	10ABB00222	_____
5. WONG SIOW YEW	10ABB02730	_____

Date: 18 APRIL 2013

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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
ATM	Automated Teller Machines
B2B	Business to Business
BNM	Bank Negara Malaysia
IB	Internet Banking
SMS	Short Message Service
SPSS	Statistical Package for Social Science
TAM	Technology Acceptance Model
TRA	Theory of Reasoned Action
UK	United Kingdom
US	United State
UTAR	University Tunku Abdul Rahman
UTAUT	Unified Theory of Acceptance and Use of Technology

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PREFACE

Today, the business world has an intense competition with each of the industry itself. Hence, the online banking is playing an important role to gain the competitive advantage for the banking industries. Frankly, online banking leads to the enhancement of productivity and efficiency of bank businesses. This is due to the automating routine processes can help to reduce the time involved in performing routine banking activities, hence online banking which can lead to the increase of banking productivity, efficiency and profitability due to the reduction of time involved for banking activities.

In fact, the research is part of our degree course in University Tunku Abdul Rahman (UTAR). In order to complete our course- BACHELOR OF BUSINESS ADMINISTRATION (HONS) BANKING AND FINANCE, we are required to conduct a research methodology and project in the final year of our studies. Well, the research topic that we conducted is “Online Banking in Malaysia from consumer perception on risks”. This research could be important for the bankers and consumers because it helps to bring awareness of the online banking that focus on the view of different risk factors.

The research was carried out to examine how the five independent variables can influence consumers’ perceptions in adopting online banking based on different risk factors. These independent variables include financial risk, time risk, security risk, performance risk and social risk.

ABSTRACT

Online banking is an essential distribution channel in banking industry of a development country. In this research, we are interested to find out the reason why there is a low adoption rate of internet banking in Malaysia. Hence, the main purpose of this research project is to determine the relationship between behavioral intention to use online banking and such independent variables, which included financial risks, performance risks, time risks, social risks and security risks. There are detailed research in the part of literature review which done by previous researchers including the dependent variable (behavioral intention to use) and also with the independent variables(perceived risk, financial risks, time risks, performance risks, social risks and security risks).

Moreover, there are 29 questions is conducted by the researches in this survey questionnaire and total of 443 self-administered questionnaires was done by those online users who's age are 18 and above in Malaysia. The result of statistical analyses is analyzed by using Statistical Package for the Social Sciences (SPSS) software. . Few analyses were conducted to examine the effects of the behavioral intention to use online banking. Thus, Pearson's Correlation Test, Simple Linear Regression and Multiple Linear Regression for inferential analysis are used to test the hypothesis in this research project.

Last but not least, the major findings are shown in the discussion. It can be concluded that there is significant impact between five independent variables (financial risk, time risk, security risk, performance risk and social risk) with the dependent variables (consumers' behavioral intention to use online banking).

This research may contribute to bankers and consumers of view so that, they can define a better strategy for banker in order to enhance competitive advantage and customers can understanding more about these various type of risks. Furthermore, the findings of this study can enhance the current knowledge level for future researches that intend to conduct further researches on similar areas.

CHAPTER 1: RESEARCH OVERVIEW

1.0 Introduction

This chapter includes several part of study. The first part of study is research background and this part is discussing overall environment and trends of internet banking in banking industry. The second part is problem statement which explaining the importance and the foundation of study. Next, there are five specific objectives of this study which are stated in the research objective. The next part of study is research question. The questions are stating how the factors can affect the consumers' behavioral intention to use online banking in consumer view. This is continued by part of significance of the study that explain the important and contribution of the research. Lastly, the last two parts of study are chapter layout and conclusion.

1.1 Research Background

Banking institution is a hub of promoting economic growth where the technological innovations and delivery through electronic distribution channel is e-banking. Online banking is a practice of handling all the bank transactions through internet which enable the user to do their transactions through internet. Nowadays in a global business world, online banking has become the rapid revolution in the banking and finance field as many businesses obtain information of cash flow report, auditing and daily data transaction processing from banking sector. Thus, with the ease of online banking, account holder can rapidly access and efficiently executed the transaction.

Lee, Tsai & Lanting (2011) indicates that in the future, businesses will compete not only in the physical market, but also in the virtual market (online technology).

In other words, there will be more and more companies switch their business models from the physical to the virtual market. In the past three decades, the financial institutions offered various types of new financial products or banking services to retain existing customer and attract new customers of the banking development. An electronic banking channel has been use as the technology adds new dimensions to the classic banking systems and grown substantially in the past few years. Therefore online banking can lead to enhancement of banking financial management. The self-service technologies enable the banker collects information and communicating with customers without face-to-face interaction, and therefore it can save the transaction time and lower the operating cost through the banking systems (Calisir, Gumussoy, 2008).

The following is the historical of banking development in Malaysia. First introduce in the early 1980s, the banks in the financial sector has emerged the first self-service technologies which the first automated teller machines (ATMs) is installed. This was followed by telephone banking services in the 1980s, and in the 1990s, with the emergence of the Internet; banks has offered web-based banking applications as extension of their existing distribution channels. On 1st June 2000, Central Bank of Malaysia or Bank Negara Malaysia (BNM) allowed the local banks to offer Internet Banking services to their customer. On June 15, 2000, Malayan Banking Berhad (Maybank) the largest domestic bank has become the first to introduce its own Internet Banking services in Malaysia through its website www.maybank2u.com and as at October 2000, it reached about 45,000 active Internet Banking users.

In Malaysia, online banking has the potential to lead technological developments that transform the financial industry. In the points of view, its benefits to businesses and consumers are long term. Financial institutions in Malaysia keep evolving rapidly the technologies and taking initiatives action to improve the delivery level of channels in banking system. The change in consumer behavioral is reflected in the increasing use of electronic payment systems.

Besides, online banking benefit banks by offering many opportunities including an additional delivery channel, low-cost banking, profitable banking, quality banking, and allows them to sell products customized to reach customer needs. Various types banking services also benefit consumers such as online payment, online transfer, checking balances history and so on , it enable account holder to access their bank account at anywhere at the operating time of period. Thus, online banking services not only provide speedy, time-saving services but is also enable the obtain of more accuracy of data and information and convenient banking opportunities. In addition, customers can enjoy the new banking services benefits through online banking such as paying bills, obtaining mortgages or auto loans, applying for credit cards and locating the nearest ATM or branch office for customers' convenience.

1.2 Problem Statement

While online banking is still in the product development stage, this paper revealed that there are low adoption rate of online banking in Malaysia. Banking system enables customers to do the banking transactions through banking website and it also provides many features and functions but many consumers yet to adopt the online banking services. In worldwide, the total growth rate of internet users in the range of year 2000 to 2012 is 566.4%. The largest proportion (44.8%) of internet users was from Asia and followed by Europe (21.5%) and North America (11.4%). In year 2012, Malaysia was the one of Asia countries of Top 10 with the highest number of internet users. As at June of year 2012, the Internet users in Malaysia had increased from 3,700,000 to 17,723,000. Within the time period of twelve years, there is at most 379% of increment and it is indicated 60.7% of the total population (Internet World Stats, 2012). However, to date, there is no any accuracy statistics of the number of internet banking users in Malaysia. According to Yeoh & Benjamin (2011), the increase number of internet users will supposedly lead to the increment of the users of online banking. Thus, this paper wants to find out the real factors that causing the lower adoption rate in Malaysia.

This paper also aims to know the actual reason that affect the behavioral intention to use online banking.

1.3 Research Objectives

This paper's research objective is to determine the consumer behavior that affects their intention to adopt behavior by using online banking. It is also to identify the significant relationship between consumers view of risk.

1.3.1 General Objectives

The objective of this paper is to examine the potential effects of risk on the adoption and use of new technologies services instead of the traditional point of view of the attitude and intention towards use of the self-technology services. The technology acceptance model (TAM) is utilized to investigate the attitude and behaviour towards switching to online banking. Thus, the objective of this research study is to analyze the effect of risks associated with the consumer behavioral intention to use online banking during the relatively early stages of its market development. Through this research stream, it can help us to characterize the development in banking system.

1.3.2 Specific Objectives

To conclude, the main objectives of this study are:

- (i) To examine the relationship between financial risks and consumers' behavioral intention to use online banking
- (ii) To examine the relationship between performance risks and consumers' behavioral intention to use online banking

- (iii) To examine the relationship between time risks and consumers' behavioral intention to use online banking
- (iv) To examine the relationship between social risks and consumers' behavioral intention to use online banking
- (v) To examine the relationship between security risks and consumers' behavioral intention to use online banking

1.4 Research Questions

Q1: Does financial risks affect consumers' behavioral intention to use online banking?

Q2: Does performance risks affect consumers' behavioral intention to use online banking?

Q3: Does time risks affect consumers' behavioral intention to use online banking?

Q4: Does social risks affect consumers' behavioral intention to use online banking?

Q5: Does security risks affect consumers' behavioral intention to use online banking?

1.5 Significance of the study

Since internet banking is quite popular among consumer nowadays, most of the companies are using online banking for their business transaction. Online banking is usually used for consumers to make transaction such as booking ticket online, purchasing product online, transferring money, paying utilities bills and so on. The importance of this study is to provide bank and consumer a brief idea on the few types of risks and the most significant risk when adopting internet banking.

The contributions of this study are the benefits for bankers and banking consumers. The following is from the view of banker's benefits. Banks can increase their competitive advantages based on this result finding. Trust plays an

important role in customer satisfaction towards online banking. Besides, risk was one of the factors which do influence the rate of adoption of internet banking in Malaysia (Suki, 2010). Thus this paper will figure out whether financial risk, performance risk, time risk, social risk and security risks will affect much on customer decision in using internet banking. In addition, bank also can increase their awareness on the risks so that precaution can be done earlier. By doing this, banks are able to provide an assurance to their clients so that they would able to maintain a competitive quality of service in the future and avoid from losing their clients to their competitors (Jenkins, 2007).

From consumer's benefits perspectives, this paper explains how each risk influence consumers' behavioural intention to use online banking. This study can help consumers to increase their awareness through different aspect of risk associated with online banking. The results will increase the confidence level of consumer while using online banking in any kind of activities. If consumers are able to identify the types of risk in the online banking, they can deal with online banking without any hesitation. It is possibly useful for the consumer and bank to be aware of these risks. By gaining understanding of the reason behind the each of the risks such as financial & security risk, this knowledge might become the resource of bankers' competitive advantages.

Nevertheless, there is also a limited finding for the types of risk that influences consumer behavior in adopting Internet banking in Malaysia. It is evidence from the literature that the past technology adoption research has primarily enhanced and focus on the positive utility gain to the system adoption such as ease of use, perceived usefulness and et cetera (Featherman & Pavlou, 2003). Some of the researchers (Johson, 2004) argued that the consumer research has forgotten about the risk. For instance, Zavareh, Ariff, Jusoh, Zakuan & Bahari (2012) only test on the reliability of the internet banking while Suki (2010) examined on factor affecting the Internet banking adoption among consumers which include perceived risk. Besides, Mozie, Mustapha & Ghazali (2012) focused on the perceived trustworthiness and behavioral intention to use Internet banking.

To date, most Internet banking studies focus on specific countries such as U.S (Vatanasombut, Igbaria, Stylianou & Rodgers, 2008; Murillo, Llobet & Fuentes, 2010; Lee, Rao, Nass, Forssell & John, 2012), U.K (Shah & Siddiqui, 2006; Alsajjan & Dennis, 2010; Durkin, Jennings, Mulholland & Worthington, 2008; Faroughian, Kalafatis, Ledden, Samouel, & Tsogas (2012), Taiwan (Ho & Wu, 2009; Tsai, Huang, Liu, Tsaur & Lin, 2010; Lee, Tsai, & Lanting, 2011), Hong Kong (Cheng, Lam & Yeung, 2006; Yiu, Grant & Edgar, 2007), Finland (Kuisma, Laukkanen & Hiltunen, 2007). These studies accentuate the factors that influence consumer behavior in adopting Internet banking. However, in Malaysia, previous studies that examine on online banking acceptance are limited. The researchers only found several researches regarding the online banking in Malaysia such as, Sohail & Shanmugham (2003), Suki (2010), and Mozie, Mustapha & Ghazali (2012). Hence, this study can be viewed as the extension of past studies to look further into online banking acceptance.

Despite the importance of understanding how each risks influence on consumer behavior when adopting internet banking, this issue is not addressed in previous studies. Most studies focused narrowly only one risk in their research. For example, Suki (2010), Yiu, Granf & Edgar (2007), and Sanayei & Noroozi (2009) focused on the effects of perceived risk towards the adoption of internet banking. Other studies mainly concentrated on the influence of perceived security on internet banking acceptance (Hutchinson & Warren, 2003; Maenpaa, KaleKuusela & Mesiranta, 2008).

Therefore, in order to fill these gaps, this study examines five types of risk such as financial risk, security risk, performance risk, time risk and social risk that influence consumer behavior in adopting online banking.

1.6 Chapter layout

In chapter 1, this paper has explained the purposes and importance of this study in the problem statement and the significance of the study. Besides, this paper sets forth the research objectives to be achieved, research questions to be answered and research background. While in chapter 2, this paper will provide the detailed explanations of the independent variables and dependent variables that this paper are studying. The process of identifying the relevant data source and extracting the relevant information will be involved during the review of past literature. Next will be chapter 3, this chapter is describing how the research will be carried out in terms of research design, data collection method, sampling design, research instrument and construct measurement. By the way, the linkage to chapter 4 will be provided in data processing, data analysis and the conclusion of this chapter. Chapter 4 presents the pattern of the result and analyses of the result which are relevant to the research question and hypothesis. Besides, this paper is going to use the SPSS software to assist the researchers in analyzing and understanding the result of the research. Last but not least, summary of the statistical analyses and major finding will be given in chapter 5 and also implication and limitation of the study will be discussed. In addition to this, recommendation for the future research and the overall conclusion of the entire project will be provided.

1.7 Conclusion

In chapter 1, this paper has introduced the research topic by discussing the background, importance, objective, purpose and the relevant variable of the study. In addition, this paper also outlined each chapter of the research report in this chapter. The further relevant information and variables that related to the study will be discussed in chapter 2.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

In Chapter 2, the researchers will explore the previous studies related to the scope of consumer perceptions of risk and consumers' behavioral intention to use online banking. This chapter begins with review of literature and followed by the review of relevant theoretical model developed by previous researchers. Next, an adopted and proposed theoretical framework that graphically illustrates the stated hypotheses is included. Finally, this section ends with conclusion of the whole chapter.

2.1 Literature Review

2.1.1 Behavioral Intention to Use

There are several different approaches in defining behavioral intention to use by researchers. The behavioral intention to use is viewed by Fishbein and Ajzen (1975) as one facet of attitude, along with the cognition and affect. An understanding of behavioral intention to use can be described as an individual judgment and perception on certain things that may lead to providing the strength of motivation to an individual to make an adoption behavior. From the study of Sathye (1999), the author defined that behavioral intention to use as the acceptance and wish of continued to use a product, service and idea. According to Pavlou (2003), behavioral intention to use is an individual perception in his or her plan and willing to make an effort to adopt the product/services, while in this case, it involved the online transaction. In addition, Eagly & Chaiken (1993) also stated that a person intention will have a strong influence on their future behavior.

Behavioral intention to use can be determined by using various factors. In this research, we are only focusing on the perceived risk. The finding results of Featherman and Pavlou (2003) indicated that behavioral intention to use e-services is adversely affected by performance based risk and ease of use perception concerns. Further, O'Connell (1996) revealed that the main factor for slow growth of e-banking is related with security and performance perspective. Some banking websites are not user friendly enough and have lots of hassle caused while some of the users are lack of knowledge about the service provided. Davis (2003) also conveys that customers intention to use internet banking can be affected by customers attitudes and customers satisfaction towards using internet banking.

2.1.2 Perceived Risk

Risk can be defined as uncertainty about financial loss from an exposure. Loss is an unpleasant outcome of risk. We may view risk into two dimensions which are the objective or subjective dimension. In fact, the perceived risk is falling under the subjective dimension. Perceived risk means that, without considering the facts, the views of different people are subjective in nature. Make it simple, it means that the risk is perceived differently. As stated in Bauer (1960), perceived risk is a well-established concept in consumer behavior. It was arise because consumers' actions are faced with probably negative consequences.

2.1.2.1 Financial risk

Financial risk is the risk that someone will encounter the financial loss or getting inadequate return. While, in this paper, it can be defined as the possibility of online banking users to face financial losses due to some banking transaction errors or bank account misuse. A study conducted by Kuisma et al. (2007) indicating that online banking transaction are not as assurance as traditional banking system in the way of providing some settings through formal proceedings and receipts. Further, they found that quite lots of customers are worry of losing their money during the process of transactions and transferring of the money through their bank accounts. In fact, some senior oldster will afraid of keying in wrong inputs of information such as wrong account number, wrong figures because of their poor eyesight or even their carelessness. In addition, consumers usually think that it will be quite hard for them to ask for compensation in the case that any transaction error occurs which causing some of them resists in participating online banking (Lee, 2008).

Besides that, online banking involves an amount of investment cost such as it needs the computing facilities and internet access fees. Although the online banking can save lots of time and transportation fees which makes it more favorable compared to other traditional approach, but consumers still have worries and plenty of problems exist in using online banking. The financial risk is not particularly related with the loss of monetary amount involved in the transaction but more on placing the consumer at the risk of losing money through credit card fraud when doing the online transaction. Littler and Melanthiou (2006) conquers that the major perceived financial risk is likely to relate to the potential loss of the deficiencies in the operating system or misappropriation of funds through illegal external access.

According to Spiteri and Dion (2004), it defined financial risk as the sacrifice by comprising of money, time and effort that strongly affect the consumer perception of value. While Whittaker et al. (2007) use a value

for money approach as a major approach to examine the outcome of intention to use behavior in consumer perception. It is evidence from the literature that the high cost of electronic devices is discouraging account holders from adopting Internet banking services (Sivanand et al.,2004).

In a similar way to the studies of Faroughian et al. (2012), the researchers provided the empirical support for the significant impact of performance and financial risks on perceptions of satisfaction. The results are also similar with Woodall (2003) and Agarwal and Teas (2001, 2004) who treat functional and financial risks as the determinants of value. Besides that, there is also a significant impact of performance and financial risks on sacrifices which in line with Sweeney et al.(1999) who stated that the financial risk indicates a subjective expectation of loss in the paper.

However, there is also a contradict result that created by DeYoung et al.(2006) who showed that the consumers are willing to pay extra of the services that they previously purchased at bank branches. This will lead to increase in bank profitability in terms of increasing non-interest income of the services charges arising from consumer deposit account and also the additional fees based services.

While, Aliyu et al.(2012) suggested that bank should not charge unnecessary fees to their customer due to user may have to incur other costs or losses that may lead to brand switching as mentioned by Mazursky et al. (1987)& Aliyu et al.(2012). Further, Aliyu et al. (2012) also recommended that bank can come out with some promotional activities to younger consumers as they are more likely to become the most users of online banking as shown in the study.

Since the financial risk has long been recognized as a significant negative effect on the intention to adopt online banking in consumers perspective (Lee, 2008; Gupta , 1988; Mazursky et al., 1987 ;Aliyu et al., 2012), so

that the risk are considered as a significant factor in effecting the consumer's behavioral intention in adopting internet banking.

2.1.2.2 Time risk

Time risk is defined as the time of wasted and inconvenience incurred due to the error or delays of receiving the data of banking transaction. The major finding shows that customers are influenced in their usage of internet banking services by discovering that the slow transaction speed is the most frequently faced problem while using internet banking (Agarwal et al., 2009). Lee (2008) found that users of online banking not satisfied with the services of delays in receiving online payments and they might concerned the length of time wasted while waiting the webpage loading or time needed to learn how internet banking services operate.

Time risk might also influence the acceptance of internet banking service. These may affect the customers whereby to conduct any transaction or have any transaction decision making within a reasonable time. Convenience is one of the important factors that encourage consumers using the internet in making decision. And the time savings is dominated the banking of convenience perceptions. For example, an interesting finding was that internet banking users believed that internet banking is to be faster than phone banking (Lichtenstein & Williamson, 2006). Internet banking has provided the easy and convenient banking services for consumer. As a result, customers can save more time on internet banking rather than to waste time making any banking transaction at the banking centre. So that, Nathan (1999) stated that internet banking services are extremely time saving for consumers and is a cost-effective way for the banking sectors.

According to Mathieson (1991), the perceived ease of use is one of the consumers' perceptions and intention toward adaption of the internet banking. It also affirmed that time risk is determined in the growth of electronic banking which is a combination of provided convenience to those with easy accessing to internet, the secure system is safe, high standard electronic banking functionality, and the necessity of internet banking services.

While Singhal & Padhmanabhan (2008) has stated that from the customer's view of point, time savings is one of vital issue in adoption of innovative service. Aliyu, Younus & Tasmin (2012) identified that technological innovation "must be easy to use" in order to enable customer for take up or acceptance of online banking. The overall level satisfaction by customers which in turn affect their acceptability of using internet banking are the effect of customers' perceptions about the time risk which consist of understand ability, ease of contact, ease of access and ease of using the system. At the same time, there is an attempt can be made to identify the areas of problems faced by the customers while using e-banking.

Online banking services are one of the channels that provide many advantages to consumer, such as faster transaction speed and lower handling cost. Gupta, Rao, & Upadhyaya (2009) also found that over the last few years, self-service technologies have replaced the need for face-to-face interaction between banks and customers. Online banking transaction can save lots of time as customers is enable to monitor contractual performance or to make confirmation decision about automatically delivery transaction or learn how to operate through online banking website (Al-Somali, Gholami & Clegg, 2009).

2.1.2.3 Security risk

Security risk also known as privacy risk that represented as any event compromises the assets, operations and objectives of an organization. While in this paper, it is defined as the possibility that internet users lose its confidentiality due to fraud or any unauthorized online access to customer's records (Lee, 2009). There are some variables under security and trust including transparency and reliability of online banking customers' information which depict the importance of customers attach with risk free operation. Besides, safety and privacy also need to be concerned while doing their online banking transaction. (Agarwal, Rastogi & Mehrotra, 2009)

Many researchers have found that security is statistically significant when consumer adopting online banking. For example, according to Zavareha et al. (2012), the researcher proved that security is three dimensions statistically significant to security and trust. Lee et al. (2011) studies also support that trust has positive and significant effect on the attitude towards switching to online banking. This is because when customers felt that their physical bank is trustworthy, they will have confident in using online banking. Next, based on the result in Lee (2009) studies, the hypotheses of security risk is negatively influences attitudes and intentions to use online banking were supported. Lee (2009) also found that security risk seems to be the most important inhibitor to the adoption of online banking. This is because internet users are mostly concerning about the fraud and identity theft when dealing with online banking.

Besides, Lichtenstein and Williamson (2006), who found out that internet users will worry about data corruption due to viruses, noise, system crash and hacking, may cause them lose their confidentiality which will reduce the intention to adopt online banking. In addition, consumers also concern on the reliability of internet banking applications and internet banking adoption. Similarly to Lee et al. (2011) and Lu, Cao, Wang & Yang (2011)

studies, who pointed out that customer concerns more on the security and disclosure of the information in the online channel. Further, Lee et al. (2012) studies found out that internet users prefer the use of a high security authentication rather than a low security authentication.

Based on the Subsorn and Limwiriyakul (2012) studies, it stated that the primary concern for both the internet users and the banking industry are privacy and security of the online banking transactions and personal information confidentiality. The most common online banking security threats and risks are spyware, Trojans, adware and viruses. These risks and threats have the ability to manipulate customers' data for illegal gain. Therefore, there are many security features information on bank website which customers have to pay more attention on it. For example, logon password minimum requirement information, national privacy laws and principles compliance and et cetera.

As the majority of the research support that security risk is negatively related to the adoption of online banking, this paper formulate the hypothesis accordingly. This paper expects that the internet users concerns about the possibility of losses due to fraud, personal information being interrupt by hackers, the unauthorized use of personal information and unprotected transactions.

2.1.2.4 Performance risk

Performance risk is the risk that defined as the losses that incurred by shortages or errors of internet banking websites. According to Kuisma et al (2007), consumers are often apprehensive to certain internet problems such as system server breakdown problems or internet disconnections which may happen when executing online transactions as these circumstances may lead to unpredictable losses. Similar to the previous research from Littler and Melanthiou (2006) , who emphasized that online banking

websites would reduce customers' willingness to adopt online banking when there is a malfunction or internet disconnection occurs, while Featherman and Pavlou (2003) found that a high rate of internet website errors and disconnections will inhibit the e-services evaluation. Therefore, the quality of internet connection is an essential element for any internet-based adoption. In fact, Almogbil's (2005) study confirmed that there is a significant relationship between the speed of internet access and the adoption of e-banking services.

Moreover, the factors including breakdown of system servers, disconnection and low download speed that will adversely affect the performance of online banking service. These may link to the customers' ability to conduct any banking transaction which can lead to influencing the transaction within a desirable time period. In addition, the effectiveness of website includes the download speed and the bearing appearance during the time needed to change from one website to another website may be relevant to the performance risk of online banking especially when the download speed is extremely slow (Hoffman and Novak, 1996). Furthermore, performance risk may occur when there is the threat that new product or service will not meet the customers' requirements. Based on the previous research from Ongkasuwan and Tantichattanon (2002), the researchers indicate that online banking can help bank to save costs. However, some factors such as user-friendly interface, level of internet experience, types of services provided (for example e-mail and electronic financial services) and delivery time may affect the customers' ability to adopt online banking.

Besides that, performance risk is also known as the possibility that the purchased products do not work properly or can be used only for a short period of time than expected (L.Simpson and H.B.Lakner, 1993). This dimension of perceived risk is similar to the usefulness or functionality of goods and services. Performance of online banking in form of usefulness will play an important role to determine consumers' adoptions of internet

banking. According to Davis et al (1989), if purchasers believe that a certain application will improve job performance, they will be more likely to use than if they do not realize the application's usefulness. At the same time, many other researchers also have found that perceive usefulness which is a key to affect performance risk, it will have a strong impact over buyers' acceptance of an application (Cheng et al., 2006; Gerrard and Cunningham, 2003). This is because perceived usefulness is a primary motivator of technology acceptance, it is reasonable that it may also affect subsequent continuance of the technology (Bhattacharjee, 2001).

Meanwhile, Gerrard and Cunningham (2003) proved that performance risk on online banking is also depend on the banking services provided such as checking bank account balances, applying for a loan, paying utility bills, transferring money abroad and obtaining information on mutual funds, which means that when these banking services are unable to perform as consumers expected, the performance risk will increase. In fact, some previous researches also proved that there is a significant relationship between performance risk and adaptation intention which means that poor performance on internet banking such as high frequency of website breakdown will eventually increase performance risk hence reduce the possibility of consumers to adopt online banking (Jaruwachirathanakul and Fink, 2005; Venkatesh, 2000). Moreover, Tan and Teo (2000) suggested that performance risk is a significant element in determining the adaptation of innovation. As a result, the greater the performance risk of using electronic banking services, the higher possibility that online banking will not be adopted by consumers (Jaruwachirathanakul and Fink, 2005).

2.1.2.5 Social risk

Social risk is defined as the potential loss of status in one's social group such as family and friends in deciding whether to adopt a product or service. Furthermore, social risk can also be defined as a threat which causes a possible loss of self-image that is resulted from the purchase of certain products or services (Forsythe and Shi, 2003).

In the context of online banking, social risk occurred when the possibility that people with unfavorable perceptions on online banking may in turn to influence the views of the potential online banking adopters. According to Featherman and Fuller (2002), consumers are more likely to influence by the referents if the referents do not accept a purchasing product or service such as online banking. In addition, some previous research projects regarding the retail purchase have shown that social risk is negatively correlated to consumers' attitudes (Yang et al, 2007). Therefore, it is reasonable to expect that the social risk has an adverse impact to the use of online banking. In fact, social risk will also affect individuals' perception on online banking which means that it is possible when a consumer's social members such as friends and family who have negative perceptions on online banking, this may eventually cause the consumer not to accept online banking (Jacoby and Kaplan, 1972).

Furthermore, Taylor and Todd (1995) also found that social influences were similar to subjective norm. In fact, subjective norm is defined as the opinion of one's referents such as friends or co-workers that may influence one's actions in adopting a service such as online banking (Davis et al., 1989; Fishbein and Ajzen, 1975). Therefore, customers may have favorable or unfavorable perceptions in adopting online banking as the influences from one's peers or family. Consistently with Taylor and Todd (1995), Davis et al. (1989) also proved that under certain conditions people might use a technology to comply with others' recommendations rather than their own feelings and beliefs.

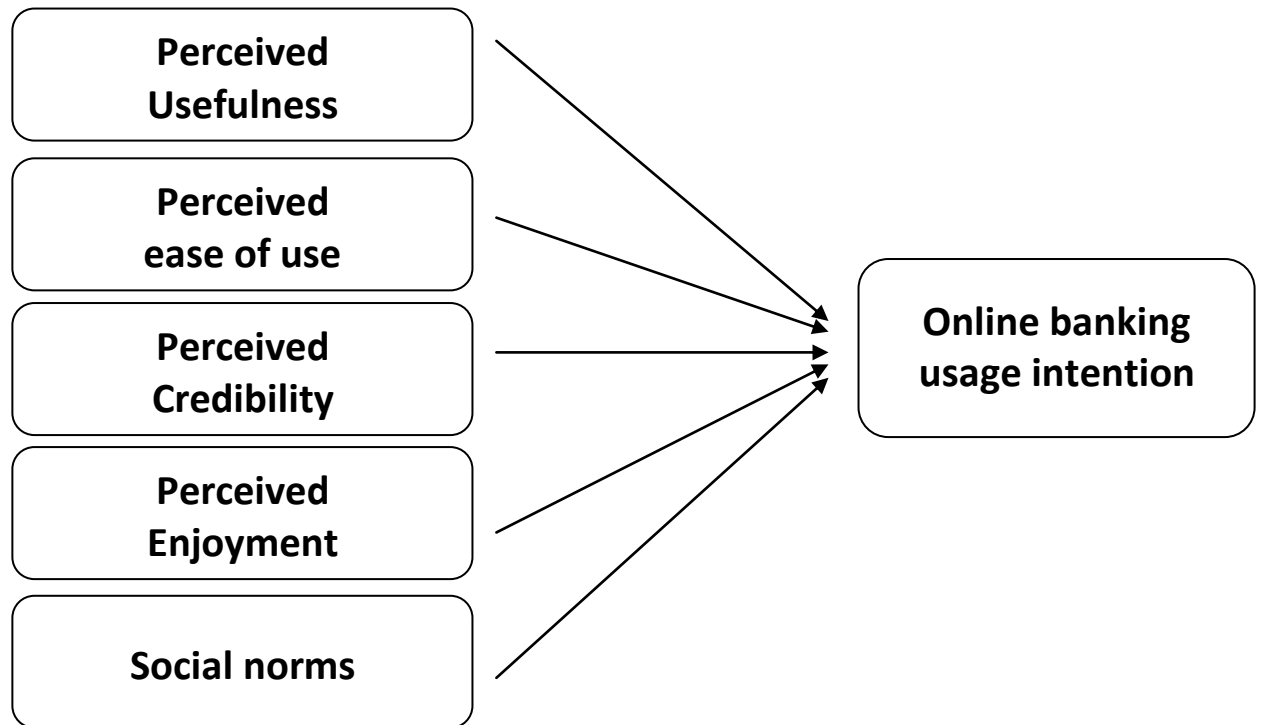
Nevertheless, social influence plays a significant role in determining the adoption or usage behavior of adopters in accepting new Information Technologies (Venkatesh and Morris, 2000). According to Rodgers and Shoemaker (1971), customers will pass through a combination process of knowledge, persuasion, decision and confirmation before they are ready to accept or use a product or service. Hence, previous research had suggested the lack of human interaction can become the obstacle to the use of technology-based services (Marr and Prendergast, 1993). As a result, social influence can build awareness of online banking such as services provided and benefits gained to a consumer from one's friends or family.

Moreover, some evidences from Sathye (1999) also proved that the adoption of online banking services is a new experience to various customers and lack of awareness of internet banking from social influence becomes an important element in causing customers not to adopt online banking.

According to Jaruwachirathanakul and Fink (2005) and Al-Somali et al. (2009), the introduction of online banking services is relevant to the bank's reputation in the context of size, awareness of the services and customers' awareness of the online banking benefits may play a critical role on the adoption of online banking. Therefore, lack of awareness of online banking is a critical factor in making customers not to adopt or accept online banking (Al-Somali et al., 2008). As a result, social risk is a key factor to the adoption of internet banking by a consumer.

2.2 Review of Relevant Theoretical Models

Figure 2.1: Theoretical model for investigating consumers' behavioral intention in adopting online banking.



Adapted from: Amin, H. (2009). An analysis of online banking usage intentions: An extension of the technology acceptance model. *International Journal Business and Society*, 10(1), 27-40.

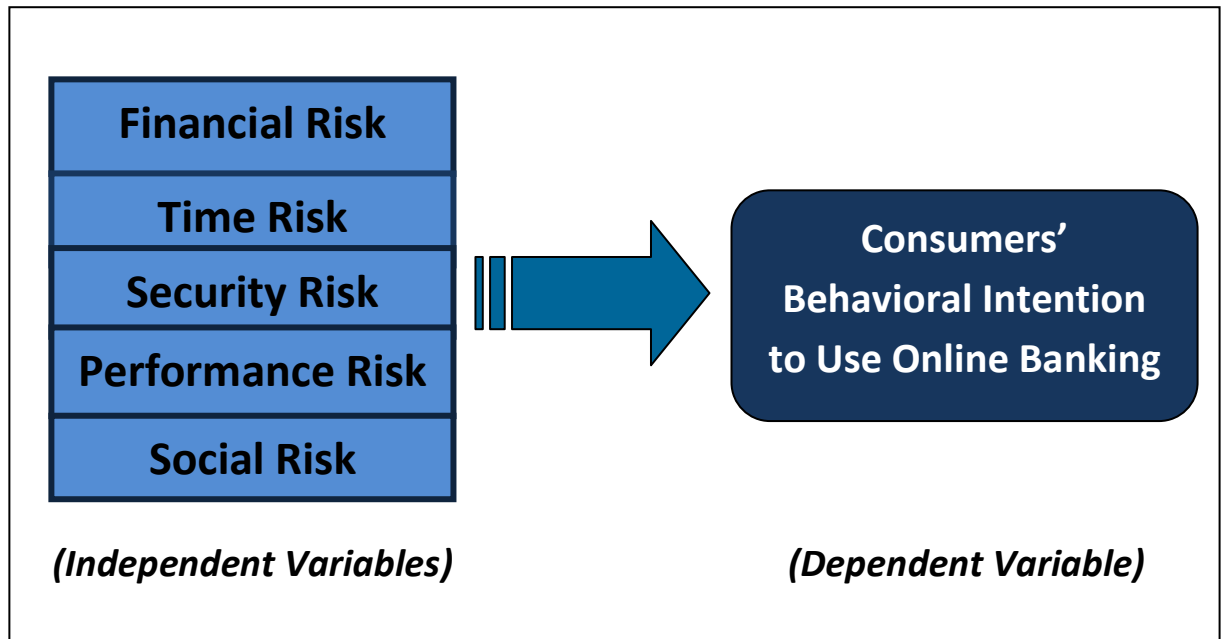
This model is used in the study of Amin (2009) to investigate the factors influencing the online banking acceptance in Kota Kinabalu, Malaysia. It is a direct extension of the Technology Acceptance Model (TAM) which explores online banking from different angle. This model not only includes the two original constructs of TAM which are perceived usefulness and perceived ease of use, but it also integrates other variables such as perceived credibility, perceived enjoyment and social norms that the author believed it can better explains user's intention in adopting online banking (Amin, 2009).

TAM has long been considered a robust model to investigate the acceptance and use of new information technologies within organization (Nasri & Charfeddine, 2012). It is an adaptation of theory of reasoned action (TRA), specially designed for explaining user acceptance of information systems. Therefore TAM is more specific than TRA that generally explain any human behavior (Davis, Bagozzi & Warshaw, 1989).

The result of the study of Amin (2009) by using the model in Figure 1 shows that perceived usefulness, perceived ease of use, perceived credibility are positively correlated with online banking usage intention. However, perceived enjoyment does not statically significant affect the usage intention. Social norms are also an important factor that drives the user's intention to use as the result shows positive correlated.

2.3 Proposed Theoretical/ Conceptual Framework

Figure 2: Proposed Theoretical/ Conceptual Framework- The influence of financial risk, performance risk, time risk, social risk and security risk towards consumers' behavioral intention in adopting internet banking.



Source: Developed for research

The sketch above shows the proposed theoretical/ conceptual framework that serve as foundation for the research project. It is adopted from the model used in the study of Amin (2009). However, the independent variables in this research paper are structured in a way that different from the study of Amin (2009). The researchers are interested to study the effect on consumers' behavioral intention to use online banking if they are facing the risk instead of the perceived benefits brought by online banking such as ease of use and usefulness. It is evidence from the literature that the past technology adoption research had primarily enhanced and focused on the positive utility gains to the system adoption such as ease of use, perceived usefulness and others (Featherman and Pavlou, 2003). Some of the researchers (Johnson, 2004) have argued that the consumers' research has forgotten about the risk. Indeed there has been a big tendency for the customers not fully acknowledge how the risk will affect consumer decision making during

the early stage of an innovation in technology adoption. Hence, perceived risk can be expected to have a role in deciding whether consumer considering to adopt or not to adopt during the early stage of innovation. Therefore in this study, we mainly focus on the risk perception based on consumers view.

Positive utility gains that being used as independent variables in Amin (2009) such as perceived usefulness, perceived ease of use, perceived credibility and social norms are substituted with performance risk, time risk, security risk and social risk accordingly in this study. Since the result in the study of Amin (2009) shows that perceived enjoyment is not statistically significant in affecting the online banking usage intention, this research paper does not include perceived enjoyment as one of the independent variables. Instead, the researchers includes another interesting variable, namely the financial risk which to be found as a significant factor that influencing the use of online banking from the studies of Lee (2008) and Gupta (1988).

In this research paper, there are five independent variables include financial risk, time risk, security risk, performance risk and social risk while consumers' behavioral intention in adopting internet banking as the dependent variable. From this proposed framework, six hypotheses have been developed to examine the effect of the independent variables towards dependent variables.

2.4 Hypotheses Development

2.4.1 Financial risk

H_{0A} : There is no significant relationship between financial risk and consumers' behavioral intention to use online banking.

H_{1A} : There is a significant relationship between financial risk and consumers' behavioral intention to use online banking.

According to Lee (2008), the resistance of consumers in participating online banking is related to their consideration of the difficulties in asking compensation whenever transaction error occurs. Besides that, from the study of Sivanand et al. (2004), the incurrence of high cost due to the electronic device is another factor that discouraging consumers from adopting internet banking. Based on the above studies, this paper assumes that financial risk is hypothesized to have significant influence on consumers' behavioral intention in adopting internet banking.

2.4.2 Time risk

H_{0B} : There is no significant relationship between time risk and consumers' behavioral intention to use online banking.

H_{1B} : There is a significant relationship between time risk and consumers' behavioral intention to use online banking.

Lallmahamood (2007) points out that consumer adapt to internet banking mainly due to convenience, ease and time saving. It allows consumers to monitor their account, make transaction through online banking website at any time, at anywhere all around the world (Al-Somali, Gholami & Clegg,

2009). Therefore, if internet banking does not provide these features, consumers will probably not be willing to adapt to internet banking. Based on the above studies, this research assumes that time risk is hypothesized to have significant influence on consumers' behavioral intention to use internet banking.

2.4.3 Security risk

H_{0C} : There is no significant relationship between security risk and consumers' behavioral intention to use online banking.

H_{1C} : There is a significant relationship between security risk and consumers' behavioral intention to use online banking.

The research of Lee (2009) shows that security or privacy risk negatively influences consumers' intentions to use internet banking. Security risk becomes the main inhibitor that hinders the consumers from using internet banking (Lee, 2009) because consumers are worrying about system crash, personal information being interrupted by hackers, the unauthorized use of personal information and unprotected transactions (Lichtenstein & Williamson, 2006; Suborn & Limwiriyakul, 2012). Based on the studies above, this paper proposed that security risk will have strong influence on consumers' behavioral intention in using internet banking.

2.4.4 Performance risk

H_{0D} : There is no significant relationship between performance risk and consumers' behavioral intention to use online banking.

H_{1D} : There is a significant relationship between performance risk and consumers' behavioral intention to use online banking.

Littler and Melanthiou (2006) said that the unwillingness of consumers adopt to internet banking is due to malfunctions of internet banking website which is similar to Featherman and Pavlou (2003) who found that a high frequency of website breakdowns and disconnections will inhibit the e-services evaluation. Besides that, performance risk also related to internet access's speed. Almogbil's (2005) study confirms that there is a significant relationship between the speed of internet access and the adoption of internet banking services. Based on the above studies, this research proposed that performance risk will have strong influence on consumers' behavioral intention in adopting internet banking.

2.4.5 Social risk

H_{0E} : There is no significant relationship between social risk and consumers' behavioral intention to use online banking.

H_{1E} : There is a significant relationship between social risk and consumers' behavioral intention to use online banking.

The research of Zeithami and Gilly (1987) and Marr and Prendergast (1993) suggested the lack of human interaction can become the obstacle for consumers to use technology-based services. According to Venkatesh and Morris (2000), social influence plays a significant role in determining

the acceptance and usage behavior of adopters of new Information Technologies as it bring awareness about the services and benefits from one's friends or family. Therefore, from the literature review, this paper proposed that social risk will significantly affect consumers' behavioral intention in adopting internet banking.

2.4.6 Five independent variables

H_{0F} : There is no significant relationship between five independent variables (financial risk, time risk, security risk, performance risk, social risk) and consumers' behavioral intention to use online banking.

H_{1F} : There is a significant relationship between five independent variables (financial risk, time risk, security risk, performance risk, social risk) and consumers' behavioral intention to use online banking.

2.5 Conclusion

This chapter mainly uses and quotes the research successfully done by previous researchers. These findings from previous research contributed significantly to the knowledge on the field of internet banking. Besides that, all the studies used in this chapter have provided a better insight and understanding regarding internet banking which lead this study to a clearer direction. The methodologies used in this study will be discussed in next chapter.

CHAPTER 3: METHODOLOGY

3.0 Introduction

The research methodology is a systematic approach that used for collection and analysis of the data. It is describing how the research was carried out in the way of data collecting methods, sampling design, research instrument, fieldwork, data processing and analysis technique that are used in this research project. This research examined on relevant information which collected by using quantitative online questionnaires. Method of analysis such as descriptive analysis, reliability test and inferential analysis are presented in the end of the chapter.

3.1 Research Design

Research design is considered as a master plan specifying the methods and procedures for collecting, processing and analyzing the related information (Zikmund, 2003). According to Hair et al (2007), it provides the needed information on the research question and the basic direction for carrying out the research. Thus, the research designed must be developed in order to be more effectively conducting a business research.

The research was conducted by using data with quantitative and descriptive method in getting useful and relevant information which suitable in building appropriate model and getting a reliable result. Quantitative research is a measurement which generates numerical for a statistical review. The data most often can be collected in the form of a questionnaire or survey. Furthermore this study employed descriptive research design to obtain data that describe the characteristic of a population or phenomenon that already exists and determined the reason that contributed to the particular characteristic (Zikmund, 2003). In the

study, the risk that influencing the acceptance on online banking has been examined. The determined risk will provide a rough picture on how these risks affect the behavioral intention to use online banking in consumer view. Thus, this paper finding are based on the questionnaires that distributed to some of the online users by using convenient sampling and snowball sampling to investigate the relationship between independent variable and dependent variable.

3.2 Data Collection Method

Data can be collected by using one or more methods. Data collection is data collected by using postal, electric mailing, personal interview or by questionnaires. The two types of data, primary and secondary data are used to obtain meaningful empirical results. The researchers will normally consider using both data collection methods in research project to ensure the independent variables able to influence the dependent variables and fit the research objectives.

3.2.1 Primary Data

Primary data is refers to the specific information which collected by researchers from their experiment, questionnaires, or first-hand experience on their research (Zikmund, 2003). Primary data collection method had been used in this paper due to the accuracy, reliability and easiness. The data are collected through a survey method which surveying the online users in the whole area of the Malaysia with respect to their perception and opinion towards internet banking. The instrument used in conducting the survey was online questionnaire on TAM, and acceptance on Internet banking. The instrument method was adopted because the method is less expensive and more convenient to conduct.

The survey questionnaire had been distributed from 18 June 2012 to 30 June 2012. All methods are collected through convenient sampling and snowball sampling due to the time constrains problem and difficulty to meet large range of all respondents that living in the whole area of Malaysia. Besides that, the researchers also get assistance from friend to re-distribute out the questionnaire to respondents by online spreadsheet that saves lots of time and effort in getting people to do the survey questionnaire.

Further, the standardized questions that design in the questionnaire will be easier for respondents' understanding and prevent any invalid or bias answer. Not only that, questionnaire can saved both parties time in collecting the data efficiently and effectively instead of other methods in this situation.

3.2.2 Secondary Data

According to Boslaugh (2007), secondary data is existing information that has been gathered for the purposes others than planning. It can be referring to the information that collected by the routine planning on organization or others external recourses. The various example of secondary data can be acquired for research purposes from archives, libraries, museums, repositories and databases, others government agencies and even from newspaper. By using secondary data, researchers have to make sure that those information are valid and reliable to the research.

Online academy database such as ScienceDirect, Scopus, JSTOR, Lexis Malaysia and ProQuest are used as this paper's secondary data sources in this research. Besides that, some search engine such as Google Scholar is used in the process of collecting relevant and important information in the paper. Others than these, the researchers also gather data from journals,

references book and articles that provided in UTAR library as the supporting materials in this research paper.

3.3 Sample Design

According to Zikmund (2003), sampling is the progress of using small number of population out from the large population as a representative and make conclusion as a whole entity. Similarly, it is common to define a sample as a subset of the population. Sampling design is a procedure that allows the researchers to choose statistical units randomly that makes the researchers easier in analyzing the characteristics of the population elements (Antal & Tille, 2011). In this section, the researchers will discuss about the target population, sample size, sample frame, sampling element and also sampling technique that involved in the questionnaire.

3.3.1 Target Population

Target population is a complete group of specific population elements that relevant to the research project (Zikmund, 2003). The researchers have to determine the group of target population before conducting the research. Sampling unit is the elements which selected from the whole population. However, researchers must ensure that they select their target population according to their research objectives (Hair et al., 2007).

The primary of the target population in this study comprise of any online users who's age are 18 and above in Malaysia. The reason for choosing those respondents as our research sample is because they reach the age of majority that are liable for their own actions by their own responsibility. Besides that, the online banking users are people that have the capability in online operating. That is the reason why the researchers targeted the sample on online users only.

3.3.2 Sampling Frame and Sampling Location

Sampling frame and sampling location is known as the second step of the sampling process. It is a complete list that include all sampling unit or a list that includes every unit. According to Hair et al. (2007) sampling frame also called working population, it is defined as a list elements that from which a sample may be selected. In this paper, the sampling frame consists of all internet users in Malaysia either they are students, lecturer, managerial position or event in the sales position. The questionnaire was distributed by using an online spreadsheet program called “Google document” that save lots of time and effort in doing the data collection progress in our research paper. Moreover, online questionnaire also solved the geographical barriers problem that will encounter if using traditional survey questionnaire method.

3.3.3 Sampling Elements

The next steps in the sampling progress are called as sampling elements which can be the unit of analysis or case in a population. It can be a person, a group or even an organization that to be measured to the selection in the sample based on the target population. The target sample in this research study includes those online users that aged above 18 from different gender, races, educational level and occupation. The researchers believed that these categories of people are knowledgeable and capable to contribute relevant and reliable information to the study.

3.3.4 Sampling Techniques

Sampling techniques can be classified into probability and non-probability sampling. Basically, there are five common types of sampling techniques under the probability sampling, which include simple random, systematic, stratified, cluster and multistage area sampling techniques. These techniques can be applied when the target population is known, as the researchers able to use random selection of element that had an equal chance to be drawn within the sample to reduce or eliminate sampling bias.

However, non-probability sampling will be applied when every element within the sample are being randomly selected, without equal chances to be selected. It is a sampling technique which units of the sampling were selected on the basis of personal judgment or convenient. Therefore, there is a greater opportunity to obtain bias findings of the study. Non-probability techniques include quota sampling, convenient sampling, judging sampling and snowball sampling.

In this study, non probability sampling method was chosen to collect this research data. Furthermore, the researchers have used snowball sampling and convenient sampling in this research survey questionnaire. Convenient sampling refers to the sampling procedures of obtaining to the people who are most conveniently available (Zikmund, 2003). Convenient sample are used because researchers are able to collect bulks of questionnaires in shorter time and cost effectively through this technique. Another sampling method that researcher used is snowball sampling. The researchers get the help from the initial respondent by letting them spreading the online questionnaires to their relatives and friends to get more sample size in answering the survey question.

3.3.5 Sampling size

Draft questionnaire has been tested by 40 respondents to demonstrate that all questions can be properly understood, indicating that the design of the questionnaire is feasible. Besides that, the researchers are targeting to receive 500 sets of online questionnaires within the period. The sample size of 500 respondents was determined and it was entered into SPSS version 21.0. This online survey, was conducted for one month, with incomplete responses and missing values deleted, resulting in a sample size of 443 users for an overall response rate of 88.6%.

3.4 Research Instrument

3.4.1 Questionnaire design

Questionnaires are allowing the collections of both objective and subjective data through used of open or closed format question. In this survey, researcher has chosen close-end question to conduct questionnaire as it help the researcher to code the information easily. Not only that, it can also limit the number of respond that will be given by the respondents and also help them to make a quick decision in choosing the best alternatives.

The main survey consists of two parts in the questionnaires which are formed in proper English with appropriate phrases that are being used. Part one contains 7 questions on the demographic profile. This part of questionnaire was used to collect basic information about respondents' characteristics including gender, age, race, education, occupation, and experience using online banking. In general, fixed alternative questions are provided in this part to ensure the answers made by respondents are specific and easily to fill it up within those ranges.

Whereby, section two consist of question related to the factors which influence the behavioral intention to use online banking, including financial risk, performance risk, time risk, social risk and security risk. Researchers use five point Likert scale to measures how strongly respondents agree or disagree with the carefully structured statement in the second part. According to Hair et al. (2007), five point Likert scale is one of the summated rating scale which attempts to measures attitudes or opinions. Thus, the total numerical value from the answer of each statement in the survey can be generated or calculated by the researchers. While for the last question in the second part, it was basically an indication of some factors that drive the intention to use Internet banking. It is also a measure that indicates consistency with selected items proposed for the hypotheses.

In the research questionnaire, the constructs in the model are selected from previous research. Some of the questions are self administered based on research objective and some of the question are adopted based on previous research journal. The survey items for financial risk, performance risk, time risk, social risk and security risk used from the study are from the various sources that will list in table 3.1 later. While, the demographic question are adapted from Lee (2008) and Littler & Melanthiou (2006). The 5 independent plus 1 dependent variable are measured by using a five-point Likert scales is adapted from “strongly disagree” to “strongly agree” that were used to examine participant's responses to these statements.

3.5 Constructs Measurement

According to Hair et. (2007), measurement involves assigning a variable depends on different rules and conditions. The assigned number must reflect the characteristic of the phenomenon being measured. There are 4 level of measurement which include nominal, interval, ordinal and ratio. The questionnaire consists of two parts which include section A and section B. This study, have used nominal, ordinal and interval scale to conduct the questionnaire.

3.5.1 Section A

Section A is the demographic part questions which use nominal and ordinal scales to measures gender, age, race, education, occupation, and experience of using online banking. Nominal scale is the lowest and easiest measurement level that researcher can use from a statistical point of view. It does not express any values or relationships between variables. For example, characteristic such as gender races and online banking usage is being measured using nominal scales. Hence, this paper labeling men as 1 and women as 2 which it does not mean that women are twice compare than men.

In contrasts, ordinal scales are used when items are classified according to whether they have more or less of a characteristic. These types of scale permit the measurement of degrees of difference, but not the specific amount of difference. According to Zikmund (2003), it is found that ordinal scale is arranging objects or alternatives based on their magnitudes. Thus, the researchers not only used ordinal scale to measure age, education level and occupation, but also to measure the frequency to assess the internet banking.

Both ordinal and nominal scales allow researcher to come out some data analysis including Chi Square Analysis, T test Analysis, One-way ANOVA Analysis, Multiple Linear Regression Analysis and much more than other analysis.

3.5.2 Section B

For this section, researchers are using interval scale to conduct the study related to the consumer perception on the internet banking. Interval scales are the ranking points in which the distance between each points on the scale are equal.

The five points Likert Scales is being used by researcher to determine how strongly consumer agree or disagree on the question that related to the financial risk, performance risk, time risk, social risk and security risk.

Table 3.1 Likert Scale used to measure the variables

Independent Variables	Item measures	Sources and Years
A. Financial Risk	1. When transferring money on Internet, I am afraid that I will lose money due to careless mistakes such as wrong input of account number and wrong input of the amount of money.	Lee(2008), Aliyu et al.(2012)
	2. When transaction errors occur, I worry that I cannot get compensation from banks.	Musiime and Ramadhan (2011)
	3. There is a higher risk that a transaction of transferring money or a standing order may not be processed.	DeYoung et al.(2006)

	4. Using an Internet-bill-payment service subjects your checking account to potential fraud.	DeYoung et al.(2006), Lee(2008)
B. Time Risk	<p>1. I think that interaction with online banking requires a lot of mental effort.</p> <p>2. I think that it is hard to use online banking to accomplish my banking tasks.</p> <p>3. Using online banking service would lead to a loss of convenience of me because I would have to waste a lot of time fixing payments errors.</p> <p>4. It is hard to remember how to use online banking.</p> <p>5. My interaction with the online banking site is unclear and not understandable.</p>	<p>Nasli and Charfeddine (2012)</p> <p>Davis et al. (1989), Venkatesh and Davis (2000), Suh and Han (2002)</p> <p>Featherman and Pavlou(2003)</p> <p>Nasli and Charfeddine (2012)</p> <p>Davis et al. (1989), Venkatesh and Davis (2000), and Suh and Han (2002)</p>
C. Security Risk	<p>1. I would not feel totally safe providing personal privacy information over the Internet Banking.</p> <p>2. I'm worried to use online banking because other people may be able to access my account.</p> <p>3. I think this banking web site does not have enough mechanisms to ensure the safe transmission of its user's information.</p>	<p>Lee (2009).</p> <p>Lee (2009).</p> <p>Manzano, Mafe, Blas& Navarre. (2011).</p>

	<p>4. I am not sure of the identity of this banking web site when I establish contact via the Internet.</p> <p>5. When I send data to this banking web site, I am not sure that they will not be intercepted by unauthorized third parties.</p>	<p>Manzano, Mafe, Blas& Navarre. (2011).</p> <p>Manzano, Mafe, Blas& Navarre. (2011).</p>
D. Performance Risk	<p>1. Online banking servers may not perform well because of slow download speeds, the servers' may break down or because the website is undergoing maintenance.</p> <p>2 I am sure that Online banking would not do actually what I want.</p> <p>3 I think that using the online banking would not help me carry on my tasks easier and faster.</p> <p>4. Using internet banking site will not improve my performance of utilizing banking activities.</p> <p>5. Online banking does not allow me to complete more banking activities.</p>	<p>Featherman and Pavlou (2003)</p> <p>Little and Melanthiou (2006)</p> <p>Cheng et al. (2006)</p> <p>Bomil Suh and Ingoo Han (2002)</p> <p>Al-Somali, Gholami and Clegg (2009)</p>
E. Social Risk	<p>1. I will have potential loss of status in one's social group when my bank account incurs fraud or being hacked.</p> <p>2. Bank employee will not assist me during my banking transactions over the internet.</p> <p>3. People whose opinions are valued to me would suggest me not to use internet banking.</p>	<p>Featherman and Pavlou (2003)</p> <p>Little and Melanthiou (2006)</p> <p>Nasli and Charfeddine (2012)</p>

	<p>4. When trying of new technology, I prefer asking advice from others rather than trust my own instinct.</p> <p>5. Most people who have strong influence on me think that I should not continue using online banking.</p>	<p>Al-Somali, Gholami and Clegg (2009)</p> <p>Al-Somali, Gholami and Clegg (2009)</p>
Dependent Variables	Item measures	Sources and Years
F. Behavioral Intention to use	<p>1. I will use online banking on regular basis in the future.</p> <p>2. I will strongly recommend others to use Internet banking.</p> <p>3. I expect my use of online banking for handling my financial transactions to continue in the future.</p> <p>4. I expect my use of this Internet banking site to continue in the future.</p> <p>5. Using the IB for handling my banking transactions is something I would do.</p>	<p>Littler and Melanthiou (2006)</p> <p>Lallmahamood(2007)</p> <p>Calisir and Gumussoy (2008)</p> <p>Nasli and Charfeddine (2012)</p> <p>Agarwal et al.(2009)</p>

Source: Developed for research.

3.6 Data Processing

The data processing that being used to analyze the data collected from the survey begins with a quick checking of the data results, followed by data editing, data coding, transcribing and data cleaning. To ensure the accuracy and completeness of the data before investing significant time in analysis, it is important to complete the data preparation and processing process before begins to analyzing the results.

3.6.1 Questionnaire Checking

Before conduct a questionnaire checking and the actual survey distributed out, a pilot test was conducted. It refers to an small scale exploratory research to serves as a guide of the large study (Zikmund, 2003). The objective of the pilot test is to make sure that respondents fully understand the questions and to make sure of the reliability and consistency of the result.

Researcher had distributed 40 set of survey to potential respondents to answer and asking for their opinion about the questions structure whether respondent fully understand what researchers intend to ask. Finally, researchers also need to make an observation when the respondent answering the question to avoid any untrustworthy outcomes in the study.

Based on the feedback received, a reliability test was conducted to make sure of the accuracy before the main test done. Cronbach's Alpha reliability test was done through the pilot test and all variables are above 0.80 which indicated that a good and accurate result. The researchers have made some minor correction on the questionnaire after the primary test done so that ambiguity can be reduce. Finally, the questionnaire is finalized and successfully distributed to our targeted respondent.

Questionnaire checking is considered as the first steps in the data preparation process. It involves eliminating unacceptable questionnaires. There are several reasons why a questionnaire may be unacceptable for use in a study. These questionnaires may be incomplete, instructions not followed, little variance, missing pages, or respondent are not qualified in the survey.

Questionnaire responses that have little variance means that some respondents will answer all multiple choice questions with the same answer which seems that they wish to done the survey as soon as possible and select answers as fast as possible which they did not read the questions properly.

While, for the respondent who did not follow the instructions, the answer respond should have been skipped especially conducting an online survey because there are no others interviewer that can give proper instruct or explanation beside the interviewee. The respondent can only rely on the wording that provided by the researcher in on the top of the survey.

Besides that, a person may have started to take a questionnaire and then for reasons of interruption or disinterest that caused the respondent providing improper or bias information in the end of the questionnaire. Thus, the researcher should check all questionnaires in the earliest stage of the field work, and continue to check sample of the questionnaires throughout the survey. The process should be set up and verified using data from the pilot survey before the main field work phase begins to avoid some potential problems such as instruction misunderstanding , question difficulties and ambiguous of the question content. Any problems should be removed by editing the data if necessary before the survey data start to come in from the field.

3.6.2 Data Editing

The second step of the data preparation is editing the raw data. Editing detects errors and omission, corrects them when possible and certifies that data quality standards are achieved. The researchers have to ensure the data legibility, completeness, consistency with the intent of the questions and the information in the survey as well as the accuracy answers of the entries.

According to Green and Tull (1978), the editing process has been summed up to more details such as:

- **Legibility** of entries means that the data must be legible in order to be used. Mostly the problem occurs when the respond could not be understood or it cannot be obtained from the interviewer.
- While, The except of the entry (**completeness**) may means that the interviewer failed to obtain the data or respondent could not reveal the some specific part of respond due to the private and confidential consequences.
- Besides that, researchers also have to make sure the **accuracy of the data**. It is important to detect if there are any response pattern survey reports such as all the answer are same. Such pattern may be lead to bias and inaccurate finding results.
- **Consistency of entry** considers that an entry is inconsistent with another raises of question of which are correct. Such contradict reply will also result the finding to become bias.

When entry gaps are present from interview, a call back should be made rather than guessing what the respondent probably would be answered. Many researchers will re-contact about 10 percent of respondent in this process of data validation. Researches also will contact the respondent for correct information if the reply are misappropriate or missing. However, since that this survey are all based from multiple question types which

question structure is quite easy to understand, therefore respondent contact details do not needed to be provided in this survey.

In the survey questionnaire, most of the problem encounters are the data incompleteness of the occupation in the demographic parts. Some of the respondent that unsure their occupation falls in which categories will instead of choosing others and write their occupation (such as teacher, accountant....) in the column. Therefore it is the researchers' responsibility to decide which of the respond is most accurate for this individual participant and ensure the consistency with the intent of the question.

3.6.3 Data Coding

The researcher may need to code some responses in order to enable analysis. Coding is a process of preparing both qualitative and quantitative information. It typically assigns the numeric codes to smoothen the transition from survey to coding. Researchers usually take several steps to make the data coding in the survey .It involves respond codes and format codes. Response codes are a set of numerical values for categorical responses to questions. While for the format codes, it is the numbers that guide the positioning of numerical data in the database. The data are coded into a single variable which can take on one of five values in this example depending on the respondents answer. The numbers 1-5 used to code the data that are given labels in the Section 2. On top of that, types of data that usually require coding are often demographic – age, gender, marital status, household size. For example, the researchers assumed male to be number 1 while female to be number 2 in the gender categories.

In this paper, the researcher use spreadsheet (like excel file) as the structure of the format codes because of its simplicity. This also allows for conversion into other types of databases. In others side, researcher should

assign case numbers before coding the survey. Besides that, prepare a codebook, which lists all variable names, response codes, and format codes is necessary for the researchers in conducting the research. This code map will indicate where the columns are located on a data sheet, size of data fields and code type as well in order to have a better planning before coding in the process of data preparation.

3.6.4 Transcribing

Transcribing involves the process of taking raw data and creating transformed data and keying the data into computer that can be used for further analysis. The transferring data can make it accessible to people or applications for further processing. However, this survey had skipped the transcribing process since the data already entered into the computer when the questions were collected. What the researchers need to do is just transform the responses into the numerical coding through the data coding process.

3.6.5 Data Cleaning

Data cleaning is the process of detecting and correcting errors and inconsistencies of the data in the databases to prevent poor data quality. The researchers need to do errors checking and making correction before they started the analysis process and get the unbiased finding. The errors are usually come from various ways such as the missing data, fabricated data, typing errors and et cetera. However, the cleaning process will be automatically checked by the Google document as the system will remind the participants to check the blank answer. Otherwise, the particular survey will consider as not finished and not completed. Besides that, the system

will computed the result by using spreadsheet also help the researcher to reduce the percentage of making typing error.

3.7 Data Analysis

The statistical package for social science (SPSS) computer software program 21.0 is used to evaluate the research questions and to complete the analyze data. The researchers use the software system to classify each variable into the numerical data in order for them to compute result without any difficulties.

The results of all tests will used to support the hypothesis of the research. SPSS can generate decision making information quickly by using powerful statistic, understand and effectively present results with high quality outputs. In the research, it consists of three types of analysis which include descriptive analysis, scale measurement and inferential analysis.

3.7.1 Descriptive Analysis

In accordance with Zikmund (2003), descriptive research is used to describe the characteristic of a population or a sample. It is a channel to transform the raw data to become a form that easy for user to understand and interpretation.

Before converting the data, researchers are required to carry out the frequency distribution process by using SPSS computer software program in order to examine the different response and provide counts of the various variables (Hair et al., 2007). Thus, calculating averages, frequency distribution and percentage distribution become the most common way of summarizing the data.

Nominal and ordinal scales are used to measure the responses in Section A. The cumulative percentages for each value of the variable and frequency counts will be found in the data. While, interval scale is used in the part B for identifying average and mean.

3.7.2 Scale Measurement – Internal Reliability Test

According to Sekaran (2003), reliability is the degree to which measures are free from error and therefore yield consistent results. It allows researcher to have a better overview on the frequency and percentage of different group of data and thus able to judge the reliability. The relationship obtained between the items in the scale able to determine the stability and consistency of the data.

In the study, Cronbach's Alpha test has been chosen to examine the internal consistency reliability of the measurement scale. Due to Zikmund et al. (2010) and George and Mallery (2003), the Cronbach's Alpha reliability coefficients, which is less than 0.6 is poor reliability, between 0.60 to 0.70 is fair reliability, between 0.7 to 0.8 is good reliability and more than 0.8 is considered as excellent good reliability. Cronbach's Alpha reliability model analysis will be conducted in section A through the pilot test which consists of participation of 40 respondents whom are required to answer all the questions listed in the questionnaire. Subsequently, the data will be collected and tested within few days. The minimum of alpha value for each independent variable should be not less than 0.70 which indicates that the proposed independent variables are still sustained as reliable and acceptable (Zikmund et al. (2010)).

Table 3.2: Cronbach's Alpha Coefficient

<i>Cronbach's Alpha Coefficient, α</i>	<i>Level of Reliability</i>
$\alpha > 0.80$	Excellent good Reliability
0.70 to 08.0	Good Reliability
0.60 to 0.70	Fair Reliability
$\alpha < 0.60$	Poor Reliability

Adopted from: Zikmund, W.G., Barry, J.B., Jon, C.C. & Mitch,C.(2010). *Business Research Methods*(8th ed.).. USA : South Western Cengage Learning.

3.7.3 Inferential Analysis

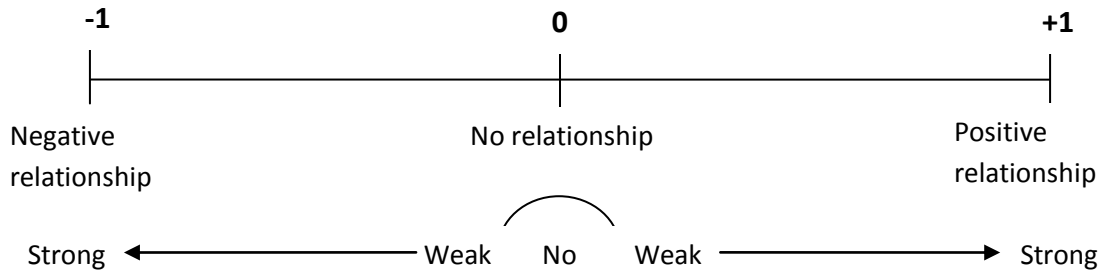
Inferential analysis is used to make judgments about population from a sample. Based on sample data, the researchers can conclude whether there is a meaningful relationship or no relationship between two population variables (Hair et al. 2007). In this research, Pearson correlation analysis and multiple linear regression analysis were used to generate a conclusion for the hypothesis and research question that established in the earlier chapter.

3.7.3.1 Pearson's Correlation Analysis

The Pearson's Correlation Analysis is used to measure the covariance between the dependent variable, *Behavioral Intention to use* and with the independent variable which including financial risk, performance risk, time risk, social risk and security risk. In general, researchers use "r" as the symbol of correlation coefficient to indicate the direction and significant relationship among the variables. It ranges from $- 1.00$ to $+ 1.00$. Correlation coefficient can either $+1$ (perfect positive relationship) or -1 (perfect negative relationship). While, zero mean there is no linear

correlation between the two variables. The larger the correlation coefficient indicates the stronger the level of association relationship.

Table 3.3: Rules of Thumb about Correlation Coefficient Size



Coefficient Range	Strength of Association
$\pm 0.91 - \pm 1.00$	Very Strong
$\pm 0.71 - \pm 0.90$	High
$\pm 0.41 - \pm 0.70$	Moderate
$\pm 0.21 - \pm 0.40$	Small but definite relationship
$\pm 0.00 - \pm 0.20$	Slight, almost negligible

Adopted from: Hair, J.F., Black, W.C., Babin, B.J., & Anderson, R.E. (2010). *Multivariate Data Analysis* (7th ed.)Upper Saddle River, New Jersey: Prentice Hall.

3.7.3.2 Simple Linear Regression Analysis

According to Hair et al. (2007), simple linear regression used for measuring linear relationship between single independent variable with a dependent variable to make a prediction. Correlation shows the direction and strength of the relationship between two variables. While, R square (r^2) indicates how many percentage of independent variable can explain be in the dependent variable. F-ratio used to assess the statistical significant of the overall regression model. The F-ratio is significant if P-value less than 0.05. The larger the F-ratio, the more significant are the variable.

The regression equation is written as:

$$Y = a + bX$$

Where

Y = the value of the Dependent variable or predicted value

a = a constant; equals the value of Y when the value of X = 0

b = the slope, or the change in Y for any corresponding change in a unit of X

X = the value of the independent variable, or variable used to predict Y

Adopted from: Hair, J. F. J., Money, A. H., Samouel, P. & Page, M. (2007). *Research Methods for Business*. The UK: John Wiley & Son Ltd.

Simple Linear Regression Equation

Behavioral Intention to use = a + b financial risk

Behavioral Intention to use = a + b performance risk

Behavioral Intention to use = a + b time risk

Behavioral Intention to use = a + b social risk

Behavioral Intention to use = a + b security risk

3.7.3.3 Multiple Linear Regressions Analysis

The general purpose of multiple regressions is to learn more about the relationship between several independent or predictor variables and a dependent variable. It will rank out which independent variable influence most toward dependent variable. Multiple regressions had been chosen to identify which independent variables are influences the most toward the Behavioral Intention to use from consumer perspective. Multiple regressions was being conducted in order to find out how the independent variables and how motivation will be explained by those variables. Therefore, Coefficient describes the average amount change in dependent variable (Y) given a unit change in the independent variable (X) (Hair et al., 2007).

The mathematical regression equation is written as:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + \dots + b_nX_n$$

Y = the value of the dependent variable

a = a constant; equals the value of Y when the value of x = 0

b = the slope of the regression line

x = the value of the independent variable

Adopted from: Weiers,R.M. (2008). Introduction to Business Statistics (6th ed.). Thompson South-Western.

Multiple coefficient of determination denotes as R^2 interprets the percentage of variance in the dependent variable that can be explained by multiple independent variables in the model. The F-ratio is represent the significant level of overall regression model, it is significant when P-value less than alpha value of 0.05, it can be concluded that all of independent variables have significant relationship to the variance of dependent variable. P-value represents the significant level of the relationship between two variables. If p-value lowers than alpha value of 0.05 the null hypothesis is rejected. Beta coefficients indicated which independent

variables have most influence to dependent variable. The range of beta coefficients is from -1.0 to +1.0. The larger the value indicated the more relative important in predicting the dependent variable (Hair et al., 2007).

The following equation is estimated to examine the relationship between dependent variable and independent variables:

$$\text{Behavioral Intention to use} = a + b1 \text{ financial risk} + b2 \text{ performance risk} + b3 \text{ time risk} + b4 \text{ social risk} + b5 \text{ security risk}$$

In the study, there exists of few questions that are crucial in the study between dependent variables and independent variables, which are:

- Are there any relationship exists?
- How strong is the relationship?
- Are the relationship is positive relationship or negative relationship.

By computing the multiple regression equation, all questions will be answered clearly and it also enables the researcher to have a better understanding on the relationship or impacts between the dependent variables and independent variables.

3.8 Conclusion

Lastly, an appropriate research methodology is important in the research because it influences the accuracy results of the actual study. This study is using the secondary data to obtain the general idea on the research study. Furthermore, the primary data will be used for the data finding, results and the conclusion of this study. Besides, all data are collected through snowball samplings and convenient sampling method. All the information from the questionnaires that the researchers collected will be the data to key into the SPSS 21.0 systems. From the result that shown from the SPSS system, researchers able to identify whether all the independent variable is directly influence to the teamwork effectiveness. Last but

not least, researchers determine the hypothesis relationship by using reliability test, Pearson's Correlation Coefficient, simple linear regression and multiple linear regressions analysis. Analysis on the result from the research question and hypothesis of those data collected through the questionnaire by the online survey spreadsheet will be presented in next chapter, Chapter 4.

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

Chapter 4 will present the result of analyses conducted in this research project as mentioned in Chapter 3. Data is collected from 443 respondents and being analyzed using the Statistical Package for the Social Sciences (SPSS) to examine if the hypotheses is valid. The result will be presented in the form of charts and tables.

This chapter consists of 4 sections, begins with descriptive analysis that includes respondent demographic profile and central tendencies measurement of construct. It is then continued with scale measurement that measures the reliability of the variables involved in the study. Section 3 will provide the result of inferential analysis and lastly, this chapter ends with a conclusion.

4.1 Descriptive Analysis

4.1.1 Respondent Demographic Profile

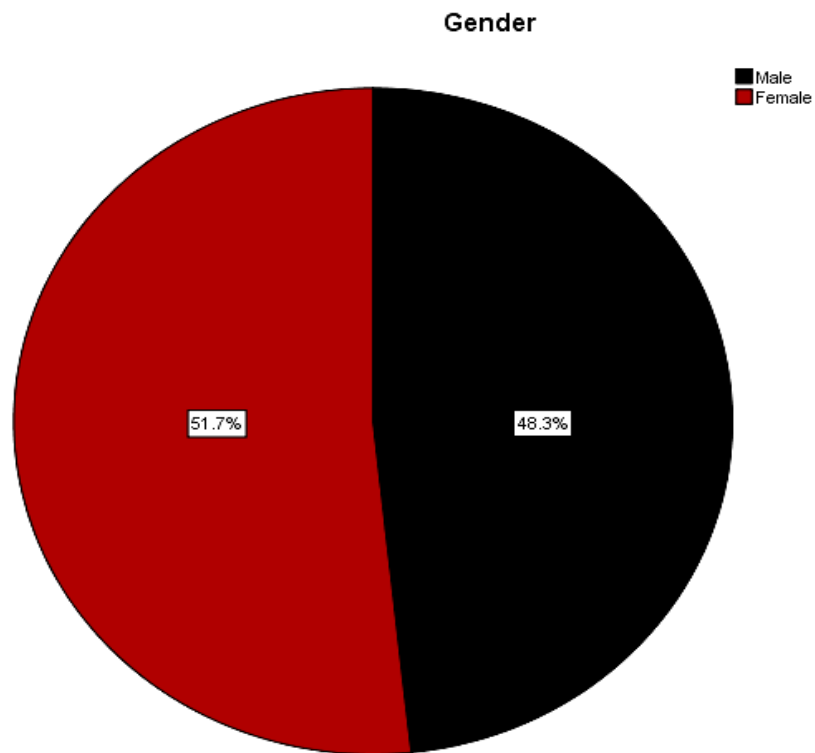
4.1.1.1 Gender

Table 4.1: Respondent Demographic of Gender

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	214	48.3	48.3	48.3
	Female	229	51.7	51.7	100.0
	Total	443	100.0	100.0	

Source: Data generated by SPSS version 21.0

Figure 4.1: Respondent Demographic of Gender



Source: Data generated by SPSS version 21.0

Table 4.2 shows the frequency and percentage of respondent demographic of gender. Among the 443 respondents, the total numbers of male respondents are 214 which are 48.3%. The total numbers of female are 229 with the percentage of 51.7% as shown in Figure 4.1.

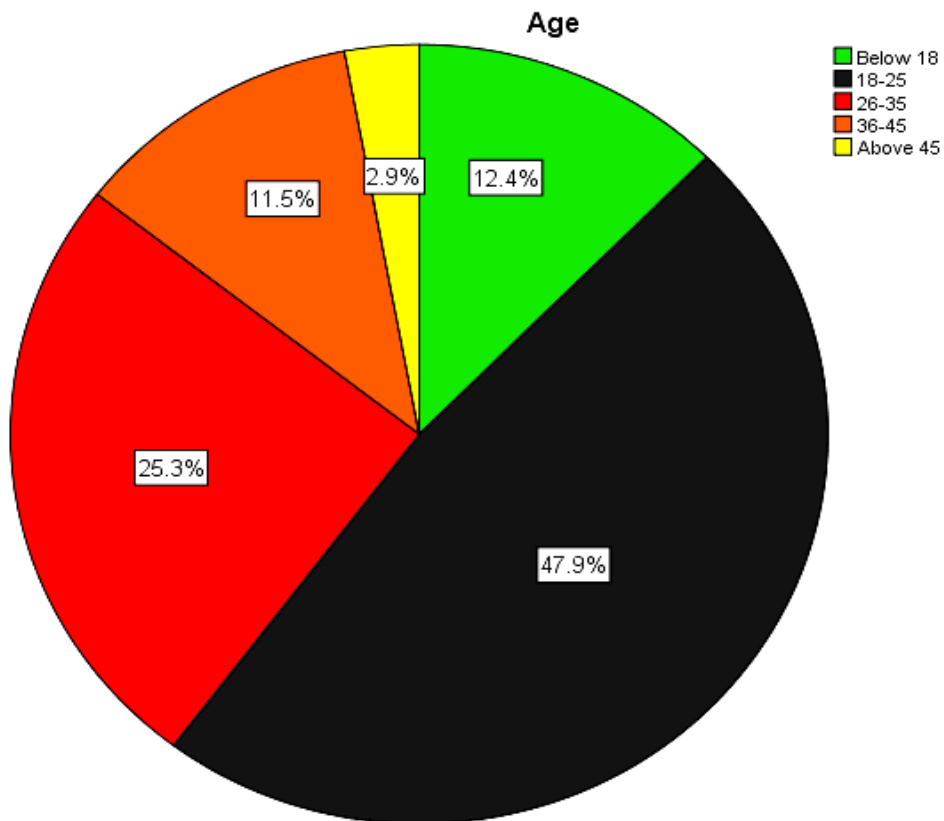
4.1.1.2 Age

Table 4.2: Respondent Demographic of Age

		Age			Cumulative Percent
		Frequency	Percent	Valid Percent	
Valid	Below 18	55	12.4	12.4	12.4
	18-25	212	47.9	47.9	60.3
	26-35	112	25.3	25.3	85.6
	36-45	51	11.5	11.5	97.1
	Above 45	13	2.9	2.9	100.0
	Total	443	100.0	100.0	

Source: Data generated by SPSS version 21.0

Figure 4.2: Respondent Demographic of Age



Source: Data generated by SPSS version 21.0

Table 4.2 shows the frequency of the range on the age of the respondents. Among the 443 respondents, 55 or 12.4% respondents are below 18 years old. There are 212 (47.9%) respondents are between 18-25 years old. Besides, for range of 26-35 years old, there are 112 or 25.3% respondents. 51 (11.5%) respondents belong to the range of 36-45 years old. The remaining 13 or (2.9%) respondents are 45 years old and above. Percentage of the respondents' age is graphically shown in Figure 4.2.

4.1.1.3 Ethnicity

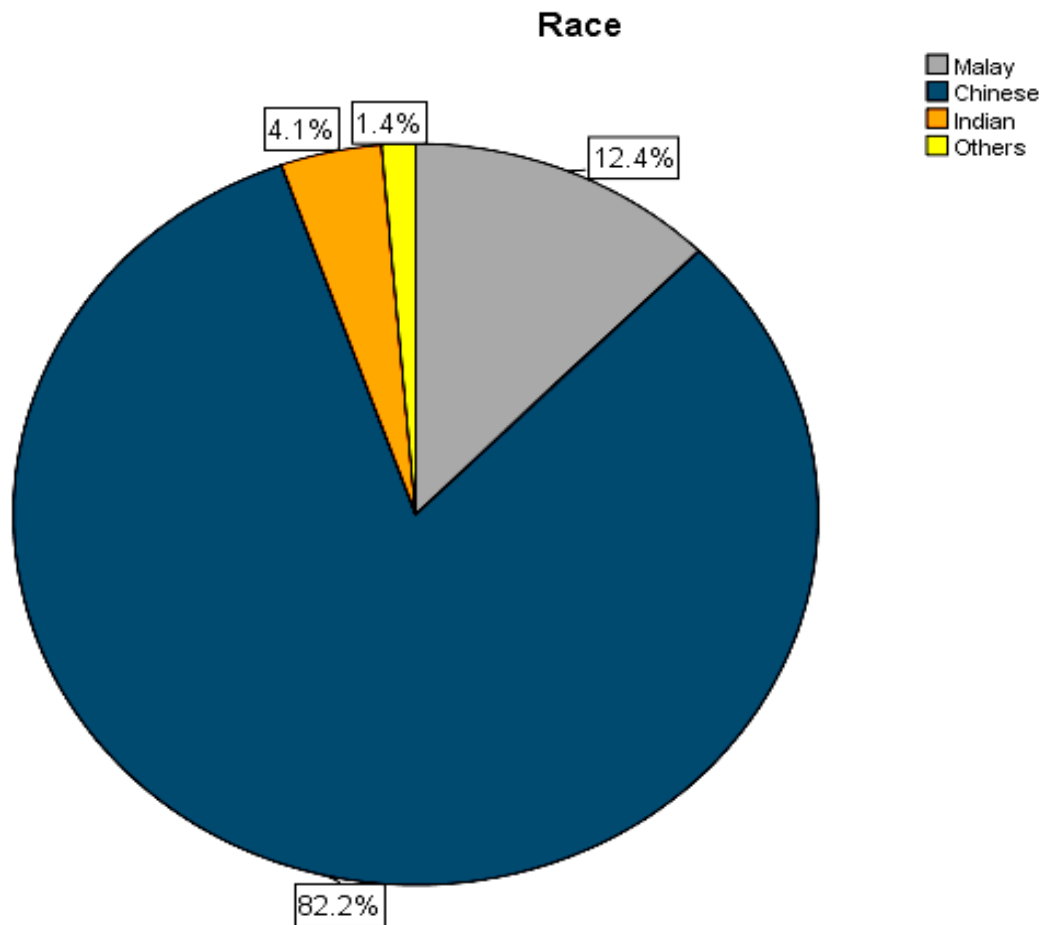
Table 4.3: Respondent Demographic of Ethnicity

Ethnicity

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Malay	55	12.4	12.4	12.4
Chinese	364	82.2	82.2	94.6
Indian	18	4.1	4.1	98.6
Others	6	1.4	1.4	100.0
Total	443	100.0	100.0	

Source: Data generated by SPSS version 21.0

Figure 4.3: Respondent Demographic of Ethnicity



Source: Data generated by SPSS version 21.0

Table 4.3 shows the frequency of the ethnicity of the respondents. There are four types of ethnic groups; Malay, Chinese, Indian and others. Among the 443 respondents, there are 55 or 12.4% respondents are Malay. Most of the respondents with a number of 364 (82.2%) are Chinese. Besides, for Indian, they accounted for 4.1% or 18 respondents. The remaining 6 or 1.4% from other ethnics are grouped as others. The Figure 4.3 has shown a clear picture of the percentage of the respondents' ethnic.

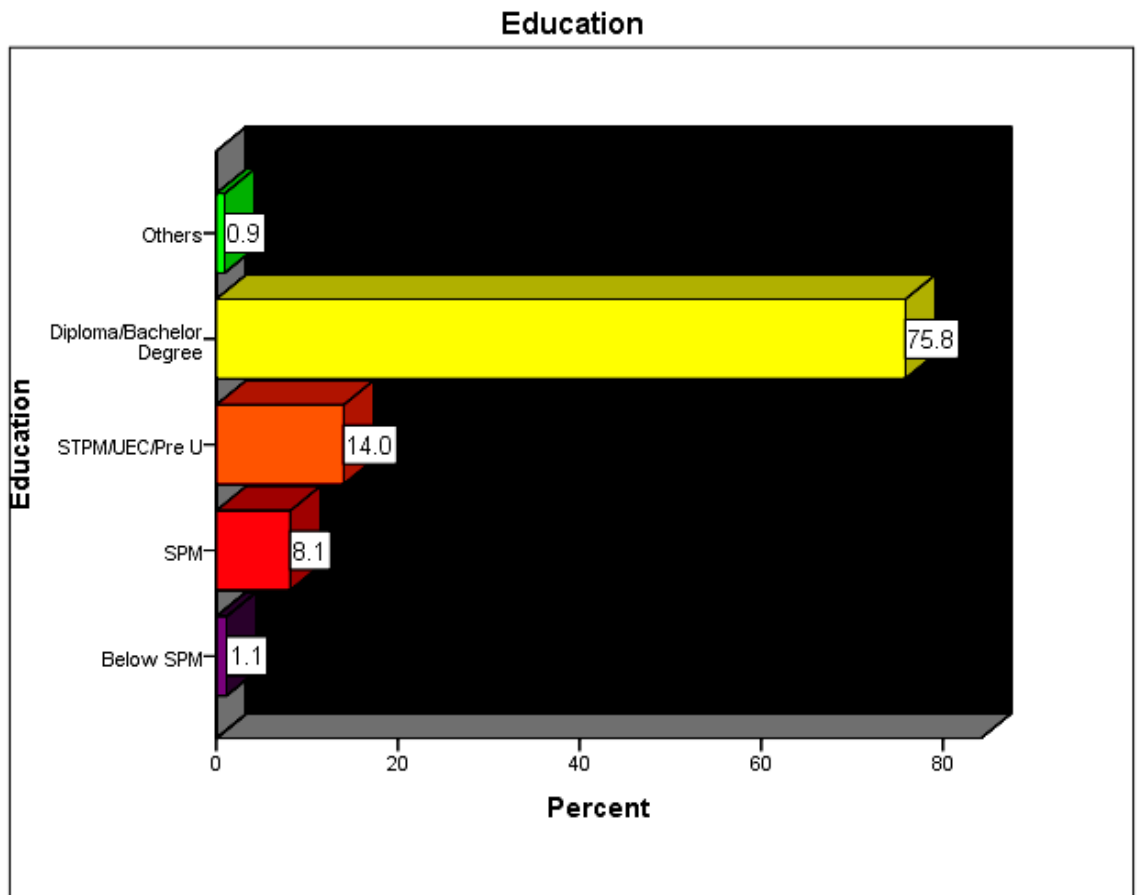
4.1.1.4 Highest Education Level

Table 4.4: Respondent Demographic of Highest Education Level

		Education Level			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below SPM	5	1.1	1.1	1.1
	SPM	36	8.1	8.1	9.3
	STPM/UEC/Pre U	62	14.0	14.0	23.3
	Diploma/Bachelor Degree	336	75.8	75.8	99.1
	Others	4	0.9	0.9	100.0
	Total	443	100.0	100.0	

Source: Data generated by SPSS version 21.0

Figure 4.4: Respondent Demographic of Highest Education Level



Source: Data generated by SPSS version 21.0

Table 4.4 shows the frequency of respondents' highest education level. Among the 443 respondents, the highest education level for 5 or 1.1% respondents is below SPM. There are 36 or 8.1% respondents having highest education level of SPM. Besides, for STPM/UEC/Pre U, there are 62 (14.0%) respondents selected this as their highest education level. The highest education level for 336 or 75.8% respondents is Diploma/Bachelor Degree. The remaining 4 (0.9%) respondents' highest education level is categorized as others. The Figure 4.4 clearly shows the percentage of the highest education level of the respondents.

4.1.1.5 Occupation

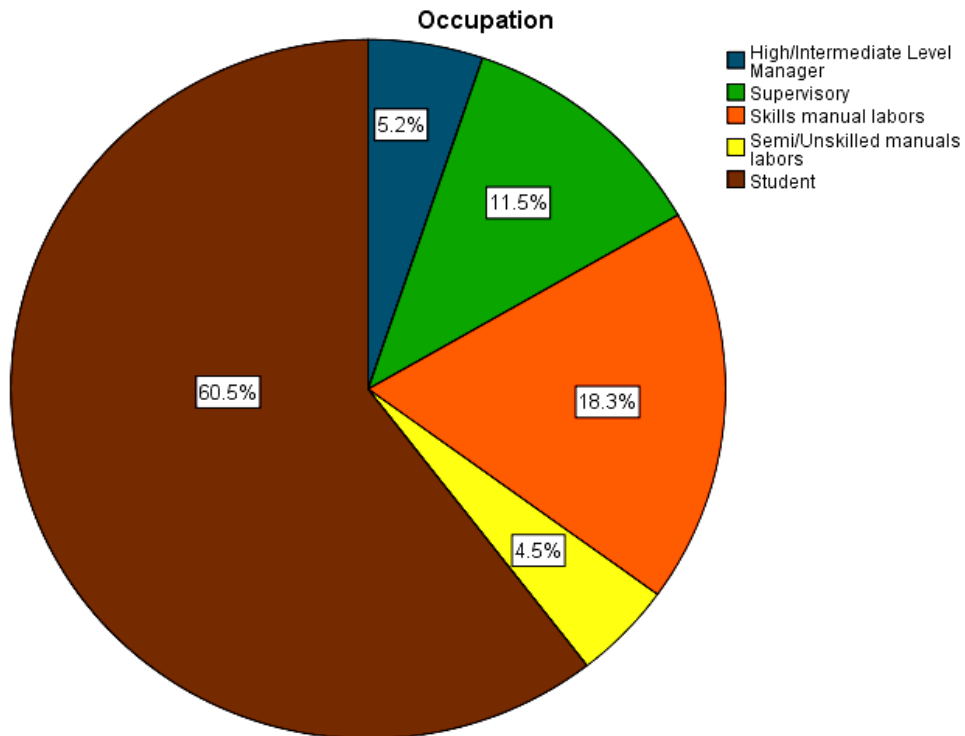
Table 4.5: Respondent Demographic of Occupation

Occupation

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid High/Intermediate Level Manager	23	5.2	5.2	5.2
Supervisory	51	11.5	11.5	16.7
Skills manual labors	81	18.3	18.3	35.0
Semi/Unskilled manuals labors	20	4.5	4.5	39.5
Student	268	60.5	60.5	100.0
Total	443	100.0	100.0	

Source: Data generated by SPSS version 21.0

Figure 4.5: Respondent Demographic of Occupation



Source: Data generated by SPSS version 21.0

Table 4.5 shows the frequency of respondents based on their occupation. Among the 443 respondents, there are 23 or 5.2% are High/Intermediate level manager, 51 or 11.5% respondents are supervisory. Besides, 81 (18.3%) respondents are categorized as skills manual labors. Other than that, there are 20 or 4.5% respondents belong to the group of semi/unskilled manuals labors. The remaining 268 (60.5%) respondents which is the largest amount are students. The percentage of respondents' occupation is graphically illustrated in Figure 4.5.

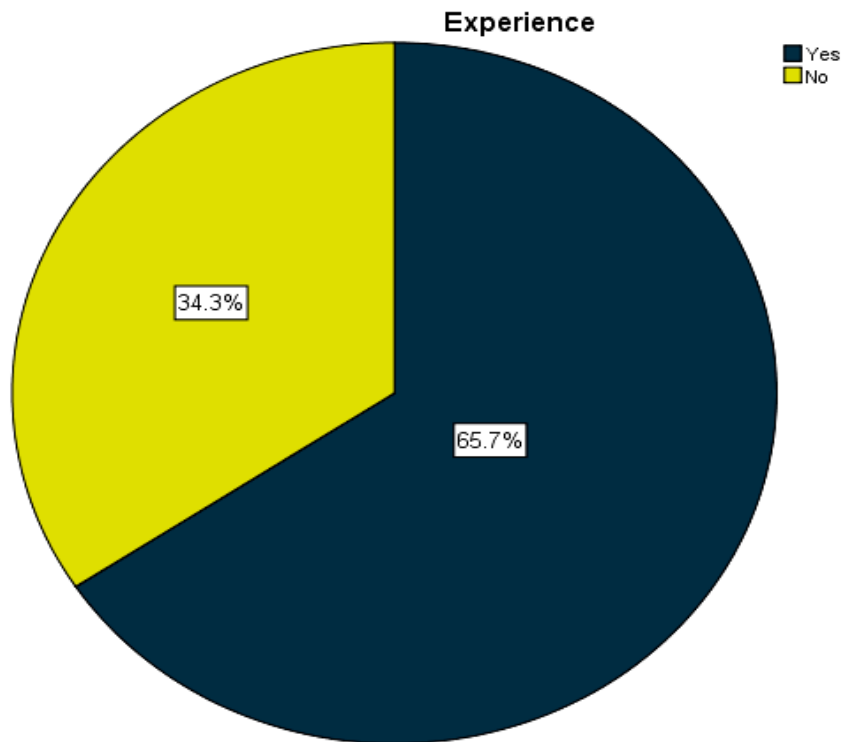
4.1.1.6 Online Banking Experience

Table 4.6: Respondent Demographic of Online Banking Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	291	65.7	65.7	65.7
	No	152	34.3	34.3	100.0
	Total	443	100.0	100.0	

Source: Data generated by SPSS version 21.0

Figure 4.6: Respondent Demographic of Online Banking Experience



Source: Data generated by SPSS version 21.0

Table 4.6 shows the frequency and percentage of respondents' experience of using online banking. Among the 443 respondents, the numbers of respondents who have used online banking before are 291 which are 65.7%. The numbers of respondents who have never use online banking are 152 (34.3%) as shown in Figure 4.6.

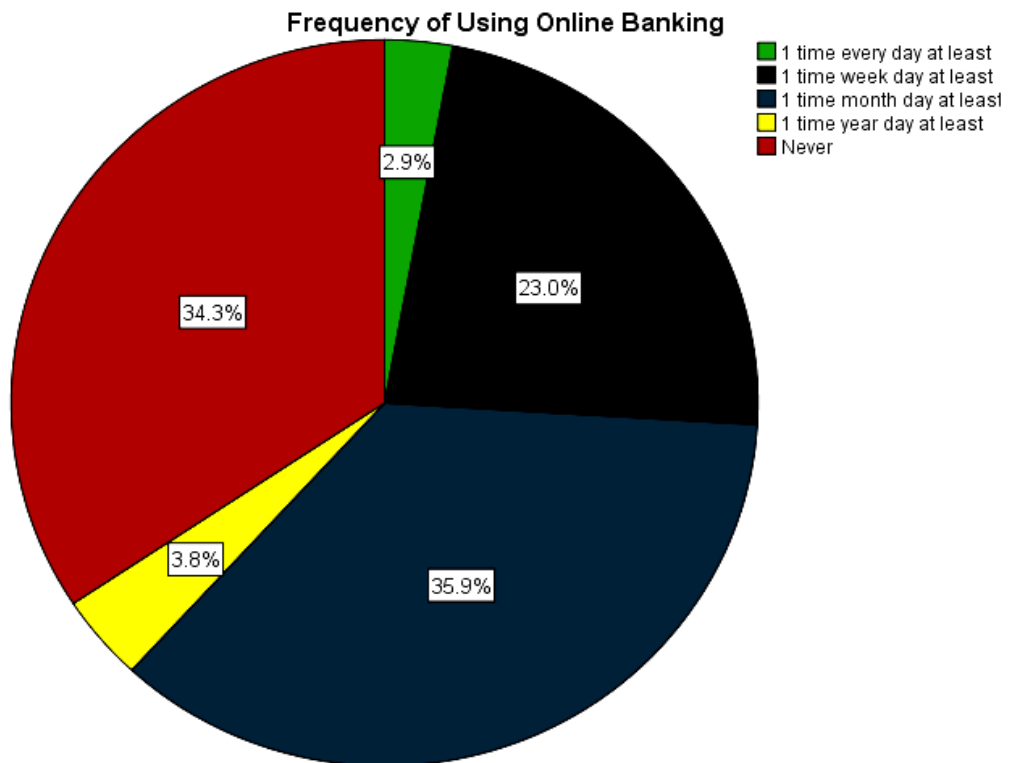
4.1.1.7 Frequency of Using Online Banking

Table 4.7: Respondent Demographic of Frequency of Using Online Banking

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 time every day at least	13	2.9	2.9	2.9
1 time week day at least	102	23.0	23.0	26.0
1 time month day at least	159	35.9	35.9	61.9
1 time year day at least	17	3.8	3.8	65.7
Never	152	34.3	34.3	100.0
Total	443	100.0	100.0	

Source: Data generated by SPSS version 21.0

Figure 4.7: Respondent Demographic of Frequency of Using Online Banking



Source: Data generated by SPSS version 21.0

Table 4.7 shows the respondents' frequency of accessing to the internet banking. 13 or 2.9% respondents are accessing to internet banking at least once a time every day. 102 or 23.0% respondents are accessing to internet banking at least once a time week day. 159 or 35.9% respondents are accessing to internet banking at least once a time month. 17 or 3.8% respondents are accessing to internet banking at least once a time year day. There are 152 or 34.3% respondents who never access to internet banking. Figure 4.7 has shown a clear picture about the percentage of respondents' frequency of accessing to internet banking.

4.1.2 Central Tendencies Measurement of Construct

In this section, central tendencies of measurement are constructed to discover the mean scores for the five interval scaled constructs. There are a total of 29 items with its mean value obtained from the SPSS. All the constructs were tapped on a 5-point Likert Scale with 1 indicating ‘Strongly Disagree’, 2 indicating ‘Disagree’, 3 indicating ‘Neutral’, 4 indicating ‘Agree’, and 5 indicating ‘Strongly Agree’.

4.1.2.1 Financial Risk

Table 4.8: Central Tendencies Measurement of Construct: Financial Risk

	Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	Rank
1.	When transferring money on Internet, I am afraid that I will lose money due to careless mistakes such as wrong input of account number and wrong input of the amount of money.	19.0	35.2	22.6	15.1	8.1	2.5824	4
2.	When transaction errors occur, I worry that I cannot get compensation from banks.	20.8	30.7	22.1	16.5	9.9	2.6411	3
3.	There is a higher risk that a transaction of transferring money or a standing order may not be processed.	10.6	33.9	37.7	12.4	5.4	2.6817	2
4.	Using an Internet-bill-payment service subjects your checking account to potential fraud.	12.0	28.2	40.6	15.3	3.8	2.7088	1

Source: Data generated by SPSS version 21.0

SD: Strongly Disagree, D: Disagree, N: Neutral, A: Agree, SA: Strongly Agree

Table 4.8 shows the central tendencies measurement of financial risk. From the table, the highest ranking of the statement is ‘Using an Internet-bill-payment service subjects your checking account to potential fraud’ which has the mean of 2.7088. It is followed by ‘There is a higher risk that a transaction of transferring money or a standing order may not be processed’ (2.6817), ‘When transaction errors occur, I worry that I cannot get compensation from banks’ (2.6411) and ‘When transferring money on Internet, I am afraid that I will lose money due to careless mistakes such as wrong input of account number and wrong input of the amount of money’ (2.5824).

In fact, the highest ranking of the statement is ‘Using an Internet-bill-payment service subjects your checking account to potential fraud’ has 40.6% of respondents rated as neutral, following by 28.2% of respondents who rated as disagree, 15.3% of respondents agreed with this statement and 12.0% of respondents rated this statement as strongly disagree. However, there are only 3.8% rated as strongly agree.

Second ranking of the statement is ‘There is a higher risk that a transaction of transferring money or a standing order may not be processed’ which 37.7% of respondents rated as neutral and there are only 5.4% rated as strongly agree.

Third ranking of the statement is ‘When transaction errors occur, I worry that I cannot get compensation from banks’ which 30.7% of respondents rated as disagree and there are only 9.9% rated as strongly agree.

The last ranking of the statement is ‘When transferring money on Internet, I am afraid that I will lose money due to careless mistakes such as wrong input of account number and wrong input of the amount of money’ which 35.2% of respondents rated as disagree and there are only 8.1% rated as strongly agree.

4.1.2.2 Time Risk

Table 4.9: Central Tendencies Measurement of Construct: Time Risk

	Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	Rank
1.	I think that interaction with online banking requires a lot of mental effort.	14.7	35.4	35.0	12.0	2.9	2.5305	2
2.	I think that it is hard to use online banking to accomplish my banking tasks.	18.5	37.5	31.4	8.8	3.8	2.4199	5
3.	Using online banking service would lead to a loss of convenience of me because I would have to waste a lot of time fixing payments errors.	13.5	32.1	38.1	13.3	2.9	2.6005	1
4.	It is hard to remember how to use online banking.	17.6	35.9	33.4	9.7	3.4	2.4537	4
5.	My interaction with the online banking site is unclear and not understandable.	14.4	36.1	37.2	9.0	3.2	2.5034	3

Source: Data generated by SPSS version 21.0

SD: Strongly Disagree, D: Disagree, N: Neutral, A: Agree, SA: Strongly Agree

Table 4.9 shows the central tendencies measurement of time risk. From the table above, the highest ranking of the statement is ‘Using online banking service would lead to a loss of convenience of me because I would have to waste a lot of time fixing payments errors’ (2.6005), followed by ‘I think that interaction with online banking requires a lot of mental effort’ (2.5305), ‘My interaction with the online banking site is unclear and not understandable’ (2.5034), ‘It is hard to remember how to use online banking’ (2.4537) and ‘I think that it is hard to use online banking to accomplish my banking tasks’ (2.4199).

In fact, the highest ranking of the statement is ‘Using online banking service would lead to a loss of convenience of me because I would have to waste a lot of time fixing payments errors’ has 38.1% of respondents rated as neutral, following by 32.1% of respondents who rated as disagree, 13.5% of respondents strongly disagreed with this statement and 13.5 % of respondents rated this statement as agree. However, there are only 2.9% rated as strongly agree.

Second ranking of the statement is ‘I think that interaction with online banking requires a lot of mental effort’ which 35.4% of respondents rated as disagree and there are only 2.9% rated as strongly agree.

Next, the third ranking of the statement is ‘My interaction with the online banking site is unclear and not understandable’ which 37.2% of respondents rated as neutral and there are only 3.2% rated as strongly agree.

Continue with the fourth ranking of the statement is ‘It is hard to remember how to use online banking’ which 35.9% of respondents rated as disagree and there are only 3.4% rated as strongly agree.

The last ranking of the statement is ‘I think that it is hard to use online banking to accomplish my banking tasks’ which 35.4% of respondents rated as disagree and there are only 2.9% rated as strongly agree.

4.1.2.3 Security Risk

Table 4.10: Central Tendencies Measurement of Construct: Security Risk

	Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	Rank
1.	I would not feel totally safe providing personal privacy information over the Internet Banking.	12.2	34.5	32.5	14.9	5.9	2.6772	3
2.	I'm worried to use online banking because other people may be able to access my account.	12.4	33.0	31.4	15.6	7.7	2.7314	2
3.	I think this banking web site does not have enough mechanisms to ensure the safe transmission of its user's information.	14.7	29.6	40.0	11.7	4.1	2.6095	5
4.	I am not sure of the identity of this banking web site when I establish contact via the Internet.	18.3	25.3	35.9	16.5	4.1	2.6275	4
5.	When I send data to this banking web site, I am not sure that they will not be intercepted by unauthorized third parties.	11.5	17.4	33.6	26.9	10.6	3.0767	1

Source: Data generated by SPSS version 21.0

SD: Strongly Disagree, D: Disagree, N: Neutral, A: Agree, SA: Strongly Agree

Table 4.10 shows the central tendencies measurement of security risk. From the table, the highest ranking of the statement is 'When I send data to this banking web site, I am not sure that they will not be intercepted by unauthorized third parties' who has the mean of 3.0767. This is followed by 'I'm worried to use online banking because other people may be able to access my account' (2.7314), 'I would not feel totally safe providing personal privacy information over the Internet Banking' (2.6772), 'I am not sure of the identity of this banking web site when I establish contact

via the Internet' (2.6275) and 'I think this banking web site does not have enough mechanisms to ensure the safe transmission of its user's information' (2.6095).

From the highest ranking statement 'When I send data to this banking web site, I am not sure that they will not be intercepted by unauthorized third parties', 33.6% of the respondent survey rated neutral, followed by 26.9% who rated agree, 17.4% rated disagree and 11.5% who rated strongly disagree. Lastly is 10.6% who rated strongly agree.

Second ranking of the statement is 'I'm worried to use online banking because other people may be able to access my account' which 33.0% of respondents rated as disagree and there are only 7.7% rated as strongly agree.

Next, the third ranking of the statement is 'I would not feel totally safe providing personal privacy information over the Internet Banking' which 34.5% of respondents rated as disagree and there are only 5.9% rated as strongly agree.

Continue with the fourth ranking of the statement is 'I am not sure of the identity of this banking web site when I establish contact via the Internet' which 35.9% of respondents rated as neutral and there are only 4.1% rated as strongly agree.

The last ranking of the statement is 'I think this banking web site does not have enough mechanisms to ensure the safe transmission of its user's information' which 40.0% of respondents rated as disagree and there are only 4.1% rated as strongly agree.

4.1.2.4 Performance Risk

Table 4.11: Central Tendencies Measurement of Construct: Performance Risk

	Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	Rank
1.	Online banking servers may not perform well because of slow download speeds, the servers' may break down or because the website is undergoing maintenance.	12.0	23.9	34.3	19.9	9.9	2.9187	1
2.	I am sure that online banking would not do actually what I want.	11.0	33.6	42	10.8	2.5	2.6005	2
3.	I think that using the online banking would not help me carry on my tasks easier and faster.	19.9	38.4	29.3	8.8	3.6	2.3792	5
4.	Using internet banking site will not improve my performance of utilizing banking activities.	16.0	37.9	33.9	9.3	2.9	2.4515	4
5.	Online banking does not allow me to complete more banking activities.	16.5	36.8	34.1	9.7	2.9	2.4582	3

Source: Data generated from SPSS Version 14.0

SD: Strongly Disagree, D: Disagree, N: Neutral, A: Agree, SA: Strongly Agree

Based on the Table 4.11 above, the statement of 'Online banking servers may not perform well because of slow download speeds, the servers' may break down or because the website is undergoing maintenance' to be ranked as first since it has the highest mean value of 2.9187. It is followed by 'I am sure that online banking would not do actually what I want' (2.6005), 'Online banking does not allow me to complete more banking activities' (2.4582), 'Using internet banking site will not improve my performance of utilizing banking activities' (2.4515), and 'I think that

using the online banking would not help me carry on my tasks easier and faster' (2.3792) respectively.

The highest ranking of the statement is 'Online banking servers may not perform well because of slow download speeds, the servers' may breakdown or because the website is undergoing maintenance' shows that there are 34.3% of respondents rated as neutral, following by 23.9% of respondents who rated the statement as disagree and there are also 19.9% of the respondents who agreed with this statement. However, there are 12% of respondents who strongly disagreed with the statements, and only 9.9% of respondents who are strongly agreed with the statement.

Second ranking of the statement is 'I am sure that online banking would not do actually what I want' which 42% of respondents rated as neutral and there are only 2.5% rated as strongly agreed.

Next, the third ranking of the statement is 'Online banking does not allow me to complete more banking activities' which 36.8% of respondents rated as disagree and there are only 2.9% rated as strongly agree.

Continue with the fourth ranking of the statement is 'Using internet banking site will not improve my performance of utilizing banking activities' which 37.9% of respondents rated as disagree and there are only 2.9% rated as strongly agree.

The last ranking of the statement is 'I think that using the online banking would not help me carry on my tasks easier and faster' which 38.4% of respondents rated as disagree and there are only 3.6% rated as strongly agree.

4.1.2.5 Social Risk

Table 4.12: Central Tendencies Measurement of Construct: Social Risk

	Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	Rank
1.	I will have potential loss of status in one’s social group when my bank account incurs fraud or being hacked.	13.5	32.1	33.0	14.4	7.0	2.6930	2
2.	Most people who have strong influence on me think that I should not continue using online banking.	10.6	30.5	41.8	10.4	6.8	2.7223	1
3.	People whose opinions are valued to me would suggest me not to use internet banking.	9.5	38.6	40.4	9.5	2.0	2.5598	4
4.	When trying of new technology, I prefer asking advice from others rather than trust my own instinct.	15.1	33.0	39.5	8.6	3.8	2.5305	5
5.	Bank employee will not assist me during my banking transaction over the internet.	10.6	32.1	45.6	8.8	2.9	2.6140	3

Source: Data generated by SPSS version 21.0

SD: Strongly Disagree, D: Disagree, N: Neutral, A: Agree, SA: Strongly Agree

From the Table 4.12 above, it comprises five statements of social risk. The statement of ‘Most people who have strong influence on me think that I should not continue using online banking’ which has the mean value of 2.7223 is ranked as first. It is followed by ‘I will have potential loss of status in one’s social group when my bank account incurs fraud or being hacked’ (2.6930), ‘Bank employee will not assist me during my banking transaction over the internet’ (2.6140), ‘People whose opinions are valued to me would suggest me to use internet banking’ (2.5598), and ‘When

trying of new technology, I prefer asking advice from others rather than trust my own instinct' (2.5305) respectively.

In fact, the highest ranking of the statement is 'Most people who have strong influence on me think that I should not continue using online banking' which has 41.8% of respondents rated as neutral, following by 30.5% of respondents who rated as disagree and 10.6% of respondents are strongly disagreed with this statement. However, there are 10.4% of respondents rated this statement as agree and only 6.8% of respondents are strongly agreed with this statement.

Second ranking of the statement is 'I will have potential loss of status in one's social group when my bank account incurs fraud or being hacked' which 32.1% of respondents rated as disagree and there are only 7% rated as strongly agree.

Next, the third ranking of the statement is 'Bank employee will not assist me during my banking transaction over the internet' which 32.1% of respondents rated as disagree and there are only 2.9% rated as strongly agree.

Continue with the fourth ranking of the statement is 'People whose opinions are valued to me would suggest me to use internet banking' which 38.6% of respondents rated as disagree and there are only 2% rated as strongly agree.

The last ranking of the statement is 'When trying of new technology, I prefer asking advice from others rather than trust my own instinct' which 33% of respondents rated as disagree and there are only 3.8% rated as strongly agree.

4.1.2.6 Consumers' Behavioral Intention to Use Online Banking

Table 4.13: Central Tendencies Measurement of Construct: Consumers' Behavioral Intention to Use Online Banking

	Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	Rank
1.	I will use online banking on regular basis in the future.	1.4	7.2	33.6	41.8	16.0	3.6388	3
2.	I will strongly recommend others to use Internet banking.	2.0	7.0	39.5	38.4	13.1	3.5350	5
3.	I expect my use of online banking for handling my financial transactions to continue in the future.	0.7	7.2	32.	44.5	15.3	3.6659	2
4.	I expect my use of this Internet banking site to continue in the future.	1.1	5.0	33.9	43.3	16.7	3.6953	1
5.	Using the IB for handling my banking transactions is something I would do.	1.1	5.9	39.1	40.6	13.3	3.5914	4

Source: Data generated by SPSS version 21.0

SD: Strongly Disagree, D: Disagree, N: Neutral, A: Agree, SA: Strongly Agree

Table 4.13 shows the central tendencies measurement of consumers' behavioral intention to use online banking. From the table, the highest ranking of the statement is 'I expect my use of this Internet banking site to continue in the future' which has the mean of 3.6953. It is followed by 'I expect my use of online banking for handling my financial transactions to continue in the future' (3.6659), 'I will use online banking on regular basis in the future' (3.6388), 'Using the IB for handling my banking transactions is something I would do' (3.5914) and 'I will strongly recommend others to use Internet banking' (3.5350).

In this statement 'I expect my use of this Internet banking site to continue in the future', 43.3% of the respondent surveyed rated agree, followed by

33.9% who rated neutral, 16.7% rated strongly agree and 5.0% who rated disagree. Lastly, 1.1% of the respondents rated strongly disagree.

Second ranking of the statement is 'I expect my use of online banking for handling my financial transactions to continue in the future' which only 0.7% of respondents rated as strongly disagree and most of the respondents (44.5%) rated as agree.

Next, the third ranking of the statement is 'I will use online banking on regular basis in the future' which 41.8% of respondents rated as agree and there are only 1.4% rated as strongly agree.

Continue with the fourth ranking of the statement is 'Using the IB for handling my banking transactions is something I would do' which 40.6% of respondents rated as agree and there are only 1.1% rated as strongly agree.

The last ranking of the statement is 'I will strongly recommend others to use Internet banking' which 39.5% of respondents rated as disagree and there are only 2.0% rated as strongly agree.

4.2 Scale Measurement

4.2.1 Internal Reliability Test

The objective of reliability measurement is to test whether the quality of the data in the questionnaire is reliable or not in order to generate an accuracy results. So, the researchers apply Cronbach's Coefficient Alpha to calculate the reliability of the study.

Table 4.14: Cronbach's Alpha Coefficient

Alpha Coefficient range, α	Level of Reliability
0.80 to 0.95	Very good Reliability
0.70 to 08.0	Good Reliability
0.60 to 0.70	Fair Reliability
$\alpha < 0.60$	Poor Reliability

Source: Zikmund et al. (2010).

Table 4.15: Reliability Test on Actual Survey

Variables	Cronbach's Alpha	Number of items
Financial Risk	0.838	4
Time Risk	0.839	5
Security Risk	0.869	5
Performance Risk	0.818	5
Social Risk	0.810	5
Consumers' Behavioral Intention to Use Online Banking	0.922	5

Source: Data generated from SPSS version 21.0

In this research, the researchers use Cronbach's Alpha to examine the internal reliability of five constructs. In this survey, there are 29 items have been included to test the internal reliability of the variables.

According to Zikmund (2010), Alpha coefficient below 0.6, the reliabilities are considered poor reliability. If the Alpha coefficient is range from 0.6 to 0.7, they are considered to be fair reliability. On the other hand, if the Alpha coefficient is in the range of 0.7 to 0.8, then they are considered as good reliability. Furthermore, if the Alpha coefficient is in the range of 0.8 to 0.95, then they are considered as very good reliability.

According to the Table 4.11 above, Cronbach's Alpha of reliability test on Consumers' Behavioral Intention to Use Online Banking is 0.922, which falls in between the range 0.80 to 0.95 and it is considered as very good reliability.

Furthermore, the Cronbach's Alpha result of reliability test on financial risk is 0.838, which is falls under the range 0.80 to 0.95 and it is considered very good reliability. In addition, the coefficient of Cronbach's Alpha of time risk is 0.839, which also shows between the ranging of 0.80 to 0.95. Moreover, the Cronbach's Alpha value of the performance risk is 0.818 which also fall between the ranging of 0.80 to 0.95. Similarly, the Cronbach's Alpha reliability result of the social risk is 0.810 which fall between the ranging of 0.80 to 0.95 too. However, the reliability test on security risk, it showed the highest value of Cronbach's Alpha among the four independent variables, which is 0.869 that falls under range 0.80 to 0.95 and it is considered as a very good reliability.

Since all the variables showed the Cronbach's Coefficient Alpha value above 0.60, so it can be concluded that the overall reliability of the questionnaire used is acceptable in this study.

4.3 Inferential Analyses

Inferential analysis is used to examine the relationship between independent variables and dependent variables. The characteristics of the population will be concluded based on the inferential analysis conducted on the sample such as Pearson Correlation Analysis, Simple Linear Regression Analysis and Multiple Regression Analysis.

4.3.1 Pearson Correlation Analysis

The Pearson's Correlation Analysis is used to measures the covariance between the dependent variable with the independent variable, which means that whether the four independent variables (financial risk, performance risk, time risk, social risk and security risk) have significant relationship with dependent variable (consumers' behavioral intention to use online banking).

Table 4.16: Rules of Thumb about Correlation Coefficient Size

Coefficient Range	Strength of Association
$\pm 0.91 - \pm 1.00$	Very Strong
$\pm 0.71 - \pm 0.90$	High
$\pm 0.41 - \pm 0.70$	Moderate
$\pm 0.21 - \pm 0.40$	Small but definite relationship
$\pm 0.00 - \pm 0.20$	Slight, almost negligible

Source: Adopted from Hair et al. (2010).

Hypothesis A: Relationship between Financial Risk and Consumers' Behavioral Intention to Use Online Banking

H_{0A}: There is no significant relationship between financial risk and consumers' behavioral intention to use online banking.

H_{1A}: There is a significant relationship between financial risk and consumers' behavioral intention to use online banking.

Table 4.17: Correlation of Financial risk and Consumers' Behavioral Intention to Use Online Banking

		Financial_risk	Behavioral_intention
Financial_risk	Pearson Correlation	1	-.605**
	Sig. (2-tailed)		.000
	N	443	443
Behavioral_intention	Pearson Correlation	-.605**	1
	Sig. (2-tailed)	.000	
	N	443	443

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

Source: Data generated by SPSS version 21.0

Based on Table 4.17, it is shown that there is a negative relationship between financial risk and consumers' behavioral intention to use online banking which the correlation coefficient is -0.605. Moreover, based on the Table 4.17 indicated that the relationship between these variables is a moderate relationship which is falling between -0.41 and -0.70. But, the P-value for this hypothesis is 0.000 which is less than 0.05 at the significance level of 5%. Thus, it is indicated that there is a significant negative relationship between financial risk and consumers' behavioral intention to use online banking. As a result, H_{0A} is rejected and H_{1A} is accepted.

Hypothesis B: Relationship between Time risk and Consumers' Behavioral Intention to Use Online Banking

H_{0B} : There is no significant relationship between time risk and consumers' behavioral intention to use online banking.

H_{1B} : There is a significant relationship between time risk and consumers' behavioral intention to use online banking.

Table 4.18: Correlation of Time risk and Consumers' Behavioral Intention to Use Online Banking.

		Time_risk	Behavioral_intention
Time_risk	Pearson Correlation	1	-.681**
	Sig. (2-tailed)		.000
	N	443	443
Behavioral_intention	Pearson Correlation	-.681**	1
	Sig. (2-tailed)	.000	
	N	443	443

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

Source: Data generated by SPSS version 21.0

Based on the Table 4.18, the result shown that there is a negative relationship between time risk and consumers' behavioral intention to use online banking due to its correlation coefficient is -0.681. According to the Table 4.18, it is explained that the relationship between these variables is a moderate relationship which is stay between -0.41 and -0.70. However, P-value for this hypothesis is fall to 0.000 which is less than 0.05 at the significance level of 5%. Thus, it is indicated that there is a significant negative relationship between time risk and consumers' behavioral intention to use online banking. It is indicated that H_{0B} is rejected and H_{1B} is accepted.

Hypothesis C: Relationship between Security Risk and Consumers' Behavioral Intention to Use Online Banking.

H_{0C} : There is no significant relationship between security risk and consumers' behavioral intention to use online banking.

H_{1C} : There is a significant relationship between security risk and consumers' behavioral intention to use online banking.

Table 4.19: Correlation of Security risk and Consumers' Behavioral Intention to Use Online Banking

	Security_risk	Behavioral_intention
Pearson Correlation	1	-.554**
Security_risk Sig. (2-tailed)		.000
N	443	443
Behavioral_ Pearson Correlation	-.554**	1
intention Sig. (2-tailed)	.000	
N	443	443

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

Source: Data generated by SPSS version 21.0

Based on the Table 4.19, it is shown there is negative relationship between security risk and consumers' behavioral intention to use online banking which the correlation coefficient is at -0.554. According to the Table 4.19, it is indicated that the relationship between these variables is known as a moderate relationship within the range of -0.41 to -0.70. The P-value for this hypothesis is 0.000 which is less than 0.05 at the significance level of 5%. So, there is a significant negative relationship between security risk and consumers' behavioral intention to use online banking. Thus, H_{0C} will be rejected while H_{1C} is accepted.

Hypothesis D: Relationship between Performance Risk and Consumers' Behavioral Intention to Use Online Banking.

H_{0D} : There is no significant relationship between performance risk and consumers' behavioral intention to use online banking.

H_{1D} : There is a significant relationship between performance risk and consumers' behavioral intention to use online banking.

Table 4.20: Correlation of Performance Risk and Consumers' Behavioral Intention to Use Online Banking.

		Performance_risk	Behavioral_intention
Performance_risk	Pearson Correlation	1	-.645**
	Sig. (2-tailed)		.000
	N	443	443
Behavioral_intention	Pearson Correlation	-.645**	1
	Sig. (2-tailed)	.000	
	N	443	443

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

Source: Data generated by SPSS version 21.0

According to Table 4.20, we found that it is a negative relationship between performance risk and consumers' behavioral intention to use online banking which the correlation coefficient is at -0.645. Through table 4.20, it is shown that the relationship between these variables is a moderate relationship within the range of -0.41 to -0.70. Moreover, P-value in this hypothesis is 0.000 which is less than 0.05 at the significance level of 5%. Thus, it is indicated that there is also a significant negative relationship between performance risk and consumers' behavioral intention to use online banking. So, H_{0D} will be rejected and H_{1D} is accepted.

Hypothesis E: Relationship between Social Risk and Consumers' Behavioral Intention to Use Online Banking.

H_{0E} : There is no significant relationship between social risk and consumers' behavioral intention to use online banking.

H_{1E} : There is a significant relationship between social risk and consumers' behavioral intention to use online banking.

Table 4.21: Correlation of Social Risk and Consumers' Behavioral Intention to Use Online Banking.

		Social_risk	Behavioral_intention
Social_risk	Pearson Correlation	1	-.653**
	Sig. (2-tailed)		.000
	N	443	443
Behavioral_intention	Pearson Correlation	-.653**	1
	Sig. (2-tailed)	.000	
	N	443	443

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

Source: Data generated by SPSS version 21.0

Based on the Table 4.21, the result shown that there is a negative relationship between social risk and consumers' behavioral intention to use online banking due to its correlation coefficient is -0.653. According to the Table 4.21, it is explained that the relationship between these variables is a moderate relationship which is stay between -0.41 and -0.70. However, P-value for this hypothesis is fall to 0.000 which is less than 0.05 at the significance level of 5%. Thus, it is indicated that there is a significant negative relationship between social risk and consumers' behavioral intention to use online banking. It is indicated that H_{0E} is rejected and H_{1E} is accepted.

4.3.2 Simple Linear Regression Analysis

Simple linear regression analysis is used to examine the linear relationship between two variables, a single independent variable and dependent variable. The strength of relationship between particular independent variables and dependent variable will be obtained through this regression analysis. R value is the absolute of correlation coefficient, measures the magnitude of relationship between single independent variable and dependent variable only, it does not indicates the direction of relationship

as Pearson Correlation Coefficient does. R-square indicates how much variation in dependent variable the single independent variable able to explain, while Analysis of Variance (ANOVA) examines the significance of the regression.

Hypothesis A: Relationship between Financial Risk and Consumers' Behavioral Intention to Use Online Banking

H_{0A}: There is no significant relationship between financial risk and consumers' behavioral intention to use online banking.

H_{1A}: There is a significant relationship between financial risk and consumers' behavioral intention to use online banking.

Table 4.22: Simple Linear Regression on Financial Risk and Consumers' Behavioral Intention to Use Online Banking (Model Summary)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.605 ^a	.366	.365	.59723

a. Predictors: (Constant), Financial_risk

Source: Data generated by SPSS version 21.0

From the model summary table above, R-value of 0.605 which is the absolute value of correlation coefficient shows that linear moderate relationship exists between financial risk and consumers' behavioral intention to use online banking. R-square is 0.366 which indicates that 36.6% of the variation in behavioral intention to use online banking is explained by financial risk. However, the remaining of 63.4% in the variation of consumers' behavioral intention to use online banking is unexplained in this study.

Table 4.23: Simple Linear Regression on Financial Risk and Consumers' Behavioral Intention to Use Online Banking (ANOVA)

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	90.899	1	90.899	254.844	.000 ^b
	Residual	157.298	441	.357		
	Total	248.197	442			

a. Dependent Variable: Behavioral_intention

b. Predictors: (Constant), Financial_risk

Source: Data generated by SPSS version 21.0

As shown in the ANOVA table above, the p-value of 0.000 is smaller than the significance level of 0.05. F-value is 254.844 which is significant. This shows that the model for this study is a good descriptor of the relation between the financial risk and the consumers' behavioral intention to use online banking. Therefore, financial risk is significant in explaining the variation in consumers' behavioral intention to use online banking. The alternative hypothesis is supported by the data.

Table 4.24: Simple Linear Regression on Financial Risk and Consumers' Behavioral Intention to Use Online Banking (Coefficients)

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	4.940	.087		56.713	.000
	Financial_risk	-.495	.031	-.605	-15.964	.000

a. Dependent Variable: Behavioral_intention

Source: Data generated by SPSS version 21.0

Based on the coefficient table above, it shows that there is a negative relationship between financial risk and the consumers' behavioral intention to use online banking. The regression coefficient for the financial risk is interpreted as when there is 1 unit increase in financial risk, it will lead to the consumers' behavioral intention to use online banking decreases by 0.495 units. The regression equation is written as following:

$$\text{Consumers' Behavioral Intention to Use Online Banking} = 4.940 - 0.495 (\text{Financial Risk})$$

Hypothesis B: Relationship between Time risk and Consumers' Behavioral Intention to Use Online Banking

H_{0B}: There is no significant relationship between time risk and consumers' behavioral intention to use online banking.

H_{1B}: There is a significant relationship between time risk and consumers' behavioral intention to use online banking.

Table 4.25: Simple Linear Regression on Time Risk and Consumers' Behavioral Intention to Use Online Banking (Model Summary)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.681 ^a	.464	.462	.54943

a. Predictors: (Constant), Time_risk

Source: Data generated by SPSS version 21.0

From the model summary table above, the absolute value of correlation coefficient, R-value is 0.681 shows that linear moderate relationship exists between time risk and consumers' behavioral intention to use online banking. R-square is 0.464 which indicates that 46.4% of the variation in consumers' behavioral intention to use online banking is explained by time risk. However, the remaining of 53.6% in the variation of consumers' behavioral intention to use online banking is unexplained in this study.

Table 4.26: Simple Linear Regression on Time Risk and Consumers' Behavioral Intention to Use Online Banking (ANOVA)

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	115.070	1	115.070	381.184	.000 ^b
	Residual	133.127	441	.302		
	Total	248.197	442			

a. Dependent Variable: Behavioral_intention

b. Predictors: (Constant), Time_risk

Source: Data generated by SPSS version 21.0

As shown in the ANOVA table above, the p-value of 0.000 is smaller than the significance level of 0.05. F-value of 381.184 is significant. This shows that the model for this study is a good descriptor of the relation between time risk and the consumers' behavioral intention to use online banking. Therefore, time risk is significant in explaining the variation in consumers' behavioral intention to use online banking. The alternative hypothesis is supported by the data.

Table 4.27: Simple Linear Regression on Time Risk and Consumers' Behavioral Intention to Use Online Banking (Coefficients)

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	5.287	.089		59.386	.000
1 Time_risk	-.664	.034	-.681	-19.524	.000

a. Dependent Variable: Behavioral_intention

Source: Data generated by SPSS version 21.0

Based on the coefficient table above, it shows that there is negative relationship between time risk and the consumers' behavioral intention to use online banking. The regression coefficient for the time risk is interpreted as when there is 1 unit increase in time risk, it will lead to the consumers' behavioral intention to use online banking decreases by 0.664 units. The regression equation is written as following:

$$\text{Consumers' Behavioral Intention to Use Online Banking} = 5.287 - 0.664 (\text{Time Risk})$$

Hypothesis C: Relationship between Security Risk and Consumers' Behavioral Intention to Use Online Banking.

H_{0C}: There is no significant relationship between security risk and consumers' behavioral intention to use online banking.

H_{1C}: There is a significant relationship between security risk and consumers' behavioral intention to use online banking.

Table 4.28: Simple Linear Regression on Security Risk and Consumers' Behavioral Intention to Use Online Banking (Model Summary)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.554 ^a	.307	.305	.62457

a. Predictors: (Constant), Security_risk

Source: Data generated by SPSS version 21.0

From the model summary table above, the R-value (absolute of correlation coefficient) shows 0.554 which mean that there is a linear moderate relationship between security risk and consumers' behavioral intention to use online banking. R-square is 0.307 which indicates that 30.7% of the variation in consumers' behavioral intention to use online banking is explained by security risk. However, the remaining of 69.3% in the variation of consumers' behavioral intention to use online banking is unexplained in this study.

Table 4.29: Simple Linear Regression on Security Risk and Consumers' Behavioral Intention to Use Online Banking (ANOVA)

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	76.166	1	76.166	195.251	.000 ^b
	Residual	172.031	441	.390		
	Total	248.197	442			

a. Dependent Variable: Behavioral_intention

b. Predictors: (Constant), Security_risk

Source: Data generated by SPSS version 21.0

As shown in the ANOVA table above, the p-value of 0.000 is smaller than the significance level of 0.05. F-value of 195.251 is significant. The model for this study is good descriptor of the relation between the security risk and the consumers' behavioral intention to use online banking. Therefore, security risk is significant in explaining the variation in consumers' behavioral intention to use online banking. The alternative hypothesis is supported by the data.

Table 4.30: Simple Linear Regression on Security Risk and Consumers' Behavioral Intention to Use Online Banking (Coefficients)

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.925	.098		50.441	.000
	Security_risk	-.474	.034	-.554	-13.973	.000

a. Dependent Variable: Behavioral_intention

Source: Data generated by SPSS version 21.0

Based on the coefficient table above, it shows that there is a negative relationship between security risk and the consumers' behavioral intention to use online banking. The regression coefficient for the security risk is interpreted as when there is 1 unit increase in security risk, it will lead to the consumers' behavioral intention to use online banking decreases by 0.474 units. The regression equation is written as following:

$$\text{Consumers' Behavioral Intention to Use Online Banking} = 4.925 - 0.474 (\text{Security Risk})$$

Hypothesis D: Relationship between Performance Risk and Consumers' Behavioral Intention to Use Online Banking.

H_{0D}: There is no significant relationship between performance risk and consumers' behavioral intention to use online banking.

H_{1D}: There is a significant relationship between performance risk and consumers' behavioral intention to use online banking

Table 4.31: Simple Linear Regression on Performance Risk and Consumers' Behavioral Intention to Use Online Banking (Model Summary)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.645 ^a	.417	.415	.57301

a. Predictors: (Constant), Performance_risk

Source: Data generated by SPSS version 21.0

From the model summary table above, the absolute of correlation coefficient which is represented by R shows a value of 0.645. This indicates that there is a linear moderate relationship between performance risk and consumers' behavioral intention to use online banking according to the rules of thumb. R-square of 0.417 shows that performance risk can explain 41.7% of the variation in consumers' behavioral intention to use online banking. The remaining of 58.3% of the variation in consumers' behavioral intention to use online banking is unexplained in this study.

Table 4.32: Simple Linear Regression on Performance Risk and Consumers' Behavioral Intention to Use Online Banking (ANOVA)

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	103.398	1	103.398	314.907	.000 ^b
	Residual	144.799	441	.328		
	Total	248.197	442			

a. Dependent Variable: Behavioral_intention

b. Predictors: (Constant), Performance_risk

Source: Data generated by SPSS version 21.0

From the ANOVA table above, p-value of 0.000 is smaller than alpha value of 0.05. F-value of 314.907 is significant indicates that this model is good enough in describing the relationship between performance risk and consumers' behavioral intention to use online banking. Therefore, performance risk is significant in explaining the variation of consumers' behavioral intention to use online banking. The alternate hypothesis is supported.

Table 4.33: Simple Linear Regression on Performance Risk and Consumers' Behavioral Intention to Use Online Banking (Coefficients)

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	5.245	.095		55.059	.000
1 Performance_risk	-.632	.036	-.645	-17.746	.000

a. Dependent Variable: Behavioral_intention

Source: Data generated by SPSS version 21.0

From the table above, the regression coefficient, B value of -0.632 shows that there is a negative relationship between performance risk and consumers' behavioral intention to use online banking. The regression coefficient is interpreted as when there is one unit increase in performance risk, it will lead to a decrease of 0.632 units in consumers' behavioral intention to use online banking. The simple linear regression model is written as following:

$$\text{Consumers' Behavioral Intention to Use Online Banking} = 5.245 - 0.632 (\text{Performance Risk})$$

Hypothesis E: Relationship between Social Risk and Consumers' Behavioral Intention to Use Online Banking.

H_{0E}: There is no significant relationship between social risk and consumers' behavioral intention to use online banking.

H_{1E}: There is a significant relationship between social risk and consumers' behavioral intention to use online banking.

Table 4.34: Simple Linear Regression on Social Risk and Consumers' Behavioral Intention to Use Online Banking (Model Summary)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.653 ^a	.427	.425	.56805

a. Predictors: (Constant), Social_risk

Source: Data generated by SPSS version 21.0

From the model summary table above, the R (absolute coefficient correlation) shows a value of 0.653. This indicates that there is a linear moderate relationship between social risk and consumers' behavioral intention to use online banking according to the rules of thumb. R-square of 0.427 shows that social risk can explain 42.7% of the variation in consumers' behavioral intention to use online banking. The remaining of 57.3% of the variation in consumers' behavioral intention to use online banking is unexplained in this study.

Table 4.35: Simple Linear Regression on Social Risk and Consumers' Behavioral Intention to Use Online Banking (ANOVA)

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	105.892	1	105.892	328.160	.000 ^b
	Residual	142.304	441	.323		
	Total	248.197	442			

a. Dependent Variable: Behavioral_intention

b. Predictors: (Constant), Social_risk

Source: Data generated by SPSS version 21.0

From the ANOVA table above, p-value of 0.000 is smaller than alpha value of 0.05. F-value of 328.160 is significant indicates that this model is good enough in describing the relationship between social risk and consumers' behavioral intention to use online banking. Therefore, social risk is significant in explaining the variation of consumers' behavioral intention to use online banking. The alternate hypothesis is supported.

Table 4.36: Simple Linear Regression on Social Risk and Consumers' Behavioral Intention to Use Online Banking (Coefficients)

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.377	.100		53.561	.000
	Social_risk	-.668	.037	-.653	-18.115	.000

a. Dependent Variable: Behavioral_intention

Source: Data generated by SPSS version 21.0

From the table above, the regression coefficient B value of -0.668 shows that there is a negative relationship between social risk and consumers' behavioral intention to use online banking. The regression coefficient is interpreted as when there is one unit increase in social risk, it will lead to a

decrease of 0.668 units in consumers' behavioral intention to use online banking. The simple linear regression model is written as following:

$$\text{Consumers' Behavioral Intention to Use Online Banking} = 5.377 - 0.668(\text{Social Risk})$$

4.3.3 Multiple Regression Analysis

Since this study includes more than one independent variable, the researchers developed a joint hypothesis (Hypothesis F, as shown in Chapter 2) and use multiple regression analysis to study the overall effect of all independent variables (financial risk, time risk, security risk, performance risk and social risk) on dependent variable (consumers' behavioral intention to use online banking). The researchers will be able to examine the total variation of dependent variable that explained by all the independent variables from the R Square value. While the Multiple R value which is represented by R, is always taken as positive and measure the degree of association between all independent variables and dependent variable (Gujarati & Porter, 2009). Besides, the Analysis of Variance (ANOVA) will indicate the overall significance of the multiple regression and the regression coefficients of each independent variable are represented by unstandardized coefficients B value.

Hypothesis F: Relationship between Five Independent Variables and Consumers' Behavioral Intention to Use Online Banking.

H_{0F}: There is no significant relationship between five independent variables (financial risk, time risk, security risk, performance risk, social risk) and consumers' behavioral intention to use online banking.

H_{1F}: There is a significant relationship between five independent variables (financial risk, time risk, security risk, performance risk, social risk) and consumers' behavioral intention to use online banking.

Table 4.37: Multiple Linear Regressions on Five Independent Variables and Consumers' Behavioral Intention to Use Online Banking (Model Summary)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.804 ^a	.646	.642	.44837

a. Predictors: (Constant), Social_risk, Security_risk, Financial_risk, Time_risk, Performance_risk

Source: Data generated by SPSS version 21.0

By referring to the Table 4.37, R Multiple represented by R=0.804 indicates that the five independent variables (financial risk, time risk, security risk, performance risk and social risk) are highly correlated to consumers' behavioral intention to use online banking. The coefficient of determination, R square of 0.646 represents that a total variation of 64.6% in consumers' behavioral intention to use online banking can be explained by all the five independent variables. The remaining 35.4% of the variation is unexplained. In other words, there are other significant factors that affecting consumers' behavioral intention to use online banking not included in this study.

Table 4.38: Multiple Linear Regressions on Five Independent Variables and Consumers' Behavioral Intention to Use Online Banking (ANOVA)

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	160.346	5	32.069	159.522	.000 ^b
	Residual	87.851	437	.201		
	Total	248.197	442			

a. Dependent Variable: Behavioral_intention

b. Predictors: (Constant), Social_risk, Security_risk, Financial_risk, Time_risk, Performance_risk

Source: Data generated by SPSS version 21.0

From the Table 4.38 above, the p-value of 0.000 is smaller than alpha value of 0.05. F-value of 159.522 is significant. The alternate hypothesis is accepted at alpha= 0.05. This indicates that the overall multiple regressions model is significant at the 5% level of significance and the regression model is a good descriptor of the relationship between consumers' behavioral intention to use online banking with financial risk, time risk, security risk, performance risk and social risk.

Table 4.39: Multiple Linear Regressions on Five Independent Variables and Consumers' Behavioral Intention to Use Online Banking (Coefficients)

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	6.180	.095		65.106	.000
1 Financial_risk	-.131	.034	-.160	-3.857	.000
Time_risk	-.147	.057	-.151	-2.581	.010
Security_risk	-.314	.026	-.368	-11.954	.000
Performance_risk	-.147	.058	-.150	-2.520	.012
Social_risk	-.228	.050	-.223	-4.595	.000

a. Dependent Variable: Behavioral_intention

Source: Data generated by SPSS version 21.0

From the result in Table 4.39, it is shown that among the five independent variables, security risk contribute the most to the variation of consumers' behavioral intention to use online banking because no matter under unstandardized or standardized coefficients, security risk has the highest magnitude of coefficients. For interpretation, the unstandardized coefficient B value for security risk is interpreted as for every 1 unit increase in security risk, on average, consumers' behavioral intention to use online banking will decrease by 0.314 units, holding other variables constant. While for standardized coefficient Beta value, it is interpreted as for 1 standard deviation increase in security risk, it will results in a 0.368 standard deviation decrease in consumers' behavioral intention to use online banking, holding other variables constant. The second highest contribution comes from social risk, followed by financial risk, time risk and the lowest is performance risk by referring to the standardized coefficient Beta value.

By using the regression coefficients represented by B value in Table 4.39, equation that describing the relationship between independent variables

(financial risk, time risk, security risk, performance risk and social risk) and consumers' behavioral intention to use online banking can be formed as following:

$$\begin{aligned} \text{Behavioral Intention to Use Online Banking} = \\ 6.180 - 0.131 \text{ Financial Risk} - 0.147 \text{ Time Risk} - 0.314 \text{ Security Risk} \\ - 0.147 \text{ Performance Risk} - 0.228 \text{ Social Risk} \end{aligned}$$

4.4 Conclusion

In this chapter, the researchers tested all the hypotheses developed in Chapter 2 by using Pearson Correlation Analysis, Simple Linear Regression and Multiple Linear Regression for inferential analysis. Internal reliability test is conducted before the inferential analysis to make sure that the reliability of instruments is established. All the results from the analysis show that there are significant relationships between five independent variables (financial risk, time risk, security risk, performance risk and social risk) with dependent variables (consumers' behavioral intention to use online banking). The next chapter will be Chapter 5, overall analysis will be summarized in that chapter. Discussion and limitation of this study will be presented also in next chapter, and last but not least, limitation and recommendation for future research.

CHAPTER 5: DISCUSSION, CONCLUSION, AND IMPLICATION

5.0 Introduction

This chapter includes the summary of the entire descriptive and inferential analysis examined and discussed in the previous chapter. Besides, researchers also explain the major finding to validate the research objectives and hypotheses. The highlight of this chapter will be summary of statistical analysis, discussions of major findings, implication of the study, limitation of study and recommendations for future research.

5.1 Summary of Statistical Analysis

5.1.1 Descriptive Analysis

In this section, it will provide summary description of the entire descriptive and inferential analyses presented and discussed in the previous chapter.

5.1.1.1 Respondent Demographic Information

Based on the analysis of the total 443 respondents' profile, female accounted for the majority respondent which is 51.7%, 229 female respondent while the remaining of 48.3%, 214 are male respondents. Most of the respondents belong to the age group of 18-25 years old with 212 respondents which are 47.9% from the range of the age. Meanwhile, the

largest ethnic population involved in this study is Chinese with a number of 364 Chinese respondents. It is followed by Malay respondents, 12.4% or 55 respondents and 4.1% or 18 respondents are from Indians group. Furthermore, most of the respondents are Diploma/ Bachelor Degree holders with 336 respondents or 75.8% as compared with others highest education level. Majority of the respondents are students which consist of 268 respondents out of a total of 443 respondents. From the 443 respondents, the numbers of respondents who have used online banking before are 229 which are 51.7%. Lastly, most of the respondents will access to online banking once a time month which are 159 respondents or 35.9% as compare to use online banking at least once per day, per week and per year.

5.1.1.2 Central Tendencies Measurement of Constructs

Table 4.8 shows the central tendencies measurement of financial risk. From the table the highest ranking of the statement is ‘Using an Internet-bill-payment service subjects your checking account to potential fraud’ which has the mean of 2.7088. The result is consistent with most of the research which point out that major of the financial risk is related with the misappropriation of funds through illegal external access (Littler and Melanthiou ,2006; Lee, 2008; Gupta ,1988; Aliyu et al., 2012). These may also due to the recent social news that happens among the society. According to Bukit Aman Commercial Crime Investigation Department director Datuk Syed Ismail Syed Azizan, a total of 3,889 cyber-crime and online shopping fraud cases were reported on the year 2012 between month of January and September (Online shopping fraud taints good image of Malaysia, local firms, 2012).This may become one of the solid reason that online fraud may becoming the largest concern in the financial risk.

On the other hand, the statement of ‘When transferring money on Internet, I am afraid that I will lose money due to careless mistakes such as wrong input of account number and wrong input of the amount of money’ scored the lowest mean of 2.5824.

For time risk, the statement of ‘Using online banking service would lead to a loss of convenience of me because I would have to waste a lot of time fixing payments errors’ scored the highest mean among all the items which is 2.6005. According to Katha (2011) consumer might click wrongly when handling the transaction and this can cause them facing monetary losses. As a result, consumers need to go through a series of procedure in order to get their problem fix. These procedures consume a lot of time and bring inconvenience for them. This may be one of the reasons that consumers think by using online banking service would cause them waste their time in handling payment errors.

Whereas, the statement of ‘I think that it is hard to use online banking to accomplish my banking tasks’ has the lowest mean of 2.4199.

In term of security risk, the statement of ‘When I send data to this banking web site, I am not sure that they will not be intercepted by unauthorized third parties’ has achieved the highest mean with 3.0767. This statement obtained highest means because consumers worry their data was being interrupted by any third parties such as hacker. Hacker attacks can cause serious consequences to any financial institution. For instance, nowadays about seven million people are Smartphone users and these users had been spotted by cyber hackers in stealing their money through sending a SMS known as Trojan. This SMS will charge them unknowingly, once they replying to the SMS. Internet Banking and phone banking has faced loses with RM590, 000 (74 cases) which caused by those hackers. (“7 Million Smartphone Users Vulnerable to Cyber Hackers,” 2012). Therefore, this may become one of the main reason that intercepted by unauthorized third parties are most concern in security risk.

However, the statement of 'I think this banking web site does not have enough mechanisms to ensure the safe transmission of its user's information' scored the lowest mean with 2.6095.

For performance risk, the statement of 'Online banking servers may not perform well because of slow download speeds, the servers' may break down or because the website is undergoing maintenance' has the highest mean value of 2.9187. This indicates that most of the respondents who encountered performance risk greatly caused by slow download speeds and unavailability of website due to server's breakdown or undergoing maintenance. Their expectations for website performance are high. Forrester Consulting released a report which found that more than half of the internet banking customers (56%) have the expectation that web pages can be loaded in 2 seconds or less (Crosman, 2010). While if the webpage failed to load in 2 seconds, up to 40% of the webpage users will abandon the website (Gomez, 2010). Besides that, most of the users are expecting 99% or higher online banking website availability (Crosman, 2010).

Meanwhile, the statement of 'I think that using the online banking would not help me carry on my tasks easier and faster' has the lowest mean value of 2.3792.

In the aspect of social risk, the statements of 'Most people who have strong influence on me think that I should not continue using online banking' gain the highest mean of 2.7223. This indicates that most of the respondents think that their views on using online banking would be strongly influenced by the perceptions from people that have strong influence on them such as family and friends. According to Yang et al. (2007), they found out that social risk has a negative impact on the attitude of consumers. When the consumers' friends or family do not accept on using online banking, this will lead them not to use the online banking services. In addition, when the consumer's family or friends who have

negative perceptions on using online banking will influence the consumers to drop the services even the consumers are currently using it.

As compared to the statement of ‘When trying of new technology, I prefer asking advice from others rather than trust my own instinct’ scored the lowest mean value of 2.5305.

Lastly, for the consumers’ behavioral intention to use online banking, the statement of ‘I expect my use of this Internet banking site to continue in the future’ scored the highest mean value of 3.6953. However, the statement of ‘I will strongly recommend others to use Internet banking’ has achieved the lowest mean value of 3.5350.

5.1.2 Scale Measurement

5.1.2.1 Summary of Reliability Test

In this survey, a total of 29 items used to examine the internal reliability of the variables by using Cronbach’s Alpha. Based on the results in Chapter 4, the alpha coefficient of behavioural intention to use is 0.922, which considered as very good reliability. This is the same for the result of reliability test on financial risk (0.838), time risk (0.839), performance risk (0.818), security risk (0.869) and social risk (0.810). Among the five independent variables, security risk showed the highest ranking of Cronbach’s Alpha results. All of the five independent variables are falls under the range 0.80 to 0.95 and it is considered as a very good reliability.

5.1.3 Summary of Inferential Analysis

5.1.3.1 Pearson's Correlation Analysis

The results from the Pearson's Correlation Analyses shows the correlation between consumers' behavioral intention to use online banking and the five independent variables which is financial risk (-0.605), time risk (-0.681), security risk (-0.554), performance risk (-0.645) and social risk (-0.653). The coefficient range of the five independent variable are in between ± 0.41 - ± 0.70 which indicated that the relationship between these variables is a moderate relationship.

5.1.3.2 Simple Linear Regression

Simple linear regression analysis is used to examine the linear relationship between two variables, a single independent variable and dependent variable and make prediction.

Hypothesis A: Relationship between Financial Risk and Consumers' Behavioral Intention to use Online Banking.

H_{0A} : There is no significant relationship between Financial Risk and Consumers' Behavioral Intention to use Online Banking.

H_{1A} : There is a significant relationship between Financial Risk and Consumers' Behavioral Intention to use Online Banking.

Based on the result of simple linear regression analysis, $r^2 = 0.366$ which indicates that 36.6% of the variation in consumers' behavioral intention to use online banking is explained by financial risk. Besides, F-value of 254.844 is significant at 5% significance level since p-value = 0.000 smaller than alpha value of 0.05. Therefore, the model for this study is a

good descriptor of the relation between the financial risk and the consumers' behavioral intention to use online banking. In conclusion, financial risk is significant in explaining the variance in consumers' behavioral intention to use online banking. The simple linear regression equation is formed as follows:

$$\text{Consumers' behavioral intention to use Online Banking} = 4.940 - 0.495 (\text{Financial Risk})$$

Hypothesis B: Relationship between Time risk and Consumers' Behavioral Intention to use Online Banking

H_{0B} : There is no significant relationship between Time risk and Consumers' Behavioral Intention to use Online Banking.

H_{1B} : There is a significant relationship between Time risk and Consumers' Behavioral Intention to use Online Banking

According to the result of the simple linear regression analysis, $r^2=0.464$ means that 46.4% of the variation in consumers' behavioral intention to use online banking is explained by time risk. Besides, F- value of 381.184 is significant. Hence, the model is a good descriptor of the relation between time risk and the consumers' behavioral intention to use online banking. In conclusion, time risk is significant in explaining the variance in consumers' behavioral intention to use online banking. The regression equation is formed as following:

$$\text{Consumers' behavioral intention to use Online Banking} = 5.287 - 0.664 (\text{Time Risk})$$

Hypothesis C: Relationship between Security Risk and Consumers' Behavioral Intention to use Online Banking.

H_{0C} : There is no significant relationship between Security Risk and Consumers' Behavioral Intention to use Online Banking.

H_{1C} : There is a significant relationship between Security Risk and Consumers' Behavioral Intention to use Online Banking.

Based on the results of simple linear regression analysis, $r^2=0.307$ which indicates that 30.7% of the variation in consumers' behavioral intention to use online banking is explained by security risk. Besides, F-value of 195.251 is significant, so the model is a good descriptor of the relation between the security risk and the consumers' behavioral intention to use online banking. In conclusion, security risk is significant in explaining the variance in consumers' behavioral intention to use online banking. The regression equation is formed as following:

Consumers' behavioral intention to use online banking =
 $4.925 - 0.474$ (Security Risk)

Hypothesis D: Relationship between Performance Risk and Consumers' Behavioral Intention to use Online Banking.

H_{0D} : There is no significant relationship between Performance Risk and Consumers' Behavioral Intention to use Online Banking.

H_{1D} : There is a significant relationship between Performance Risk and Consumers' Behavioral Intention to use Online Banking.

From the result of simple linear regression analysis, $r^2=0.417$ which indicates that 41.7% of the variation in consumers' behavioral intention to use online banking is explained by performance risk. Besides, F-value of 314.907 is significant indicates that this model is good enough in describing the relationship between performance risk and consumers'

behavioral intention to use online banking. In conclusion, performance risk is significant in explaining the variance of consumers' behavioral intention to use online banking. The regression equation is formed as following:

$$\text{Consumers' behavioral intention to use Online Banking} = 5.245 - 0.632(\text{Performance Risk})$$

Hypothesis E: Relationship between Social Risk and Consumers' Behavioral Intention to use Online Banking.

H_{0E} : There is no significant relationship between Social Risk and Consumers' Behavioral Intention to use Online Banking.

H_{1E} : There is a significant relationship between Social Risk and Consumers' Behavioral Intention to use Online Banking.

According to the results of simple linear regression analysis, $r^2 = 0.427$ which indicates that 42.7% of the variation in consumers' behavioral intention to use online banking is explained by social risk. Besides, F-value of 328.160 is significant indicates that this model is good enough in describing the relationship between social risk and consumers' behavioral intention to use online banking. In conclusion, social risk is significant in explaining the variance of consumers' behavioral intention to use online banking. The regression equation is formed as following:

$$\text{Consumers' behavioral intention to use Online Banking} = 5.377 - 0.668(\text{Social Risk})$$

5.1.3.3 Multiple Linear Regressions

According to the Table 4.35, the Multiple regression analysis results for the $r^2 = 0.646$ represents that a total variation of 64.6% in consumers' behavioral intention to use online banking can be explained by financial risk, time risk, security risk, performance risk and social risk. Meanwhile, based on Table 4.36, the value for $F = 159.522$ which is significant and the p-value of 0.000 is smaller than alpha value of 0.05. The alternate hypothesis is accepted at $\alpha = 0.05$. Lastly, the output of the coefficient equation is formed as following:

Consumers' behavioral intention to use Online Banking =

6.180 – 0.131 Financial Risk – 0.147 Time Risk – 0.314 Security Risk

– 0.147 Performance Risk – 0.228 Social Risk

Among the five independent variables, security risk contribute the most to the variation of consumers' behavioral intention to use online banking because security risk has the highest magnitude of coefficients. The unstandardized coefficient Beta value is interpreted as when there is one unit increase in security risk, consumers' behavioral intention to use online banking will decrease by 0.314 units.

5.2 Discussion of Major Findings

Table 5.1 Summary of the Result of Hypotheses Testing

Hypothesis	Beta Coefficient, β	P-value
Simple Linear Regressions		
H1 _A : There is a significant relationship between Financial Risk and Consumers' Behavioral Intention to use Online Banking.	-0.495	0.000
H1 _B : There is a significant relationship between Time risk and Consumers' Behavioral Intention to use Online Banking.	-0.664	0.000
H1 _C : There is a significant relationship between Security Risk and Consumers' Behavioral Intention to use Online Banking.	-0.474	0.000
H1 _D : There is a significant relationship between Performance Risk and Consumers' Behavioral Intention to use Online Banking.	-0.632	0.000
H1 _E : There is a significant relationship between Social Risk and Consumers' Behavioral Intention to use Online Banking.	-0.668	0.000
Multiple Linear Regressions		
H1 _F : There is a significant relationship between five independent variables and Consumers' Behavioral Intention to use Online Banking.	-0.131 (Financial Risk)	0.000
	-0.147 (Time Risk)	0.010
	-0.314 (Security Risk)	0.000
	-0.147 (Performance Risk)	0.012
	-0.228 (Social Risk)	0.000

Source: Developed for the research.

5.2.1 Simple Linear Regression

Hypothesis A: Relationship between Financial Risk and Consumers' Behavioral Intention to use Online Banking.

H_{0A} : There is no significant relationship between Financial Risk and Consumers' Behavioral Intention to use Online Banking.

H_{1A} : There is a significant relationship between Financial Risk and Consumers' Behavioral Intention to use Online Banking.

Based on the table above, the significance value for financial risk is 0.000 which less than p-value of 0.05. Hence, H_{1A} is accepted which indicates that there is a negative significant relationship between financial risk and consumers' behavioral intention to use online banking as the regression coefficient is -0.495. According to Lee, 2008; Gupta, 1988; Mazursky et al., 1987; Aliyu et al., 2012, these researcher had proved that financial risk has negative effect on the consumer intention to adopt online banking. Besides, Faroughian et al. (2012) also provide the empirical support that there is a significant impact of financial risk on perceptions of satisfaction of consumers. Hence, financial risk is one of the important factors in that will affect the consumers' intention to use online banking. This has been shown and proven that this paper result is validity.

Hypothesis B: Relationship between Time risk and Consumers' Behavioral Intention to use Online Banking.

H_{0B} : There is no significant relationship between Time risk and Consumers' Behavioral Intention to use Online Banking.

H_{1B} : There is a significant relationship between Time risk and Consumers' Behavioral Intention to use Online Banking.

From the table above, the significance value for time risk is 0.000 which less than p-value of 0.05. Hence, H_{1B} is accepted which indicates that there is a negative significant relationship between time risk and behavioral intention to use online banking as the regression coefficient is -0.664. Based on Cooper (1997), the researcher state that time savings is important on the consumer perspective for adoption of innovative service like online banking. Besides, Chen and Bames (2007) has found that time risk has significant negative effect towards consumer intention to adopt online banking. Hence, time risk is important to determine the consumers' intention to use online banking.

Hypothesis C: Relationship between Security Risk and Consumers' Behavioral Intention to use Online Banking.

H_{0C} : There is no significant relationship between Security Risk and Consumers' Behavioral Intention to use Online Banking.

H_{1C} There is a significant relationship between Security Risk and Consumers' Behavioral Intention to use Online Banking.

Based on the results in chapter 4, the significance value for security risk is 0.000 which less than p-value of 0.05. Hence, H_{1C} is accepted which indicates that there is a negative significant relationship between security risk and behavioral intention to use online banking as the regression coefficient is -0.474. Based on Lee (2009) studies, the researcher found

that security risk is negatively influences attitudes and intentions to use online banking. Lee (2009) also proves that security risk seems to be the most important inhibitor to the adoption of online banking by internet users. Therefore, this paper finding is valid and security risk is also one of the important factors that influence the consumers' intention to use online banking which mostly same results with the previous researchers.

Hypothesis D: Relationship between Performance Risk and Consumers' Behavioral Intention to use Online Banking.

H_{0D} : There is no significant relationship between Performance Risk and Consumers' Behavioral Intention to use Online Banking.

H_{1D} : There is a significant relationship between Performance Risk and Consumers' Behavioral Intention to use Online Banking.

According the results in Chapter 4, the significance value for performance risk is 0.000 which less than p-value of 0.05. Hence, H_{1D} is accepted which indicates that there is a negative significant relationship between performance risk and behavioral intention to use online banking as the regression coefficient is -0.632. Performance of internet banking in form of usefulness will play important roles to determine consumers' intention to use online banking. According to Jaruwachirathananakul and Fink, (2005); Venkatesh, (2000) studies have proved that there is a significant relationship between performance risk and consumers' intention to use online banking. Hence, performance risk also considered as an important factors in affecting the consumers' behavioural intention to use online banking. Thus, the result of this paper has been proved and aligns with most of the previous researcher.

Hypothesis E: Relationship between Social Risk and Consumers' Behavioral Intention to use Online Banking.

H_{0E} : There is no significant relationship between Social Risk and Consumers' Behavioral Intention to use Online Banking.

H_{1E} : There is a significant relationship between Social Risk and Consumers' Behavioral Intention to use Online Banking.

From the table above, the significance value for social risk is 0.000 which less than p-value of 0.05. Hence, H_{1E} is accepted which indicates that there is a negative significant relationship between social risk and behavioral intention to use online banking as the regression coefficient is -0.668. Based on previous researchers' results, Yang et al (2007), the researcher has found that social risk is negatively correlated to consumers' attitudes. Further, J.Jacoby; L.B. Kaplan (1972) also found that consumers social members who have negative perceptions on internet banking will change the perception of the consumers' itself. As results, this paper findings are align with previous researcher so social risk considered to be one of the important factors that will affect the consumers' intention to use online banking.

5.2.2 Multiple Linear Regressions

Hypothesis F: Relationship between Five Independent Variables and Consumers' Behavioral Intention to use Online Banking.

H_{0F} : There is no significant relationship between five independent variables (financial risk, time risk, security risk, performance risk, social risk) and Consumers' Behavioral Intention to use Online Banking.

H_{1F} : There is a significant relationship between five independent variables (financial risk, time risk, security risk, performance risk, social risk) and Consumers' Behavioral Intention to use Online Banking.

Based on the results in Chapter 4, the significance value for five independent variables is 0.000 which is less than p-value of 0.05. Hence, H_{1F} is accepted which indicates that there is a negative significant relationship between five independent variables (financial risk, time risk, security risk, performance risk, social risk) and behavioral intention to use online banking as the regression coefficient is -0.131(Financial Risk), -0.147 (Time Risk), -0.314 (Security Risk), -0.147 (Performance Risk), -0.228 (Social Risk).

5.3 Implication of the study

The results of this research shows that security risk, financial risk, performance risk, social risk and time risk have a strong relationship with the consumer behaviour intention to use online banking. The results from this paper will lend a helping hand to bank when considering a new future policy and strategy in internet banking industry.

5.3.1 Managerial Implication

Based on the finding of Pearson correlation test had conducted that each of the independent variables which are financial risk, time risk, security risk, performance risk and social risk have a negative relationship towards the consumers behaviour to use online banking.

Based on the results, security risk has been proved that to have the strongest negative impact towards the consumer behaviour to use online banking with the beta value of -0.314. Nowadays, most of the internet users are concern on the fraud and identity theft when dealing with online banking. They usually worry about data corruption due to viruses, system crash and hacking which may cause them lose their confidentiality. Internet users actually expect their transaction and personal details to be kept secured and safeguard. Therefore, it is important for bank representatives to ensure their internet banking security is under control so consumers may felt safe when using it. In addition, most of the consumers dislike their personal information get exposed when dealing with internet banking. Hence, bank representative should pay more attention on this issue and must make sure that there has a comprehensive security program on their website to safeguard every internet banking transaction and personal privacy.

Social risk has been found to have the second strongest negative impact towards consumer behaviour intention to use online banking with the beta value of -0.228. In this social world, consumers usually will seek for opinion from their social members such friends and family when there is an uncertainty exists. Negative Word of Mouth would be one of the example that causing internet user unwilling to adopt internet banking. Therefore, banks can take action by creating an awareness of internet banking to consumers through campaign. In this campaign, banks can promote and advertise the benefits of using internet banking websites to the consumers. When internet users get to know more about internet banking, they will be no doubt for them to adopt internet banking.

Next, both time risk and performance risk are also one of the negative impact towards consumers behaviour intention to use internet banking with the beta value of -0.147. Most of the consumers dislike wasting their time on handling the low performance of internet banking service. For example, when there is a breakdown of system servers, it is inconvenience for consumers who want to make transaction urgently. So there will be a performance risk occurs. When there is a higher performance risk while using online banking services, the higher possibility that online banking will not be adopted by consumers. Hence, banks should come out with new strategy and innovation on internet banking to reduce time risk and performance risk. For instance, banks must make sure their online banking websites are 24 hours free from any malfunctions happening.

Lastly, financial risk seems to have the weakest negative impact on consumers' intention to use online banking which beta value is -0.131. Financial risk is defined as internet users have the possibility faced a financial losses due to bank transaction error or bank account misuse. Therefore, some consumers are not willing to use online banking because they feel that online banking are not as assurance as traditional banking system. They worry of losing their money during the process of transaction and transferring money through their bank account. As a result, bank should hire an expert technician to check the online system from time to time. This can prevent any malfunction of the system to be happened. Hence, internet users may feel more secure using the online banking services. Since trust

can be build between internet users and banks, possibility to use internet banking services will be increased.

5.4 Limitation of the study

Although the results of analyses are statistically significant, there were several limitations in this study. First, due to time constraint, the researcher only given few weeks to collect survey results, therefore time series data are hardly to be obtained. This is because every trend of independent variables is different from time to time so comparison using time series cannot be examined. For example, the results for financial risk in this year's would be different with the results from last previous year.

Besides, this study only focuses on Business to Consumers environment where all the collection of data is mainly come from non-business consumers and thus it indirectly neglected the users from business environment. Examples of Business to business are manufacturers, resellers, non-profit institution and government. There might be different results if B2B data are included in this research sample.

5.5 Recommendations for Future Research

As for future researchers, it is recommended to employ using a longitudinal study to evaluate the customers' behaviour in adopting internet banking. By using the longitudinal data in future, it may help in examine the research model in different time periods and also make comparisons. Hence, this help in providing a better view into the phenomenon of internet banking adoption. Besides, Future researcher also should pay attention on business to business consumer environments.

Since this study R^2 is 64.6% where about 35.4% of the variation in the consumers' behavioral intention to use online banking contributed by others significant factors are unexplained. Therefore, future researcher is recommended to implement other model such as Unified Theory of Acceptance and Use of Technology (UTAUT) formulated by Venkatesh in explaining the behaviour of consumer. From the studies of Im, Hong and Kang (2011), the researcher states that UTAUT is a behavioural model that explains user's behaviour of accepting information technology. UTAUT model have two extra constructs which includes facilitating conditions and social influence as compared to TAM.

As for banker, since this paper had figure out the results that security risk has the highest influence on consumers' adoption on internet banking. Therefore, banker should pay more attention on their bank online security especially in terms of privacy in order to build trust in consumers. As a result, consumer may feel more secure in using the internet banking services.

At the same time, this paper results also proves that social risk influenced consumers' decision too. So, banker and policy makers can cooperate in creating awareness on benefits of internet banking through campaign. In this campaign, banker and policy makers can increase the awareness about the perceived risk that encountered during the online banking transaction. As a result, it can helps

consumer to prevent from any financial loss that arises from various perceived risk.

5.6 Conclusion

In a nutshell, the researcher had finally disclosed new frameworks which state that the financial risk, time risk, security risk, performance risk and social risk have a significant relationship towards consumers' behavioral intention to use online banking. This means that if proper concern is implant to the independent variables, then consumers' are more willing to use online banking. This whole chapter five had provided a better understanding of internet banking to consumers. Nevertheless, researcher believes that there is still a room for improvement in this study. Hence, some recommendations are suggested for future researchers as a reference.

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APPENDICES

APPENDIX A: Permission to Conduct Survey

 **UNIVERSITI TUNKU ABDUL RAHMAN**
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28 June 2012

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 Business Administration (Hons) Banking and Finance* 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
Gan Lee Xien	10ABB03011
Foong Sook Kuen	10ABB03055
Ang Hui Ting	10ABB02926
Lim Yin Ying	10ABB00222
Wong Siow Yew	10ABB02730

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

Thank you.

Yours sincerely " *Woo Kok Hoong* "

Woo Kok Hoong 2/7/12

Woo Kok Hoong
Head of Department
Faculty of Business and Finance
Email: khwoo@utar.edu.my

Lu Ming Pey

Lu Ming Pey
Supervisor
Faculty of Business and Finance
Email: lump@utar.edu.my

Address: 9, Jalan Bersatu 13/4, 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 B: Survey Questionnaire

Consumer Perception on Online Banking

Dear respondent, We are final year students pursuing Bachelor Of Business Administration (Hons) Banking And Finance in University Tunku Abdul Rahman(UTAR). As part of our research project, we are conducting a survey to seek public opinions and view regarding online banking. We appreciate your participation and feedback on this survey. Be assured that your identity will remain private and confidential, and the research results will only be used strictly for academic purposes only. Thank you for your cooperation.

Your sincerely,

Ang Hui Ting, Foong Sook Kuen, Gan Lee Xien, Lim Yin Ying, Wong Siow Yew .

1. Gender *

- male
- female

2. Age *

- Below 18
- 18- 25
- 26-35
- 35-45
- Above 45

3. Race *

- Malay
- Chinese
- Indian
- Other:

4. Highest Education Level *

- Below SPM

- SPM
- STPM/UEC/Pre U
- Foundation/Diploma/ Bachelor Degree
- Other:

5. Occupation *

- High/Intermediate level manager
- Supervisory
- Skills manual labors
- Semi/ Unskilled manuals labors
- Student
- Other:

6. Have you using Online Banking before? *

- Yes
- No

7. Frequencies of using Online Banking *

- One time every day at least
- One time week day at least
- One time month day at least
- One time year day at least
- Never

Continue ?

Consumer Perception on Online Banking

* Required

This section assess your perception on the adoption of online banking factors that influence consumer decision in Malaysia using 5 point Likert scale and ranking system. Please indicate the degree of how strongly you agree or disagree with each element by circling on the number from 1 till 5 where: 1 = Strongly Disagree (SD) 2 = Disagree (D) 3 = Neutral (N) 4 = Agree (A) 5 = Strongly Agree (SA)

Financial Risk

1. When transferring money on Internet, I am afraid that I will lose money due to careless mistakes such as wrong input of account number and wrong input of the amount of money. *

1 2 3 4 5

Strongly Disagree Strongly Agree

2. When transaction errors occur, I worry that I cannot get compensation from banks. *

1 2 3 4 5

Strongly Disagree Strongly Agree

3. There is a higher risk that a transaction of transferring money or a standing order may not be processed. *

1 2 3 4 5

Strongly Disagree Strongly Agree

4. Using an Internet-bill-payment service subjects my checking account to potential fraud. *

1 2 3 4 5

Strongly Disagree Strongly Agree

Time Risk

1. I think that interaction with online banking require a lot of mental effort. *

1 2 3 4 5

Strongly Disagree Strongly Agree

2. I think that it is hard to use online banking to accomplish my banking tasks. *

1 2 3 4 5

Strongly Disagree Strongly Agree

3. Using online banking service would lead to a loss of convenience of me because I would have to waste a lot of time fixing payments errors. *

1 2 3 4 5

Strongly Disagree Strongly Agree

4. It is hard to remember how to use online banking. *

1 2 3 4 5

Strongly Disagree Strongly Agree

5. My interaction with the online banking site is unclear and not understandable. *

1 2 3 4 5

Strongly Disagree Strongly Agree

Security Risk

1. I would not feel totally safe providing personal privacy information over the Internet Banking. *

1 2 3 4 5

Strongly Disagree Strongly Agree

2. I'm worried to use online banking because other people may be able to access my account. *

1 2 3 4 5

Strongly Disagree Strongly Agree

3. I think this banking web site does not have enough mechanisms to ensure the safe transmission of its user's information. *

1 2 3 4 5

Strongly Disagree Strongly Agree

4. I am not sure of the identity of this banking web site when I establish contact via the Internet. *

1 2 3 4 5

Strongly Disagree Strongly Agree

5. When I send data to this banking web site, I am not sure that they will not be intercepted by unauthorized third parties. *

1 2 3 4 5

Strongly Disagree Strongly Agree

Performance Risk

1. Online banking servers may not perform well because of slow download speeds, the servers' may break down or because the website is undergoing maintenance. *

1 2 3 4 5

Strongly Disagree Strongly Agree

2. I am sure that Online banking would not do actually what I want. *

1 2 3 4 5

Strongly Disagree Strongly Agree

3. I think that using the online banking would not help me carry on my tasks easier and faster. *

1 2 3 4 5

Strongly Disagree Strongly Agree

4. Using internet banking site will not improve my performance of utilizing banking activities. *

1 2 3 4 5

Strongly Disagree Strongly Agree

5. Online banking does not allow me to complete more banking activities. *

1 2 3 4 5

Strongly Disagree Strongly Agree

Social Risk

1. I will have potential loss of status in one's social group when my bank account incurs fraud or being hacked. *

1 2 3 4 5

Strongly Disagree Strongly Agree

2. Bank employee will not assist me during my banking transactions over the internet. *

1 2 3 4 5

Strongly Disagree Strongly Agree

3. People whose opinions are valued to me would suggest me to use internet banking. *

1 2 3 4 5

Strongly Disagree Strongly Agree

4. When trying of new technology, I prefer asking advice from others rather than trust my own instinct.. *

1 2 3 4 5

Strongly Disagree Strongly Agree

5. Most people who have strong influence on me think that I should not continue using online banking. *

1 2 3 4 5
Strongly Disagree Strongly Agree

Behavioral Intention to use

1. I will use online banking on regular basis in the future. *

1 2 3 4 5
Strongly Disagree Strongly Agree

2. I will strongly recommend others to use Internet banking. *

1 2 3 4 5
Strongly Disagree Strongly Agree

3. I expect my use of online banking for handling my financial transactions to continue in the future. *

1 2 3 4 5
Strongly Disagree Strongly Agree

4. I expect my use of this Internet banking site to continue in the future. *

1 2 3 4 5
Strongly Disagree Strongly Agree

5. Using the Internet Banking for handling my banking transactions is something I would do *

1 2 3 4 5
Strongly Disagree Strongly Agree

? Back	Submit

APPENDIX C: Data Information

DISPLAY DICTIONARY

File Information

Variable Information

Variable	Position	Label	Measurement Level	Column Width	Alignment	Print Format	Write Format
Gender	1	Gender	Nominal	8	Right	F8	F8.2
Age	2	Age	Ordinal	8	Right	F8	F8.2
Race	3	Race	Nominal	8	Right	F8	F8.2
Education	4	Highest Education Level	Ordinal	8	Right	F8	F8.2
Occupation	5	Occupation	Ordinal	8	Right	F8	F8.2
Experience	6	Experience of using	Nominal	8	Right	F8	F8.2
Frequency	7	Frequency of using	Ordinal	8	Right	F8	F8.2
Financial1	8	Financial risk 1	Scale	8	Right	F8	F8.2
Financial2	9	Financial risk 2	Scale	8	Right	F8	F8.2
Financial3	10	Financial risk 3	Scale	8	Right	F8	F8.2
Financial4	11	Financial risk 4	Scale	8	Right	F8	F8.2
Time1	12	Time risk 1	Scale	8	Right	F8	F8.2
Time2	13	Time risk 2	Scale	8	Right	F8	F8.2
Time3	14	Time risk 3	Scale	8	Right	F8	F8.2
Time4	15	Time risk 4	Scale	8	Right	F8	F8.2
Time5	16	Time risk 5	Scale	8	Right	F8	F8.2
Security1	17	Security risk 1	Scale	8	Right	F8	F8.2
Security2	18	Security risk 2	Scale	8	Right	F8	F8.2
Security3	19	Security risk 3	Scale	8	Right	F8	F8.2
Security4	20	Security risk 4	Scale	8	Right	F8	F8.2
Security5	21	Security risk 5	Scale	8	Right	F8	F8.2
Performance1	22	Performance risk 1	Scale	8	Right	F8	F8.2
Performance2	23	Performance risk 2	Scale	8	Right	F8	F8.2
Performance3	24	Performance risk 3	Scale	8	Right	F8	F8.2
Performance4	25	Performance risk 4	Scale	8	Right	F8	F8.2
Performance5	26	Performance risk 5	Scale	8	Right	F8	F8.2
Social1	27	Social risk 1	Scale	8	Right	F8	F8.2

Online Banking In Malaysia From Consumer Perception On Risk

Social2	28	Social risk 2	Scale	8	Right	F8	F8.2
Social3	29	Social risk 3	Scale	8	Right	F8	F8.2
Social4	30	Social risk 4	Scale	8	Right	F8	F8.2
Social5	31	Social risk 5	Scale	8	Right	F8	F8.2
Behavior1		Behavioral intention					
	32	to use online	Scale	8	Right	F8	F8.2
		banking 1					
Behavior2		Behavioral intention					
	33	to use online	Scale	8	Right	F8	F8.2
		banking 2					
Behavior3		Behavioral intention					
	34	to use online	Scale	8	Right	F8	F8.2
		banking 3					
Behavior4		Behavioral intention					
	35	to use online	Scale	8	Right	F8.2	F8.2
		banking 4					
Behavior5		Behavioral intention					
	36	to use online	Scale	8	Right	F8.2	F8.2
		banking 5					
Financial risk	37	<none>	Scale	12	Right	F8.2	F8.2
Time risk	38	<none>	Scale	10	Right	F8.2	F8.2
Security risk	39	<none>	Scale	12	Right	F8.2	F8.2
Performance risk	40	<none>	Scale	15	Right	F8.2	F8.2
Social risk	41	<none>	Scale	10	Right	F8.2	F8.2
Behavioral intention		Consumers' behavioral intention					
	42	to use online	Scale	15	Right	F8.2	F8.2
		banking					

Variables in the working file

Variable Values

Value		Label
Gender	1	Male
	2	Female

Age	1	Below 18
	2	18-25
	3	26-35
	4	36-45
	5	Above 45
Race	1	Malay
	2	Chinese
	3	Indian
	4	Others
Education	1	Below SPM
	2	SPM
	3	STPM/UEC/Pre U
	4	Diploma/Bachelor Degree
	5	Others
Occupation	1	High/Intermediate Level Manager
	2	Supervisory
	3	Skills manual labors
	4	Semi/Unskilled manuals labors
	5	Student
	6	Others
Experience	1	Yes
	2	No
Frequency	1	1 time every day at least
	2	1 time week day at least
	3	1 time month day at least
	4	1 time year day at least
	5	Never
Financial1	1	Strongly Disagree
	2	Disagree
	3	Neutral
	4	Agree
	5	Strongly Agree
Financial2	1	Strongly Disagree
	2	Disagree
	3	Neutral

	4	Agree
	5	Strongly Agree
Financial3	1	Strongly Disagree
	2	Disagree
	3	Neutral
	4	Agree
	5	Strongly Agree
Financial4	1	Strongly Disagree
	2	Disagree
	3	Neutral
	4	Agree
	5	Strongly Agree
Time1	1	Strongly Disagree
	2	Disagree
	3	Neutral
	4	Agree
	5	Strongly Agree
Time2	1	Strongly Disagree
	2	Disagree
	3	Neutral
	4	Agree
	5	Strongly Agree
Time3	1	Strongly Disagree
	2	Disagree
	3	Neutral
	4	Agree
	5	Strongly Agree
Time4	1	Strongly Disagree
	2	Disagree
	3	Neutral
	4	Agree
	5	Strongly Agree
Time5	1	Strongly Disagree
	2	Disagree
	3	Neutral

	4	Agree
	5	Strongly Agree
Security1	1	Strongly Disagree
	2	Disagree
	3	Neutral
	4	Agree
	5	Strongly Agree
Security2	1	Strongly Disagree
	2	Disagree
	3	Neutral
	4	Agree
	5	Strongly Agree
Security3	1	Strongly Disagree
	2	Disagree
	3	Neutral
	4	Agree
	5	Strongly Agree
Security4	1	Strongly Disagree
	2	Disagree
	3	Neutral
	4	Agree
	5	Strongly Agree
Security5	1	Strongly Disagree
	2	Disagree
	3	Neutral
	4	Agree
	5	Strongly Agree
Performance1	1	Strongly Disagree
	2	Disagree
	3	Neutral
	4	Agree
	5	Strongly Agree
Performance2	1	Strongly Disagree
	2	Disagree
	3	Neutral

	4	Agree
	5	Strongly Agree
Performance3	1	Strongly Disagree
	2	Disagree
	3	Neutral
	4	Agree
	5	Strongly Agree
Performance4	1	Strongly Disagree
	2	Disagree
	3	Neutral
	4	Agree
	5	Strongly Agree
Performance5	1	Strongly Disagree
	2	Disagree
	3	Neutral
	4	Agree
	5	Strongly Agree
Social1	1	Strongly Disagree
	2	Disagree
	3	Neutral
	4	Agree
	5	Strongly Agree
Social2	1	Strongly Disagree
	2	Disagree
	3	Neutral
	4	Agree
	5	Strongly Agree
Social3	1	Strongly Disagree
	2	Disagree
	3	Neutral
	4	Agree
	5	Strongly Agree
Social4	1	Strongly Disagree
	2	Disagree
	3	Neutral

Social5	4	Agree
	5	Strongly Agree
	1	Strongly Disagree
	2	Disagree
	3	Neutral
Behavior1	4	Agree
	5	Strongly Agree
	1	Strongly Disagree
	2	Disagree
	3	Neutral
Behavior2	4	Agree
	5	Strongly Agree
	1	Strongly Disagree
	2	Disagree
	3	Neutral
Behavior3	4	Agree
	5	Strongly Agree
	1	Strongly Disagree
	2	Disagree
	3	Neutral
Behavior4	4	Agree
	5	Strongly Agree
	1	Strongly Disagree
	2	Disagree
	3	Neutral
Behavior5	4	Agree
	5	Strongly Agree
	1	Strongly Disagree
	2	Disagree
	3	Neutral

APPENDIX D: Respondent Demographic Profile

Frequencies

		Statistics						Frequencies
		Gender	Age	Race	Education	Occupation	Experience	
N	Valid	443	443	443	443	443	443	443
	Missing	0	0	0	0	0	0	0
Mean		1.5169	2.4470	1.9436	3.6727	4.0361	1.3431	3.4357
Median		2.0000	2.0000	2.0000	4.0000	5.0000	1.0000	3.0000
Mode		2.00	2.00	2.00	4.00	5.00	1.00	3.00
Std. Deviation		.50028	.95071	.46504	.68523	1.31078	.47529	1.25388
Variance		.250	.904	.216	.470	1.718	.226	1.572
Range		1.00	4.00	3.00	4.00	4.00	1.00	4.00
Minimum		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Maximum		2.00	5.00	4.00	5.00	5.00	2.00	5.00

Frequency Table

Gender				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	214	48.3	48.3
	Female	229	51.7	100.0
	Total	443	100.0	100.0

Age				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 18	55	12.4	12.4
	18-25	212	47.9	60.3
	26-35	112	25.3	85.6
	36-45	51	11.5	97.1
	Above 45	13	2.9	100.0
	Total	443	100.0	100.0

Education				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below SPM	5	1.1	1.1
	SPM	36	8.1	9.3
	STPM/UEC/Pre U	62	14.0	23.3
	Diploma/Bachelor Degree	336	75.8	99.1
	Others	4	.9	100.0
	Total	443	100.0	100.0

Race				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Malay	55	12.4	12.4
	Chinese	364	82.2	94.6
	Indian	18	4.1	98.6
	Others	6	1.4	100.0
	Total	443	100.0	100.0

Occupation

	Frequency	Percent	Valid Percent	Cumulative Percent
High/Intermediate Level Manager	23	5.2	5.2	5.2
Supervisory	51	11.5	11.5	16.7
Valid Skills manual labors	81	18.3	18.3	35.0
Semi/Unskilled manuals labors	20	4.5	4.5	39.5
Student	268	60.5	60.5	100.0
Total	443	100.0	100.0	

Experience

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	291	65.7	65.7	65.7
Valid No	152	34.3	34.3	100.0
Total	443	100.0	100.0	

Frequencies

	Frequency	Percent	Valid Percent	Cumulative Percent
1 time every day at least	13	2.9	2.9	2.9
1 time week day at least	102	23.0	23.0	26.0
Valid 1 time month day at least	159	35.9	35.9	61.9
1 time year day at least	17	3.8	3.8	65.7
Never	152	34.3	34.3	100.0
Total	443	100.0	100.0	

APPENDIX E: Central Tendencies Measurement of Constructs

Financial Risk

Frequencies

		Statistics			
		Financial1	Financial2	Financial3	Financial4
N	Valid	443	443	443	443
	Missing	0	0	0	0
Mean		2.5824	2.6411	2.6817	2.7088
Std. Deviation		1.18984	1.25479	1.00240	.99255
Variance		1.416	1.575	1.005	.985
Percentiles	25	2.0000	2.0000	2.0000	2.0000
	50	2.0000	2.0000	3.0000	3.0000
	75	3.0000	4.0000	3.0000	3.0000

Frequency Table

		Financial1			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	84	19.0	19.0	19.0
	Disagree	156	35.2	35.2	54.2
	Neutral	100	22.6	22.6	76.7
	Agree	67	15.1	15.1	91.9
	Strongly Agree	36	8.1	8.1	100.0
	Total	443	100.0	100.0	

		Financial2			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	92	20.8	20.8	20.8
	Disagree	136	30.7	30.7	51.5
	Neutral	98	22.1	22.1	73.6
	Agree	73	16.5	16.5	90.1
	Strongly Agree	44	9.9	9.9	100.0
	Total	443	100.0	100.0	

Financial3

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	47	10.6	10.6	10.6
Disagree	150	33.9	33.9	44.5
Neutral	167	37.7	37.7	82.2
Agree	55	12.4	12.4	94.6
Strongly Agree	24	5.4	5.4	100.0
Total	443	100.0	100.0	

Financial4

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	53	12.0	12.0	12.0
Disagree	125	28.2	28.2	40.2
Neutral	180	40.6	40.6	80.8
Agree	68	15.3	15.3	96.2
Strongly Agree	17	3.8	3.8	100.0
Total	443	100.0	100.0	

Time Risk

Frequencies

Statistics

		Time1	Time2	Time3	Time4	Time5
N	Valid	443	443	443	443	443
	Missing	0	0	0	0	0
Mean		2.5305	2.4199	2.6005	2.4537	2.5034
Std. Deviation		.97982	1.01114	.97744	.99978	.95456
Variance		.960	1.022	.955	1.000	.911
Percentiles	25	2.0000	2.0000	2.0000	2.0000	2.0000
	50	2.0000	2.0000	3.0000	2.0000	2.0000
	75	3.0000	3.0000	3.0000	3.0000	3.0000

Frequency Table

Time1

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	65	14.7	14.7	14.7
Disagree	157	35.4	35.4	50.1
Neutral	155	35.0	35.0	85.1
Agree	53	12.0	12.0	97.1
Strongly Agree	13	2.9	2.9	100.0
Total	443	100.0	100.0	

Time2

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	82	18.5	18.5	18.5
Disagree	166	37.5	37.5	56.0
Neutral	139	31.4	31.4	87.4
Agree	39	8.8	8.8	96.2
Strongly Agree	17	3.8	3.8	100.0
Total	443	100.0	100.0	

Time3

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	60	13.5	13.5	13.5
Disagree	142	32.1	32.1	45.6
Neutral	169	38.1	38.1	83.7
Agree	59	13.3	13.3	97.1
Strongly Agree	13	2.9	2.9	100.0
Total	443	100.0	100.0	

Time4

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	78	17.6	17.6	17.6
Disagree	159	35.9	35.9	53.5
Neutral	148	33.4	33.4	86.9
Agree	43	9.7	9.7	96.6
Strongly Agree	15	3.4	3.4	100.0
Total	443	100.0	100.0	

Time5

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	64	14.4	14.4	14.4
Disagree	160	36.1	36.1	50.6
Neutral	165	37.2	37.2	87.8
Agree	40	9.0	9.0	96.8
Strongly Agree	14	3.2	3.2	100.0
Total	443	100.0	100.0	

Security Risk

Frequencies

Statistics

		Security1	Security2	Security3	Security4	Security5
N	Valid	443	443	443	443	443
	Missing	0	0	0	0	0
Mean		2.6772	2.7314	2.6095	2.6275	3.0767
Std. Deviation		1.05595	1.10432	1.00614	1.08418	1.15083
Variance		1.115	1.220	1.012	1.175	1.324
Percentiles	25	2.0000	2.0000	2.0000	2.0000	2.0000
	50	3.0000	3.0000	3.0000	3.0000	3.0000
	75	3.0000	3.0000	3.0000	3.0000	4.0000

Frequency Table

Security1

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	54	12.2	12.2	12.2
Disagree	153	34.5	34.5	46.7
Neutral	144	32.5	32.5	79.2
Agree	66	14.9	14.9	94.1
Strongly Agree	26	5.9	5.9	100.0
Total	443	100.0	100.0	

Security2

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	55	12.4	12.4	12.4
Disagree	146	33.0	33.0	45.4
Neutral	139	31.4	31.4	76.7
Agree	69	15.6	15.6	92.3
Strongly Agree	34	7.7	7.7	100.0
Total	443	100.0	100.0	

Security3

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	65	14.7	14.7	14.7
Disagree	131	29.6	29.6	44.2
Neutral	177	40.0	40.0	84.2
Agree	52	11.7	11.7	95.9
Strongly Agree	18	4.1	4.1	100.0
Total	443	100.0	100.0	

Security4

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	81	18.3	18.3	18.3
Disagree	112	25.3	25.3	43.6
Neutral	159	35.9	35.9	79.5
Agree	73	16.5	16.5	95.9
Strongly Agree	18	4.1	4.1	100.0
Total	443	100.0	100.0	

Security5

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	51	11.5	11.5	11.5
Disagree	77	17.4	17.4	28.9
Neutral	149	33.6	33.6	62.5
Agree	119	26.9	26.9	89.4
Strongly Agree	47	10.6	10.6	100.0
Total	443	100.0	100.0	

Performance Risk

Frequencies

Statistics

		Performance1	Performance2	Performance3	Performance4	Performance5
N	Valid	443	443	443	443	443
	Missing	0	0	0	0	0
Mean		2.9187	2.6005	2.3792	2.4515	2.4582
Std. Deviation		1.14461	.91032	1.01381	.96512	.97477
Variance		1.310	.829	1.028	.931	.950
Percentiles	25	2.0000	2.0000	2.0000	2.0000	2.0000
	50	3.0000	3.0000	2.0000	2.0000	2.0000
	75	4.0000	3.0000	3.0000	3.0000	3.0000

Frequency Table

Performance1

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	53	12.0	12.0	12.0
Disagree	106	23.9	23.9	35.9
Neutral	152	34.3	34.3	70.2
Agree	88	19.9	19.9	90.1
Strongly Agree	44	9.9	9.9	100.0
Total	443	100.0	100.0	

Performance2

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	49	11.1	11.1	11.1
Disagree	149	33.6	33.6	44.7
Neutral	186	42.0	42.0	86.7
Agree	48	10.8	10.8	97.5
Strongly Agree	11	2.5	2.5	100.0
Total	443	100.0	100.0	

Performance3

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	88	19.9	19.9	19.9
Disagree	170	38.4	38.4	58.2
Neutral	130	29.3	29.3	87.6
Agree	39	8.8	8.8	96.4
Strongly Agree	16	3.6	3.6	100.0
Total	443	100.0	100.0	

Performance4

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	71	16.0	16.0	16.0
Disagree	168	37.9	37.9	54.0
Neutral	150	33.9	33.9	87.8
Agree	41	9.3	9.3	97.1
Strongly Agree	13	2.9	2.9	100.0

Online Banking In Malaysia From Consumer Perception On Risk

Total	443	100.0	100.0
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Performance5

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	73	16.5	16.5	16.5
Disagree	163	36.8	36.8	53.3
Neutral	151	34.1	34.1	87.4
Agree	43	9.7	9.7	97.1
Strongly Agree	13	2.9	2.9	100.0
Total	443	100.0	100.0	

Social Risk

Frequencies

Statistics

		Social1	Social2	Social3	Social4	Social5
N	Valid	443	443	443	443	443
	Missing	0	0	0	0	0
Mean		2.6930	2.7223	2.5598	2.5305	2.6140
Std. Deviation		1.09322	1.01443	.86559	.97751	.89619
Variance		1.195	1.029	.749	.956	.803
Percentiles						
25		2.0000	2.0000	2.0000	2.0000	2.0000
50		3.0000	3.0000	3.0000	3.0000	3.0000
75		3.0000	3.0000	3.0000	3.0000	3.0000

Frequency Table

Social1

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	60	13.5	13.5	13.5
Disagree	142	32.1	32.1	45.6
Neutral	146	33.0	33.0	78.6
Agree	64	14.4	14.4	93.0
Strongly Agree	31	7.0	7.0	100.0
Total	443	100.0	100.0	

Social2

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	47	10.6	10.6	10.6
Disagree	135	30.5	30.5	41.1
Neutral	185	41.8	41.8	82.8
Agree	46	10.4	10.4	93.2
Strongly Agree	30	6.8	6.8	100.0
Total	443	100.0	100.0	

Social3

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	42	9.5	9.5	9.5
Disagree	171	38.6	38.6	48.1
Neutral	179	40.4	40.4	88.5
Agree	42	9.5	9.5	98.0
Strongly Agree	9	2.0	2.0	100.0
Total	443	100.0	100.0	

Social4

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	67	15.1	15.1	15.1
Disagree	146	33.0	33.0	48.1
Neutral	175	39.5	39.5	87.6
Agree	38	8.6	8.6	96.2
Strongly Agree	17	3.8	3.8	100.0
Total	443	100.0	100.0	

Social5

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	47	10.6	10.6	10.6
Disagree	142	32.1	32.1	42.7
Neutral	202	45.6	45.6	88.3
Agree	39	8.8	8.8	97.1
Strongly Agree	13	2.9	2.9	100.0

Total	443	100.0	100.0
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Consumers' Behavioral Intention to Use Online Banking

Frequencies

		Statistics				
		Behavior1	Behavior2	Behavior3	Behavior4	Behavior5
N	Valid	443	443	443	443	443
	Missing	0	0	0	0	0
Mean		3.6388	3.5350	3.6659	3.6953	3.5914
Std. Deviation		.88247	.87990	.84628	.84535	.83347
Variance		.779	.774	.716	.715	.695
Percentiles						
	25	3.0000	3.0000	3.0000	3.0000	3.0000
	50	4.0000	4.0000	4.0000	4.0000	4.0000
	75	4.0000	4.0000	4.0000	4.0000	4.0000

Frequency Table

		Behavior1			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	1.4	1.4	1.4
	Disagree	32	7.2	7.2	8.6
	Neutral	149	33.6	33.6	42.2
	Agree	185	41.8	41.8	84.0
	Strongly Agree	71	16.0	16.0	100.0
	Total	443	100.0	100.0	

		Behavior2			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	2.0	2.0	2.0
	Disagree	31	7.0	7.0	9.0
	Neutral	175	39.5	39.5	48.5
	Agree	170	38.4	38.4	86.9
	Strongly Agree	58	13.1	13.1	100.0
	Total	443	100.0	100.0	

Behavior3

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	3	.7	.7	.7
Disagree	32	7.2	7.2	7.9
Neutral	143	32.3	32.3	40.2
Agree	197	44.5	44.5	84.7
Strongly Agree	68	15.3	15.3	100.0
Total	443	100.0	100.0	

Behavior4

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	5	1.1	1.1	1.1
Disagree	22	5.0	5.0	6.1
Neutral	150	33.9	33.9	40.0
Agree	192	43.3	43.3	83.3
Strongly Agree	74	16.7	16.7	100.0
Total	443	100.0	100.0	

Behavior5

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	5	1.1	1.1	1.1
Disagree	26	5.9	5.9	7.0
Neutral	173	39.1	39.1	46.0
Agree	180	40.6	40.6	86.7
Strongly Agree	59	13.3	13.3	100.0
Total	443	100.0	100.0	

APPENDIX F: Scale Measurement – Reliability Analysis

Reliability – Financial risk

Case Processing Summary

		N	%
Cases	Valid	443	100.0
	Excluded ^a	0	.0
	Total	443	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.838	.839	4

Inter-Item Correlation Matrix

	Financial1	Financial2	Financial3	Financial4
Financial1	1.000	.709	.584	.514
Financial2	.709	1.000	.573	.488
Financial3	.584	.573	1.000	.525
Financial4	.514	.488	.525	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Financial1	8.0316	7.266	.736	.565	.764
Financial2	7.9729	7.058	.716	.548	.776
Financial3	7.9323	8.520	.663	.441	.800
Financial4	7.9052	8.946	.585	.351	.830

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
10.6140	13.405	3.66128	4

Reliability – Time risk

Case Processing Summary

		N	%
Cases	Valid	443	100.0
	Excluded ^a	0	.0
	Total	443	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.839	.839	5

Inter-Item Correlation Matrix

	Time1	Time2	Time3	Time4	Time5
Time1	1.000	.608	.352	.497	.544
Time2	.608	1.000	.362	.662	.631
Time3	.352	.362	1.000	.371	.425
Time4	.497	.662	.371	1.000	.649
Time5	.544	.631	.425	.649	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Time 1	9.9774	9.918	.627	.422	.811
Time2	10.0880	9.248	.728	.570	.782
Time3	9.9074	10.885	.451	.211	.856
Time4	10.0542	9.472	.695	.532	.792
Time5	10.0045	9.570	.722	.535	.785

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
12.5079	14.748	3.84034	5

Reliability – Security risk

Case Processing Summary

		N	%
Cases	Valid	443	100.0
	Excluded ^a	0	.0
	Total	443	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.869	.873	5

Inter-Item Correlation Matrix

	Security1	Security2	Security3	Security4	Security5
Security1	1.000	.742	.709	.660	.356
Security2	.742	1.000	.742	.685	.395
Security3	.709	.742	1.000	.733	.315
Security4	.660	.685	.733	1.000	.449
Security5	.356	.395	.315	.449	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Security1	11.0451	12.478	.752	.620	.828
Security2	10.9910	11.959	.789	.666	.817
Security3	11.1129	12.707	.765	.672	.826
Security4	11.0948	12.158	.777	.625	.821
Security5	10.6456	14.161	.429	.226	.908

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
13.7223	19.206	4.38241	5

Reliability – Performance risk

Case Processing Summary

		N	%
Cases	Valid	443	100.0
	Excluded ^a	0	.0
	Total	443	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.818	.828	5

Inter-Item Correlation Matrix

	Performance1	Performance2	Performance3	Performance4	Performance5
Performance1	1.000	.383	.255	.304	.244
Performance2	.383	1.000	.574	.543	.515
Performance3	.255	.574	1.000	.708	.675
Performance4	.304	.543	.708	1.000	.701
Performance5	.244	.515	.675	.701	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Performance1	9.8894	10.705	.348	.161	.868
Performance2	10.2077	10.065	.645	.422	.774
Performance3	10.4289	9.223	.710	.595	.752
Performance4	10.3567	9.361	.733	.608	.747
Performance5	10.3499	9.558	.682	.562	.762

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
12.8081	14.621	3.82380	5

Reliability – Social risk

Case Processing Summary

		N	%
Cases	Valid	443	100.0
	Excluded ^a	0	.0
	Total	443	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.810	.813	5

Inter-Item Correlation Matrix

	Social1	Social2	Social3	Social4	Social5
Social1	1.000	.531	.469	.428	.454
Social2	.531	1.000	.435	.430	.352
Social3	.469	.435	1.000	.493	.594
Social4	.428	.430	.493	1.000	.472
Social5	.454	.352	.594	.472	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Social1	10.4266	8.376	.611	.390	.770
Social2	10.3973	8.978	.565	.351	.783
Social3	10.5598	9.283	.646	.452	.761
Social4	10.5892	9.057	.583	.347	.777
Social5	10.5056	9.359	.598	.418	.774

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
13.1196	13.440	3.66612	5

Reliability – Consumers’ Behavioral Intention to Use Online Banking

Case Processing Summary

		N	%
Cases	Valid	443	100.0
	Excluded ^a	0	.0
	Total	443	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.922	.923	5

Inter-Item Correlation Matrix

	Behavior1	Behavior2	Behavior3	Behavior4	Behavior5
Behavior1	1.000	.727	.698	.656	.642
Behavior2	.727	1.000	.733	.700	.678
Behavior3	.698	.733	1.000	.816	.695
Behavior4	.656	.700	.816	1.000	.703
Behavior5	.642	.678	.695	.703	1.000

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Behavior1	14.4876	9.164	.766	.603	.911
Behavior2	14.5914	9.007	.806	.656	.903
Behavior3	14.4605	9.041	.841	.736	.896
Behavior4	14.4312	9.146	.817	.711	.901
Behavior5	14.5350	9.435	.763	.586	.912

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
18.1264	14.038	3.74677	5

APPENDIX G: Pearson Correlation Analysis

Relationships between Financial Risk and Consumers' Behavioral Intention to Use Online Banking

Descriptive Statistics

	Mean	Std. Deviation	N
Financial_risk	2.6535	.91532	443
Behavioral_intention	3.6253	.74935	443

Correlations

		Financial_risk	Behavioral_intention
Financial_risk	Pearson Correlation	1	-.605**
	Sig. (2-tailed)		.000
	N	443	443
Behavioral_intention	Pearson Correlation	-.605**	1
	Sig. (2-tailed)	.000	
	N	443	443

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

Relationships between Time Risk and Consumers' Behavioral Intention to Use Online Banking

Descriptive Statistics

	Mean	Std. Deviation	N
Time_risk	2.5016	.76807	443
Behavioral_intention	3.6253	.74935	443

Correlations

		Time_risk	Behavioral_intention
Time_risk	Pearson Correlation	1	-.681**
	Sig. (2-tailed)		.000
	N	443	443
Behavioral_intention	Pearson Correlation	-.681**	1
	Sig. (2-tailed)	.000	
	N	443	443

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

Relationships between Security Risk and Consumers' Behavioral Intention to Use Online Banking

Descriptive Statistics

	Mean	Std. Deviation	N
Security_risk	2.7445	.87648	443
Behavioral_intention	3.6253	.74935	443

Correlations

		Security_risk	Behavioral_intention
Security_risk	Pearson Correlation	1	-.554**
	Sig. (2-tailed)		.000
	N	443	443
Behavioral_intention	Pearson Correlation	-.554**	1
	Sig. (2-tailed)	.000	
	N	443	443

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

Relationships between Performance Risk and Consumers' Behavioral Intention to Use Online Banking

Descriptive Statistics

	Mean	Std. Deviation	N
Performance_risk	2.5616	.76476	443
Behavioral_intention	3.6253	.74935	443

Correlations

		Performance_risk	Behavioral_intention
Performance_risk	Pearson Correlation	1	-.645**
	Sig. (2-tailed)		.000
	N	443	443
Behavioral_intention	Pearson Correlation	-.645**	1
	Sig. (2-tailed)	.000	
	N	443	443

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

Relationships between Social Risk and Consumers' Behavioral Intention to Use Online Banking

Descriptive Statistics

	Mean	Std. Deviation	N
Social_risk	2.6239	.73322	443
Behavioral_intention	3.6253	.74935	443

Correlations

		Social_risk	Behavioral_intention
Social_risk	Pearson Correlation	1	-.653**
	Sig. (2-tailed)		.000
	N	443	443
Behavioral_intention	Pearson Correlation	-.653**	1
	Sig. (2-tailed)	.000	
	N	443	443

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

APPENDIX H: Simple Linear Regression Analysis

Relationships between Financial Risk and Consumers' Behavioral Intention to Use Online Banking

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	Financial_risk ^b		.Enter

a. Dependent Variable: Behavioral_intention

b. All requested variables entered.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.605 ^a	.366	.365	.59723

a. Predictors: (Constant), Financial_risk

b. Dependent Variable: Behavioral_intention

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	90.899	1	90.899	254.844	.000 ^b
	Residual	157.298	441	.357		
	Total	248.197	442			

a. Dependent Variable: Behavioral_intention

b. Predictors: (Constant), Financial_risk

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.940	.087		56.713	.000
	Financial_risk	-.495	.031	-.605	-15.964	.000

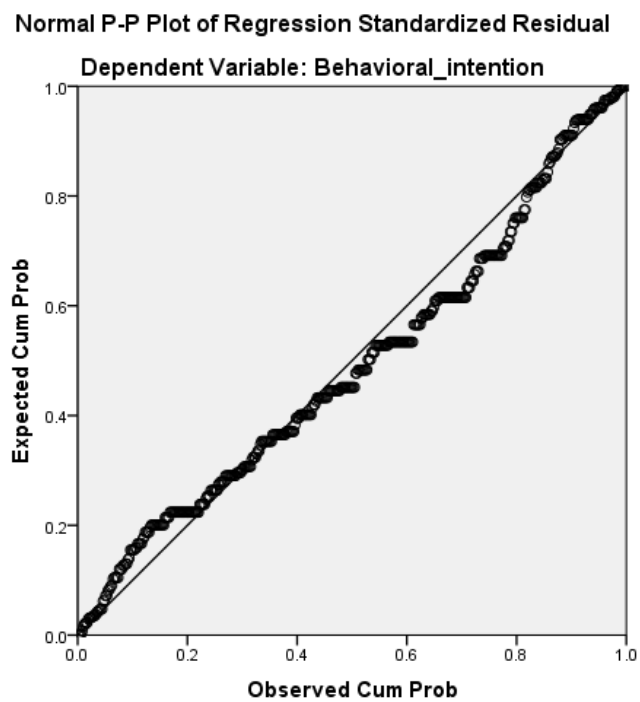
a. Dependent Variable: Behavioral_intention

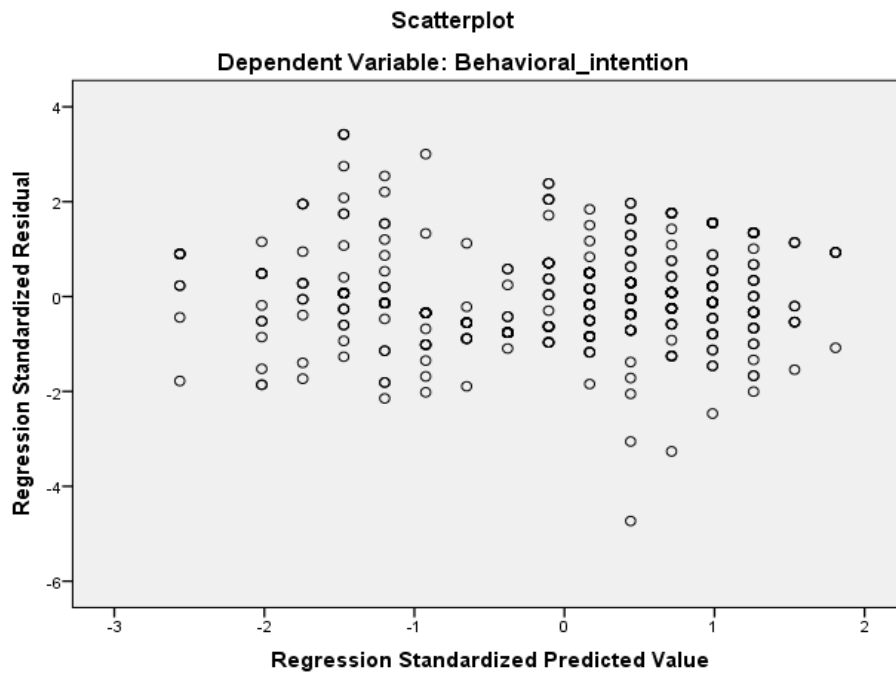
Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.4627	4.4445	3.6253	.45349	443
Residual	-2.82519	2.04183	.00000	.59655	443
Std. Predicted Value	-2.564	1.806	.000	1.000	443
Std. Residual	-4.730	3.419	.000	.999	443

a. Dependent Variable: Behavioral_intention

Charts





Relationships between Time Risk and Consumers' Behavioral Intention to Use Online Banking

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	Time_risk ^b		.Enter

a. Dependent Variable: Behavioral_intention

b. All requested variables entered.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.681 ^a	.464	.462	.54943

a. Predictors: (Constant), Time_risk

b. Dependent Variable: Behavioral_intention

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	115.070	1	115.070	381.184	.000 ^b
Residual	133.127	441	.302		
Total	248.197	442			

a. Dependent Variable: Behavioral_intention

b. Predictors: (Constant), Time_risk

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	5.287	.089		59.386	.000
Time_risk	-.664	.034	-.681	-19.524	.000

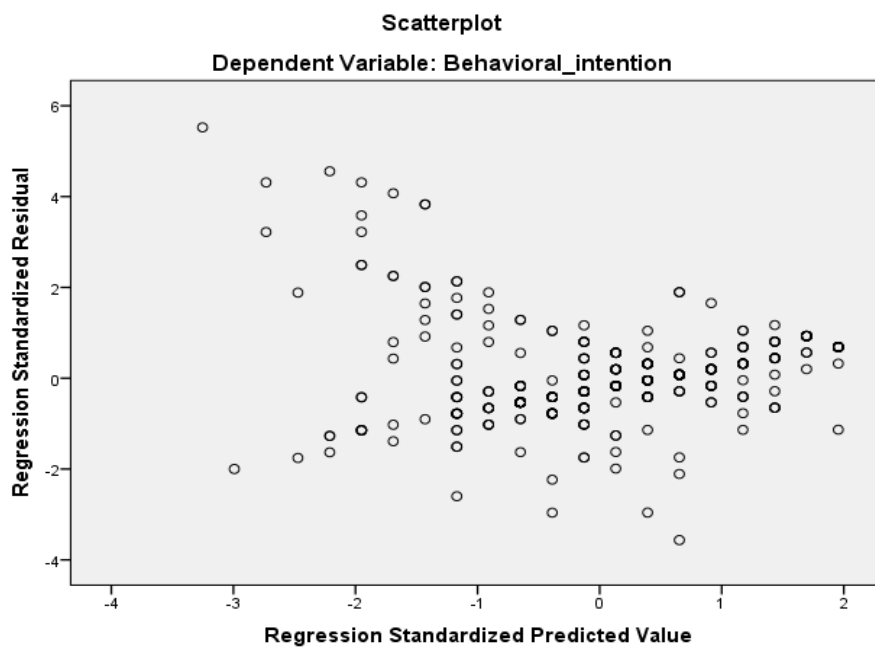
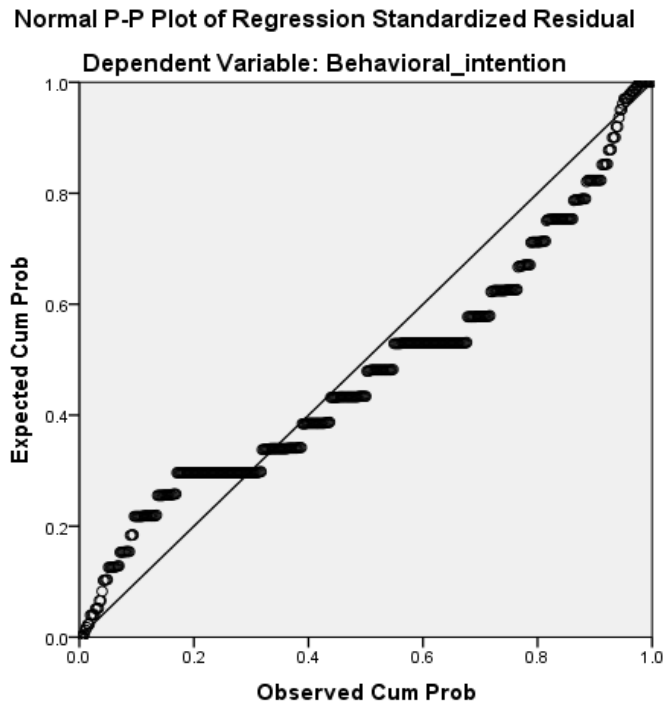
a. Dependent Variable: Behavioral_intention

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.9656	4.6228	3.6253	.51023	443
Residual	-1.95849	3.03444	.00000	.54881	443
Std. Predicted Value	-3.253	1.955	.000	1.000	443
Std. Residual	-3.565	5.523	.000	.999	443

a. Dependent Variable: Behavioral_intention

Charts



Relationships between Security Risk and Consumers' Behavioral Intention to Use Online Banking

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	Security_risk ^b		.Enter

- a. Dependent Variable: Behavioral_intention
 b. All requested variables entered.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.554 ^a	.307	.305	.62457

- a. Predictors: (Constant), Security_risk
 b. Dependent Variable: Behavioral_intention

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	76.166	1	76.166	195.251	.000 ^b
	Residual	172.031	441	.390		
	Total	248.197	442			

- a. Dependent Variable: Behavioral_intention
 b. Predictors: (Constant), Security_risk

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.925	.098		50.441	.000
	Security_risk	-.474	.034	-.554	-13.973	.000

- a. Dependent Variable: Behavioral_intention

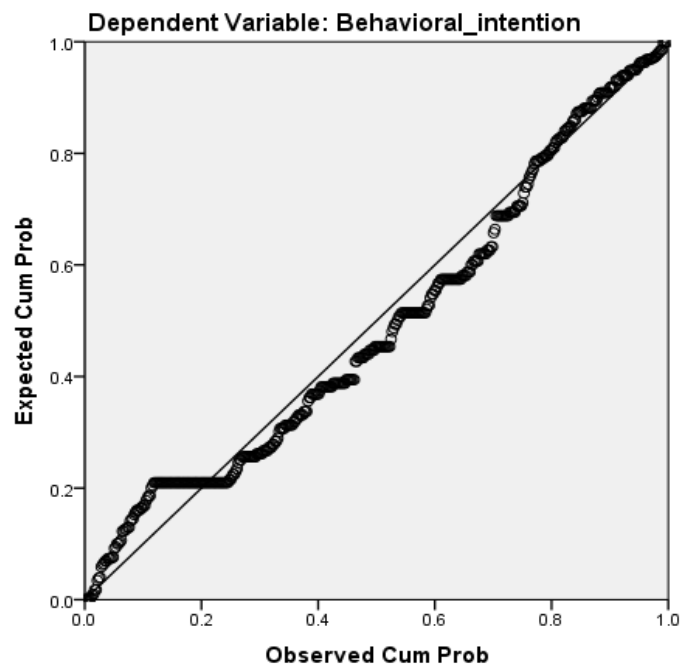
Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.5570	4.4515	3.6253	.41512	443
Residual	-2.00954	2.44297	.00000	.62387	443
Std. Predicted Value	-2.573	1.990	.000	1.000	443
Std. Residual	-3.217	3.911	.000	.999	443

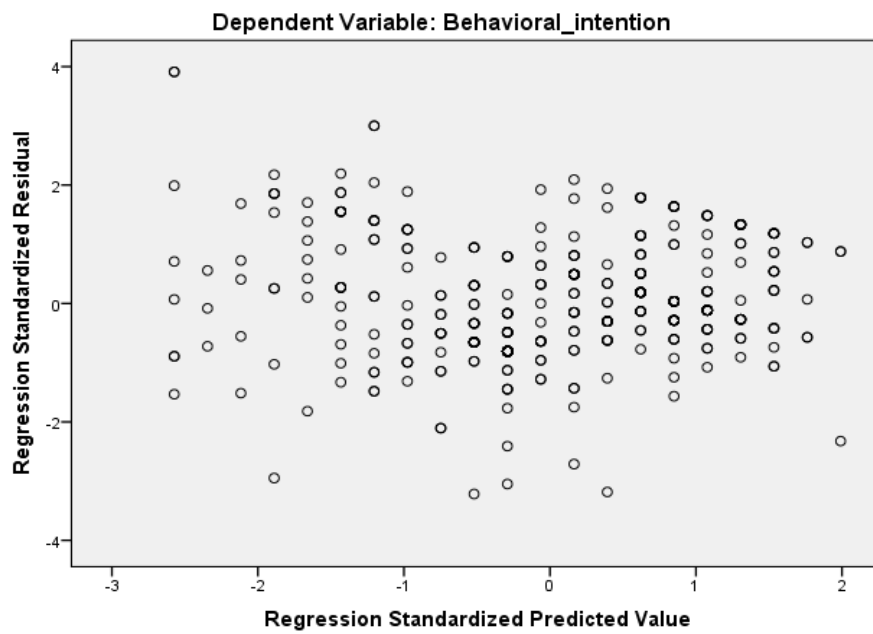
- a. Dependent Variable: Behavioral_intention

Charts

Normal P-P Plot of Regression Standardized Residual



Scatterplot



Relationships between Performance Risk and Consumers' Behavioral Intention to Use Online Banking

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	Performance_risk ^b		. Enter

a. Dependent Variable: Behavioral_intention

b. All requested variables entered.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.645 ^a	.417	.415	.57301

a. Predictors: (Constant), Performance_risk

b. Dependent Variable: Behavioral_intention

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	103.398	1	103.398	314.907	.000 ^b
	Residual	144.799	441	.328		
	Total	248.197	442			

a. Dependent Variable: Behavioral_intention

b. Predictors: (Constant), Performance_risk

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.245	.095		55.059	.000
	Performance_risk	-.632	.036	-.645	-17.746	.000

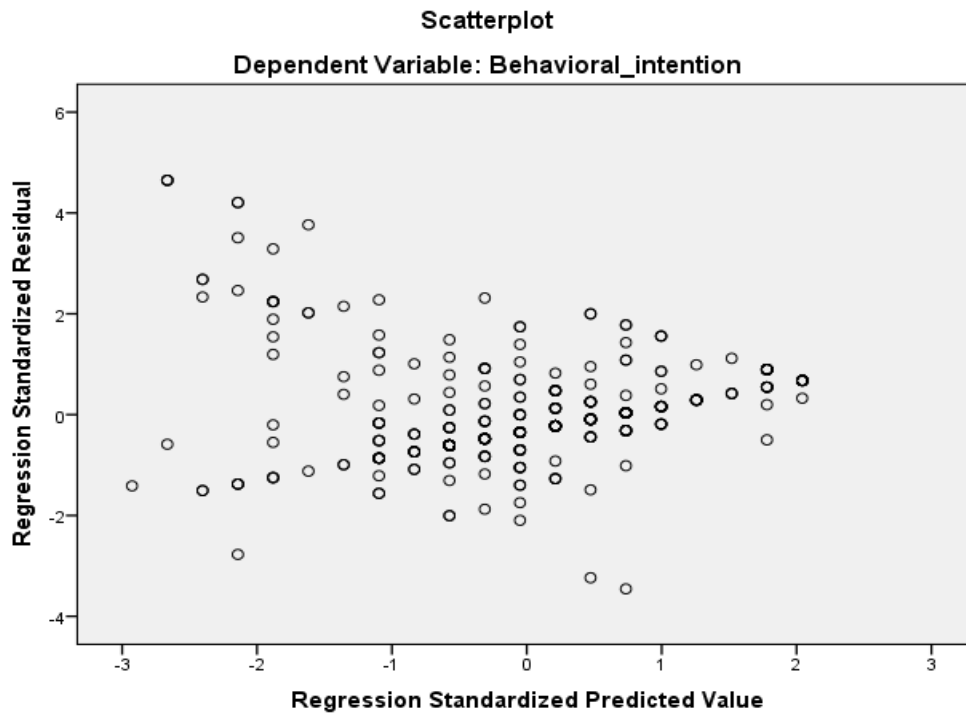
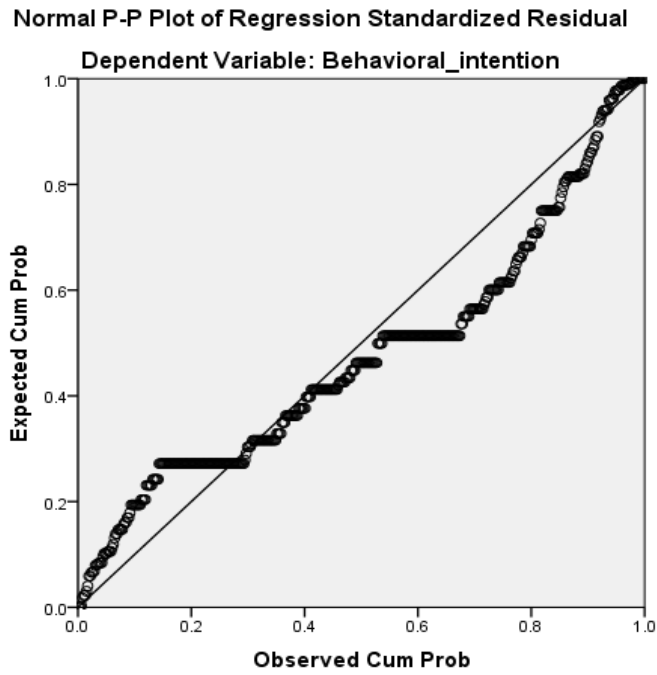
a. Dependent Variable: Behavioral_intention

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.2096	4.6129	3.6253	.48366	443
Residual	-1.98048	2.66386	.00000	.57236	443
Std. Predicted Value	-2.927	2.042	.000	1.000	443
Std. Residual	-3.456	4.649	.000	.999	443

a. Dependent Variable: Behavioral_intention

Charts



Relationships between Social Risk and Consumers' Behavioral Intention to Use Online Banking

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	Social_risk ^b		.Enter

- a. Dependent Variable: Behavioral_intention
- b. All requested variables entered.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.653 ^a	.427	.425	.56805

- a. Predictors: (Constant), Social_risk
- b. Dependent Variable: Behavioral_intention

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	105.892	1	105.892	328.160	.000 ^b
	Residual	142.304	441	.323		
	Total	248.197	442			

- a. Dependent Variable: Behavioral_intention
- b. Predictors: (Constant), Social_risk

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.377	.100		53.561	.000
	Social_risk	-.668	.037	-.653	-18.115	.000

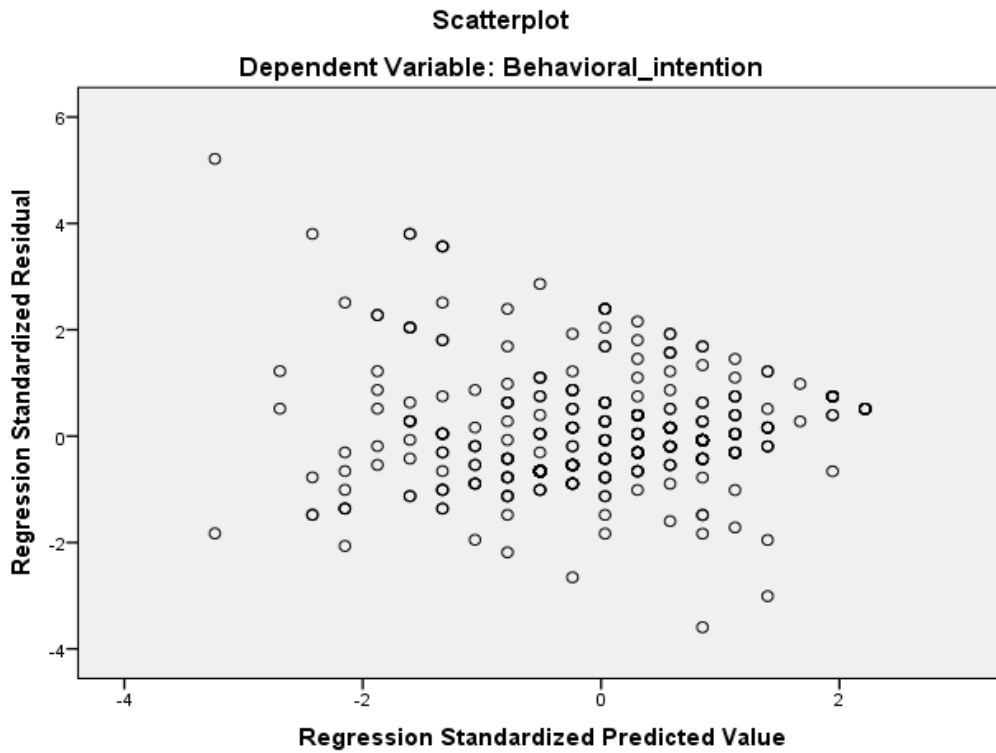
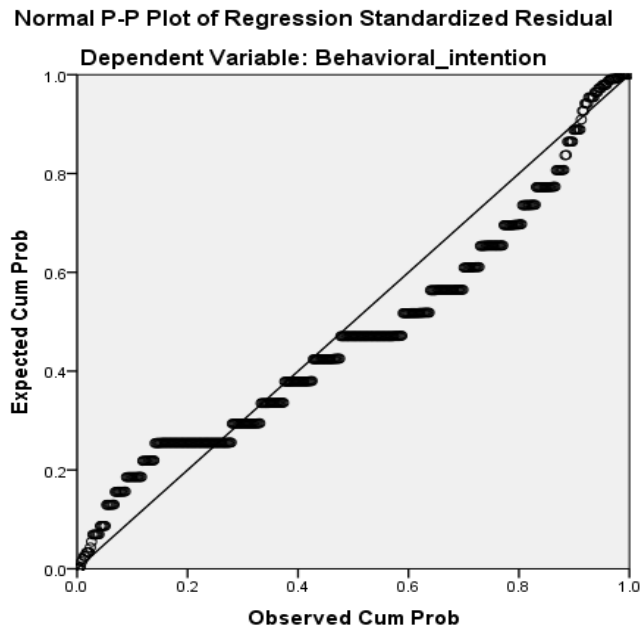
- a. Dependent Variable: Behavioral_intention

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.0391	4.7093	3.6253	.48946	443
Residual	-2.04179	2.96087	.00000	.56741	443
Std. Predicted Value	-3.241	2.215	.000	1.000	443
Std. Residual	-3.594	5.212	.000	.999	443

- a. Dependent Variable: Behavioral_intention

Charts



APPENDIX I: Multiple Regression Analysis

Relationships between 5 Independent Variables and Consumers' Behavioral Intention to Use Online Banking

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	Social_risk, Security_risk, Financial_risk, Time_risk, Performance_risk ^b		.Enter

a. Dependent Variable: Behavioral_intention

b. All requested variables entered.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.804 ^a	.646	.642	.44837

a. Predictors: (Constant), Social_risk, Security_risk, Financial_risk, Time_risk, Performance_risk

b. Dependent Variable: Behavioral_intention

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	160.346	5	32.069	159.522	.000 ^b
	Residual	87.851	437	.201		
	Total	248.197	442			

a. Dependent Variable: Behavioral_intention

b. Predictors: (Constant), Social_risk, Security_risk, Financial_risk, Time_risk, Performance_risk

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
Financial_risk	-.131	.034	-.160	-3.857	.000	.472	2.116
Time_risk	-.147	.057	-.151	-2.581	.010	.237	4.223
Security_risk	-.314	.026	-.368	-11.954	.000	.856	1.169
Performance_risk	-.147	.058	-.150	-2.520	.012	.228	4.382
Social_risk	-.228	.050	-.223	-4.595	.000	.342	2.921

a. Dependent Variable: Behavioral_intention

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.8465	5.1464	3.6253	.60231	443
Residual	-1.80357	2.06435	.00000	.44582	443
Std. Predicted Value	-2.953	2.525	.000	1.000	443
Std. Residual	-4.023	4.604	.000	.994	443

a. Dependent Variable: Behavioral_intention

Charts

