FACTORS INFLUENCING THE ADOPTION OF MOBILE BANKING AMONG GENERATION Y

ADILAH BINTI OTHMAN

UNIVERSITI UTARA MALAYSIA

2014

FACTORS INFLUENCING THE ADOPTION OF MOBILE BANKING AMONG GENERATION Y

BY:

ADILAH BINTI OTHMAN

(MATRIC: 813282)

Thesis Submitted to
Othman Yeop Abdullah Graduate School of Business,
Universiti Utara Malaysia
In Fulfillment of the Requirement for the Degree of Master Science Management

PERMISSION TO USE

In presenting this thesis in partial fulfillment of the requirements for a postgraduate degree from Universiti Utara Malaysia, I agree that the University Library makes a freely available for inspection. I further agree that permission for copying of this thesis in any manner, in whole or in part, for scholarly purpose may be granted by my supervisor or, in their absence by the Dean of Othman Yeop Abdullah Graduate School of Business. It is understood that any copying or publication or use of this thesis or parts thereof for financial gain shall not be given to me and to Universiti Utara Malaysia for any scholarly use which may be made of any material from my thesis.

Request for permission to copy or make other use of materials in this thesis, in whole or in part should be addressed to:

Dean of Othman Yeop Abdullah Graduate School of Business
Universiti Utara Malaysia
06010 UUM Sintok
Kedah Darul Aman

ABSTRAK

Tujuan utama kajian ini dilakukan adalah bagi mengkaji faktor yang paling mempengaruhi niat Generasi Y untuk menggunakan perkhidmatan perbankan telefon mudah alih. Kajian ini telah dilakukan di kalangan pelajar Universiti Utara Malaysia yang terdiri daripada pelajar ijazah, sarjana dan PhD. Di dalam kajian ini, pengkaji telah mengedar soalan sebanyak 400 kepada peserta, namun hanya 382 sahaja dipulangkan. Di antara elemen-elemen yang dikaji dalam kajian ini ialah Persepsi Kebergunaan, Persepsi kemudahgunaan, Kesedaran, Kepercayaan, Persepsi Nilai, dan juga Pengaruh sosial. Dapatan kajian menunjukkan bahawa terdapat hubungan yang positif di antara kesemua pembolehubah bebas dengan pembolehubah bersandar. Manakala, Pengaruh sosial mempunyai pengaruh yang penting di dalam penggunaan perbankan telefon mudah alih di kalangan Generasi Y.

ABSTRACT

The main purpose of this study is to examine what are the most significant factors that influence the intention to adopt Mobile Banking Services by Generation Y. This study was carried out among the respondents of the students at Universiti Utara Malaysia which includes three educational levels. In this study, a total of 400 questionnaire forms were distributed to respondents, but only 382 were returned. The variables that have been tested in this study were Perceived Usefulness, Perceive Ease of Use, Awareness, Trust, Perceived Value and Social Norms. The findings of the study revealed that all independent variables have a positive relationship with the dependent variable. Meanwhile, Social Norms have a positive influence towards Mobile Banking Adoption among Generation Y.

ACKNOWLEDGEMENT

First of all, Alhamdulillah, my praise to Allah who has blessed me with the inner strength, and commitment, strong will and determination to complete this project paper.

My deepest thankfulness to my supervisors, Haji Mohamad Zainol Abidin bin Adam, Senior Lecturer in Universiti Utara Malaysia for his guidance, patience, constructive suggestions, and support that he gave throughout this research. Working with him has certainly been an enjoyable and rewarding good experience for me.

My heartfelt thankfulness and love is also extended to my beloved husband and family who had given their full support and understanding during my period of study. To all my friends and classmate, thank you for the cooperation, comments, and provision given throughout this study.

Last but not least, my honest gratitude also directed to the respondents who sacrifice their most valuable time and energy to help me during data collection process. I am grateful and in debt for their cooperation and help.

May Allah S.W.T reward the kindness of everyone that I had mentioned.

ADILAH BINTI OTHMAN
MASTER OF SCIENCE (MANAGEMENT)
UNIVERSITI UTARA MALAYSIA

TABLE OF CONTENTS

CHAPTER 2: LITERATURE REVIEW

CHAPTER 3: METHODOLOGY

CHAPTER 4: FINDINGS

TABLE **PAGE**

LIST OF FIGURES

LIST OF ABBREVIATIONS

ATM	Automatic Teller Machine
CRM	Customer relationship management
DIT	Diffusion of Innovation Technology
Gen Y	Generation Y
PEOU	Perceived Ease of Use
PU	Perceived Usefulness
IS	Information System
UUM	Universiti Utara Malaysia
TAM	Technology Acceptance Model
TPB	Theory of Planned Behaviors
TRA	Theory of Reasoned Action
ETAM	Extended Technology Acceptance Models

1

INTRODUCTION

1.0 CHAPTER INTRODUCTION

This study explores the factors influencing mobile banking adoption among generation Y in Universiti Utara Malaysia. Specifically, it will discuss the influence of Perceived Usefulness, Perceived Ease of Use, Awareness, Trust, Perceived Value and Social Norms towards Mobile Banking Adoption. This chapter contains the following topics: Introduction to the Mobile Banking in Malaysia, Overview of Generation Y, Objectives of the Study, Importance of the Study, Problem Statements, Purpose of the Study, Research Questions, Theoretical Framework, Hypothesis, and Significance of the Study.

1.1 AN OVERVIEW OF MOBILE BANKING

Nowadays, rapid innovations in technology are changing the method we communicate with each other. Mobile phones have become a device for daily usage, which can create a chance for the improvement of banking services to reach customer through mobile banking services. In recent years, there has been continuous enlargement in banking channel to help facilitate banking transactions around the world. Firstly, we can see that when Bank introduce Automated Teller Machine (ATM). This ATM machine makes customers' life easier because customers can withdraw their money without the help of bank employees. Then, the internet banking was also introduced by financial institution and next, mobile banking also being introduced. The traditional banking system is already used for several years and it is the regular way of conducting banking operations in the worldwide (Luarn and Lin, 2005).

Additionally, mobile banking services can increase the access on banking transactions for busy lifestyles among Malaysians and also to customers especially in rural areas. Therefore, users can conduct their banking transaction without going to the bank or to the ATM machine. According to Amin (2007), Mobile Banking is systems used by customers to make transactions with banks through mobile phones. Mobile banking refers to banking transaction via mobile devices like cell phones, Personal Digital Assistant, smart phones and other gadgets except laptops (Lee and Chung, 2009).

Mobile Banking Services is a subset of Mobile commerce while Mobile commerce includes of Mobile banking, mobile information services, mobile marketing, mobile entertainment, and advertising, and mobile ticketing (Tiwari and Buse, 2007). If we compare with other method of commercial transaction, the mobile commerce has its own distinctive characteristics and benefits whereby mobile commerce is directly connected, localization, practical, works well, discretion, easy confirmation processes and contiguity (Tsalgatidou and Pitoura, 2001).

Mobile banking has become a common network of financial institutions to offer banking transactions to the users. In conducting transactions via mobile banking, customer can choose whether to use smart phone or using cellular Phone. Besides that, customers also can conduct mobile banking transactions via personal digital assistant (PDA) (Laukkanen, 2007)

Currently, many financial institutions apply business plan that involves e-business. The main purpose applying e-business because they want to compete in a competitive business environment. Mobile banking is a powerful CRM tool and new marketing methods that suitable to the financial institution (Sinisalo and Karjaluoto, 2007).

The opinion from Sinisalo and Karjaluoto (2007) is true because with the growth of the new technology, it is unavoidable for financial institutions to move towards offering mobile banking services to their customers. Traditional banking services and Mobile banking services are using similar way in their operation. The main difference between both services is when customers use mobile banking, customers can access to their account and information, making payments, and

reconciling statements by using their mobile phone instead of using paper to complete the transactions.

Among the benefits of using mobile banking is that it can give convenience to customers. Users can make transactions anytime and anywhere, 24 hours per day, and 365 days per year. Besides that, when customers perform banking activities at their convenience, they also can eliminate wasting time in parking, traffic jam, and petrol cost.

Table 1.1: ***Shows the banks that offer mobile banking as well as banks that offer internet banking***

Internet Banking	Mobile Banking
1. Affin Bank Berhad	1. Al Rajhi Banking & Investment Corporation (Malaysia) Berhad
2. Agrobank	2. AmBank (M) Berhad
3. Al Rajhi Banking & Investment Corporation (Malaysia) Berhad	3. Bank Islam Malaysia Berhad
4. Alliance Bank Malaysia Berhad	4. Bank Simpanan Nasional
5. AmBank (M) Berhad	5. CIMB Bank Berhad
6. AmIslamic Bank Berhad	6. Citibank Berhad
7. Bank Islam Malaysia Berhad	7. Hong Leong Bank Berhad
8. Bank Kerjasama Rakyat Malaysia	8. HSBC Bank Malaysia Berhad
9. Bank Muamalat Malaysia Berhad	9. Malayan Banking Berhad
10. Bank of America Malaysia Berhad	10. OCBC Bank (Malaysia) Berhad
11. Bank of Tokyo-Mitsubishi UFJ (Malaysia) Bhd	11. Public Bank Berhad
12. Bank Simpanan Nasional	12. RHB Bank Berhad
13. BNP Paribas Malaysia Berhad	13. Standard Chartered Bank Malaysia Berhad
14. CIMB Bank Berhad	
15. Citibank Berhad	
16. Deutsche Bank (Malaysia)	

Berhad

17. Hong Leong Bank Berhad
18. HSBC Amanah Malaysia Berhad
19. HSBC Bank Malaysia Berhad
20. Industrial and Commercial Bank of China (Malaysia) Berhad
21. J.P. Morgan Chase Bank Berhad
22. Kuwait Finance House (M) Berhad
23. Malayan Banking Berhad
24. OCBC Bank (Malaysia) Berhad
25. Public Bank Berhad
26. RHB Bank Berhad
27. RHB Islamic Bank Berhad
28. Standard Chartered Bank Malaysia Berhad
29. Sumitomo Mitsui Banking Corporation Malaysia Berhad
30. The Royal Bank of Scotland Berhad
31. United Overseas Bank (Malaysia) Berhad

Source: Bank Negara Malaysia

In this study, mobile banking services from Bank Islam and Commerce Investment Merchant Bank (CIMB) will be explained as an example. Bank Islam was the first financial institution that provides Mobile Banking Services to the customers In October 2010, Bank Islam offers mobile banking services entirely through Transact at palm or mobile banking TAP-I. Through this service, account holders can conduct their banking transactions anytime and anywhere without using internet access. To activate the TAP-I Mobile banking, customers must perform two procedures: first, customers are required to have a current or savings account with Bank Islam. Secondly, customers should attach a special chip provided by the bank to a mobile phone Sim card (subscriber identification module).

The CIMB bank also provides mobile banking to their customers. There are three types of mobile banking services provided by CIMB Banks which is CIMB Clicks Mobile App (for Java enabled phone), CIMB Clicks App and MyMobile. To use Mobile App, users must have an internet connection. Transactions available in the mobile app are: View account balances, View recent transactions (last 5 transactions), Fund Transfers, Foreign Telegraphic Transfers, online bill payment, Reload prepaid phone, View latest foreign exchange rates, create: view and cancel Schedule Transactions (ST), Place, withdraw or perform FD updates e-Fixed Deposit Account and view FD rates. For customers using iOS, BlackBerry Z10 or Q10 and Android operated phones, the users can use CIMB Clicks App. Through this application, users can View Account Balances, Fund Transfer, Prepaid Reload, Create Instant TAC, Pay Utilities Bill, eFixed Deposit, Currency Converter, Home Loan Calculator, CIMB Clicks (a shortcut to favourite financial portal) and provide CIMB ATM & Branch Locator that nearest to customers. Finally, customers can

choose to use a network that is being introduced by MyClear which is a mymobile application. Through this application, customers can perform banking transactions without internet and only use short code via SMS. Among the services through mymobile are Account Inquiry, Fund Transfer, Mobile to Mobile Fund Transfer, Bill Payment and Mobile Reload.

1.2 AN OVERVIEW OF GENERATION Y

The term of Baby Boomers, generation X, Y, and Z were used to refer to the demographic diversity in a certain age of the group. Generation Y can be described as people who are born after Generation X, thus, this group was born between the 1977 until 1994. This generation is also recognized the internet (or dot.com) generation, echo boomers, Millenials and Nexters. The Gen Y cohort is technology savvy, independent, self-reliant and entrepreneurial thinkers (Martin, 2005). Gen Y is often seen as the early adopters of new technologies and extensive users to the internet (Kumar and Lim, 2006). They were also born into an era of electronic, technological and wireless society where global boundaries have been blurred (Williams and Page, 2010)

According to Koenig-Lewis et al., (2010), Gen Y people are always exposed with the latest lifestyle, therefore it is very easy for them to adopt new technology such as mobile banking services. Among the characteristic of Gen Y is that mobile phones are always in their hand and download the latest game, song, video and so on while their ear are covered by earphone or headphone and listen to their favourite song. Additionally, Gen Y has grown up surrounded by laptops, tablets, smart phones, MP3, MP4 and other gadgets. They keep using the Internet and its

applications for, news, reviews, information, entertainment, social networking, communication, online shopping, or solving problems. In other words, they can be categorized as a well-connected generation. Most importantly, Gen Y loves new gadgets and cannot live without their own gadgets. More than 50 percent of the Gen Y owns a mobile phone and they usually use their mobile phones to make calls and send short message services (SMS) (Kumar and Lim, 2006). These characteristics reflect their attitude and consumption pattern which is different from their predecessors, which are Generation X and Baby Boomers.

According to Syrett and Lamminman (2004), there are five features that define the Gen Y and which is Intimacy, Loyalty, Awareness, Balance, and Risk. Intimacy is the ability to establish and sustain close relationships over the internet. Loyalty can be described as their own closely-guarded personal networks and, less consistently or reliably, to brands and employers. Meanwhile, Awareness is the social issues inside and outside work, of the need for transparency and honesty. Next, Balance is the interface between work and personal life, millennial are also willing to embrace 24/7 lifestyles. Last but not least, Risk is their openness to frequent change and their willingness to be open, flexible and mobile. The generation Y also likes to find information quickly and they are easy to communicate with people (Erickson, 2008).

1.3 OBJECTIVES OF THE STUDY

1.3.1 Main objective

The main objective of this study is to determine factors that influence the adoption of mobile banking among generation Y.

1.3.2 Specific Objectives

The specific objectives of this study are as follows:

1) To examine whether there is a significant difference between Mobile Banking Adoption and Genders among Generation Y.

2) To examine whether there is a significant difference between Mobile Banking Adoption and demographic variables such as Age, Ethnic Groups, Religion, and Level of Education among Generation Y.

3) To determine the relationship between the independent variable (Perceived Usefulness, Perceived Ease of Use, Trust, Awareness, Social Norms, and Perceived Value) on Mobile Banking Adoption among Generation Y.

4) To determine the influence of Perceived Usefulness, Perceived Ease of Use, Trust, Awareness, Social Norms, and Perceived Value towards Mobile Banking Adoption among Generation Y.

1.4 RESEARCH QUESTIONS

The following research questions are necessary to be answered in this study:

1) Is there any significant difference of Mobile Banking Adoption between Genders among Generation Y?

2) Is there any significant difference of Mobile Banking Adoption between Age, Ethnic Groups, Religion, and Level of Education among Generation Y?

3) Is there any relationship between Perceived Usefulness, Perceived Ease of Use, Trust, Awareness, Social Norms, and Perceived Value towards Mobile Banking Adoption among Generation Y?

4) Is there any significant influence between Perceived Usefulness, Perceived Ease of Use, Trust, Awareness, Social Norms, and Perceived Value with Mobile Banking Adoption among Generation Y?

1.5 IMPORTANCE OF THE STUDY

Mobile Banking services provide a lot of benefits in banking transaction. However, Generation Y does not want to use it due to various causes. This research is conducted to recognize the important elements of mobile banking adoption among Generation Y. Therefore, from the findings of this research, it is hoped that banking institutions can develop methods, procedures and actions that will support Generation Y to adopt mobile banking services.

1.6 PROBLEM STATEMENTS

Mobile Banking has a lot of advantages such as increasing the access on banking transactions for busy lifestyles among Malaysians and also to customers, especially in rural areas can connect with financial institutions through a mobile device.

According to the survey of mobile subscribers from the Malaysian Communications and Multimedia Commissions in 2012, the numbers of subscribers among Malaysians has reached 86.3 percent. Meanwhile, the percentages of numbers of subscribers among Non-Malaysian that lived in Malaysia has reached 13.7 percent and are expected to increase in future.

With the advent of mobile banking, we can conduct our banking transactions anywhere and anytime with the minimal costs because we eliminate the costs of oil of vehicles and parking ticket. Furthermore, we also can save our valuable time

because we are not facing with any traffic jam and no need to queue up and wait at the bank, because all transactions are at our fingertips. Mobile banking services, whether internet based or SMS based, guaranteed to allow the Customers to access banking transaction more quickly and easily anywhere at any time (Laukkanen, 2007).

In this study, age cohort investigation can help recognize the intentions to use mobile banking services of mobile users and improve the capability to estimate target market potential. As we know, Generation Y was cohort group that always uses the latest technology facilities. According to Morris and Venkatesh (2000) technology-based services tend to affect numerous cohort groups differently and the adoption of technology based services may differ by age cohort. In addition, the study from Morris and Venkatesh (2000) also found that age was significant influences in adoption of information technology (IT).

In Malaysia, there are many studies about mobile banking adoption was conducted, But Researchers do not focus on mobile banking adoption among generation Y. Therefore, this study was conducted to examine the factors that influencing the mobile banking adoption among generation Y in UUM.

1.7 PURPOSE OF THE STUDY

This study aims to explore the factors influencing adoption of mobile banking among Generation Y in Universiti Utara Malaysia. Meanwhile, the theory of TAM has been chosen by the researcher as the theoretical basis of study.

1.8 THE VARIABLES OF THE STUDY

A variable is anything that can take on differing or changing values. The values can vary at numerous times for the same object or people, or at the same time for dissimilar objects or people (Sekaran and Bougie, 2013). In research, there are two types of variables known as an Independent and dependent variables. Dependent and independent variables are correlated to each other (Zikmund et al., 2012).

1.8.1 Dependent Variable

Dependent variables also recognized as the criterion variable. The researcher's objective is to comprehend and define the dependent variable, or to clarify its variability, or predict it. In other words, it is the main variable that lends itself for investigation as a viable factor). Through the analysis of the dependent variable (finding what variables influence it), it is possible to find solutions to the problem. (Sekaran and Bougie, 2013). In any research, there can be one dependent variable (Zikmund et al., 2012). The dependent variable for this research is Mobile Banking Adoption.

1.8.2 Independent Variables

Independent Variables also recognized as the predictor variable. In any valid research, must have more than one independent variable (Zikmund et al., 2012). Specifically, when the independent variable is present, the dependent variable is also present, and with each unit of increase in the independent variable, there is an increase or decrease in the dependent variable also (Sekaran and Bougie, 2013). In this study the Independent variables are Perceived Usefulness, Perceived Ease of Use, Awareness, Trust, Perceived Value and Social Norms.

1.9 THEORETICAL FRAMEWORK

The theoretical framework of this study is shown in Figure 1.1 below:

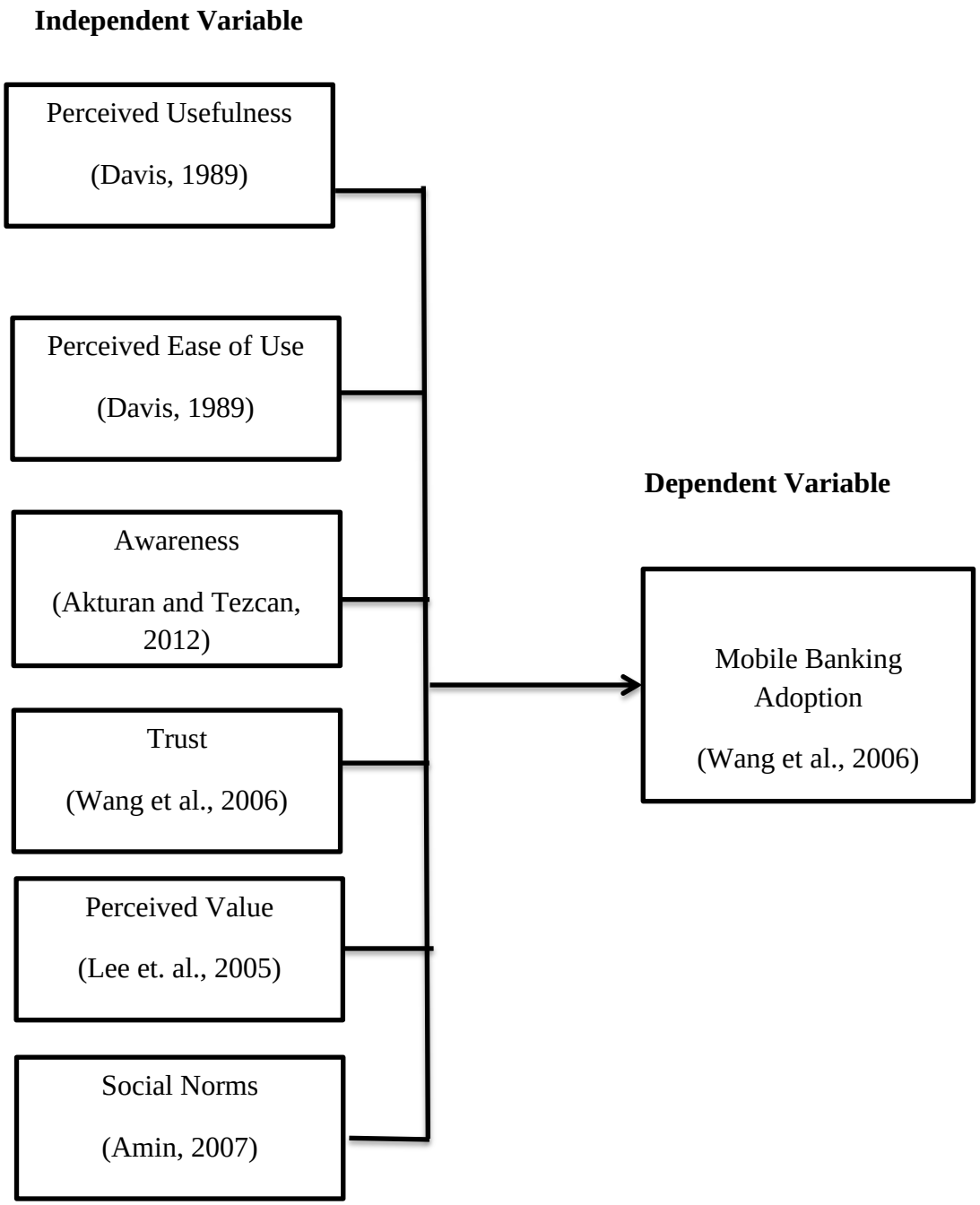


Figure 1.1: ***Theoretical Framework of the study***

1.10 HYPOTHESIS OF THE STUDY

A hypothesis refers to tentative, yet testable, statement, which predicts what researchers anticipate to discover in empirical data. In this manner, a hypothesis can be defined as logical conjectured relationships between two or more variables expressed in the form of testable statements (Zikmund et al., 2012). Based on the literatures, it can be hypothesized that Perceived Usefulness, Ease of Use, Awareness, Trust, Perceived Value and Social Norms have a direct effect on Mobile Banking Adoption of Generation Y.

Thus, in this study, the following hypotheses are being proposed:

Hypothesis 1

There is a significant difference of Mobile Banking Adoption between Genders among Generation Y.

Hypothesis 2

There is a significant difference of Mobile Banking Adoption between Age (2a), Ethnic group (2b), Religion (2c), and Level of education (2d) among Generation Y.

Hypothesis 3

There is a significant relationship between Perceived Usefulness (3a), Perceived Ease of Use (3b), Awareness (3c), Trust (3d), Social Norms (3e) and Perceived Value (3f) Mobile Banking Adoption among Generation Y.

Hypothesis 4

There is a significant influence between Perceived Usefulness, Perceived Ease of Use, Awareness, Trust, Perceived Value and Social Norms on Mobile Banking Adoption among Generation Y.

1.11 SIGNIFICANCE OF THE STUDY

As a result, the aim of this research to observe the essential elements that influences the usage of Mobile banking among the Generation Y Universiti Utara Malaysia. On the other hand, in this study, it is hoped that the findings can provide understanding about the acceptance of mobile banking and can provide important information on the assessed factors by Generation Y in using mobile banking. Apart from that, the result of study also can be used as a basic of upgrading bank strategies to attract Generation Y in using mobile banking in the future. The research is based on statistical data and evidence from previous research to support the results.

2

LITERATURE REVIEW

2.0 CHAPTER INTRODUCTION

This section discusses the factors influencing mobile banking adoption, which are perceived Usefulness, Perceived Ease of Use, Awareness, Trust, Perceived Value, and Social Norms

2.1 ADOPTION

Before customers adopt a new services or products, they will pass through a process of knowledge, persuasion, decision, implementation and confirmation, (Rogers and Shoemaker, 1971). In other words, adoption is the individual acceptance to consume a new product or service.

Among earlier researchers that studied the adoption process is Everett Rogers. Rogers (1962) explained the adoption process through his book entitled Diffusion of Innovations that was published in 1962. Through a survey, he found that each individual goes through five phases: knowledge, persuasion, decision, implementation and confirmation before deciding whether to accept or reject an innovation.

This study will focus on Mobile Banking Adoption among Generation Y. According to Rogers (1962), there are five categories of adopters which are innovators, early adopters, early majority, late majority, and laggards. Therefore, as we know Generation Y is the generation that adores new technologies. Hence we can categorize them as part of the early adopters.

Among the studies that examine mobile banking adoption are from Alsaab (2009) who investigated the adoption of SMS banking among customers in Saudi Arabia. In his research, Alsaab (2009) using TAM, ETAM and DIT as a base model. The factors that he takes into account in his study were Perceived Usefulness. Perceived Ease of Use, Perceived credibility, Compatibility, and Observability. As a result, he's found that there are positive connections between all these factors.

The study by Alsaab (2009) is consistent with Zainol (2011) whereby the researcher found that Perceived Usefulness. Perceived Ease of Use, Perceived credibility, Compatibility, and Self-efficacy had significant relationships with Mobile Banking Adoption.

2.2 TECHNOLOGY ACCEPTANCE MODEL (TAM)

Based on previous studies, this study will use one of the most common models used by other researchers in the study related to technology adoption. This model is the Technology Acceptance Model (TAM) that was proposed by Davis (1989). Technology Acceptance Model (TAM) was created based on prior work which is the Theory of reasoned Action (TRA) proposed by Fishbein and Ajzen (1975) and Theory of Planned Behaviors (TPB) by Taylor and Todd (1985). Fred Davis proposed TAM model at the MIT Sloan School of Management in Cambridge, Massachusetts, USA in his doctoral thesis. Meanwhile, the two key fundamental elements of Technology Acceptance Model are perceived usefulness (PU) and perceived ease of use (PEOU). Perceived usefulness and perceived ease of use are found to be two important factors that influenced the used of information system.

Davis (1985) recommended that user's motivation can be described using three aspects which are perceived usefulness (PU) perceived ease of use (PEOU), and attitude to using the system (ATT). Davis (1985) proposed that system use is a response that can be described or forecast by motivation from the user, which in turn, is directly influenced by an external stimulus consisting of the actual system's features and capabilities. He also assumed that the attitude of a user towards a system was a most important element, whether the user will reject or accept the system. The attitude of the user, in turn, was influenced by two main principles which are perceived usefulness (PU) and perceived ease of use (PEOU). Perceived ease of use (PEOU) had a straight effect on perceived usefulness (PU). In other words, The

Technology Acceptance Model proposed that the attitudes of any consumers predict intentions and intentions predict behavior.

The technology acceptance model (TAM) was used as the basic model in order to develop the modified version of TAM to better reflect on Mobile Banking Adoption. In the modified model, the influenced of Awareness, Trust, Perceived Value and Social Norms on Mobile Banking Services are added.

In this study, the researcher expands the basic model by including additional predictor variable that is significant to the study of mobile banking adoption among generation Y. The TAM model is shown in Figure 2.1

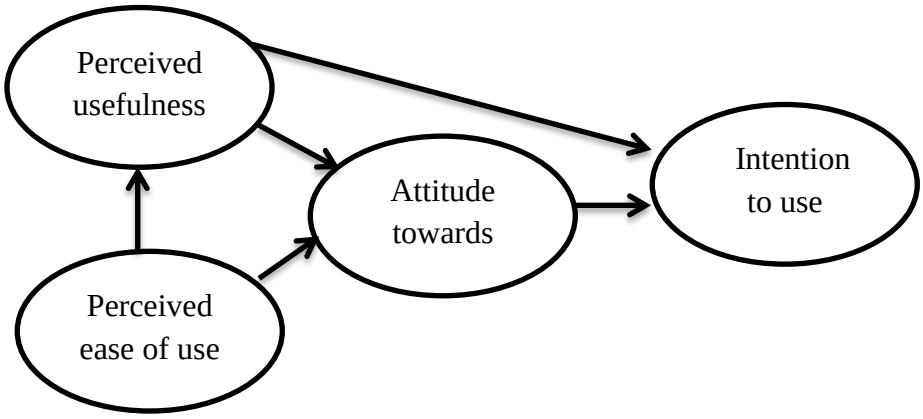


Figure 2.1:

Technology Acceptance Model

Source: Davis (1989)

2.2.1 PERCEIVED USEFULNESS

According to Davis (1989), perceived usefulness can be defined as the degree to which a person believes that using a particular system would enhance his or her job performance. Davis (1989) also explained that perceived usefulness had a very significant result on use and intention to use. Meanwhile, perceived usefulness in this research is defined as the level to which the generation Y believes that mobile banking is more beneficial when compared to the traditional way of conducting banking transactions.

Previous studies on technology adoptions have constantly revealed that perceived usefulness has a strong effect on user's intentions to accept new technology. Wessels and Drennan (2010) in their study of user's acceptance of Mobile Banking in Australia found that perceived usefulness had the most important effect on the acceptance to adopt mobile banking among users.

Koenig-Lewis et al., (2010) conducted an online survey of 263 young people in Germany. Researchers found that risk, perceived usefulness, and compatibility, are important predictor variables for the mobile banking services adoption. Compatibility is a significant precursor for perceived ease of use, perceived usefulness and credibility. Furthermore, others predictors variable which is credibility and trust are important to reduce the whole perceived threats towards mobile banking. A study by Wang, Lin, and Luarn (2006) revealed that perceived usefulness was found to be one of the significant adoption factors for mobile banking adoption.

However, not all research had found that perceived usefulness has an influence on the adoption of mobile banking. A Study by Aboelmaged and Gebba

(2013) that used Integrating Technology Acceptance Model (TAM) and Theory of Planned Behavior (TPB) as base model found that the effect of behavioral control and perceived usefulness on mobile banking adoption were in United Arab Emirates (UAE).

2.2.2 PERCEIVED EASE OF USE

Besides Perceived Usefulness, Perceived Ease of Use is also derived from the Technology Acceptance Model (TAM). Perceived Ease of Use can be defined as the level to which a user's trust that using a new specific system will be free of effort regarding its transfer and utilization (Davis, 1989). Thus, if a person feels that mobile banking is easy to use and free of hustle, then the probabilities of the users to use new technology will be high. Although the users may believe that the new technology is beneficial, but at the same time, users might think that the system is difficult to use (Davis, 1989).

Amin, Baba, and Muhammad (2007) also conducted a survey on mobile banking acceptance by Malaysian users. In their research, the participants in a bank were asked to answer a personally administered questionnaire. There are 239 respondents that involve in this survey. Meanwhile, their study found that Perceived Usefulness, Perceived Ease of Use, Perceived Credibility, and Perceived Self-Efficacy are important elements in explaining the acceptance of mobile banking among Malaysian users.

Akturan and Tezcan (2012) conducted a research on 435 university students in Istanbul, Turkey. The research was conducted through face to face interview. They found that perceived usefulness, perceived social risk, perceived performance risk and perceived benefit directly affect attitudes towards mobile banking. They also

found that attitude is the main element in mobile banking adoption. However, there were no direct connection between perceived usefulness and intention to use, perceived ease of use and attitude, financial risk, time, risk, security/privacy risk and attitude was identified.

In addition, Amin (2007) also conducted a study using TAM model regarding the intentions of Mobile Credit Card usage among bank customers in Malaysia. This study was conducted in Banks in Labuan and Kota Kinabalu, Sabah. In the data collection method Amin (2007) used personally administered questionnaire. In this research, Amin (2007) modified the version of TAM and added two other variables which are the amount of information and perceived credibility. He found that Perceived Ease of Use, Perceived Usefulness, Perceived Credibility and the Amount of Information on mobile credit cards are significant elements that influence bank customers to use mobile credit card.

2.3 AWARENESS

Mobile banking services are still new to many users. Financial institutions must create and increase consumers' awareness to capture the attention to the users about the benefits of Mobile Banking. Awareness is one of the key factors to consumers' adoption behavior, which is decided through associate of the particular product Velmurugan and Velmurugan (2014). However, Lionberger (1968) suggested that awareness was one of the best-known acts for using the new product. Among the main elements that influenced the adoption of online banking was the level of information that the users knew regarding that system (Sathye, 1999).

A study in India by Velmurugan and Velmurugan (2014) found that Perceived Ease of Use and Awareness were the key factor that influenced the adoption of information technology towards mobile phone usage. According to Wadhe and Ghodke (2013) consumer awareness is marketing terms which mean that the users realize or are aware about products or services. They said that we can create awareness through advertisement, commercials, word of mouth, and producer. In this relation, the responsibilities of the producers are to inform and educate customers about their products or services. The level of customer awareness will influence the adoption of a novelty (Laforet and Li, 2005).

A study by Adesina (2012), towards 270 customers who have used and also never used mobile banking in Nigeria found that awareness, social influence, perceived financial cost, perceived credibility, perceived usefulness, perceived ease of use, perceived self-efficacy and compatibility had some level of influenced on users to use and adopt mobile banking services.

Devi, Sebastina and Kanchana (2011) also conducted a study towards 249 potential users of Mobile banking in India. The main objective researchers conduct this study was to observe customers' awareness regarding Mobile banking, their view about the problems encountered and the purpose for choosing Mobile banking although there are many other technologies that available. The result of the study revealed that there is no significant difference between the education and monthly income of mobile banking usage. In addition, the result also found that there is no significant difference between private and public bank in the average problem score of internet banking.

2.4 TRUST

The Definition of trust has been widely discussed by the researcher in many disciplines. By definition, Trust has three elements which are Ability, Benevolence and Integrity. Trust refers to the belief that the promise of another can be relied upon and that, in unexpected situations, the other will act in a spirit of kindness and in a caring fashion toward the trustor (Mayer, Davis and Schoorman, 1995). Trust refers to trusting intentions that make someone feel secure enough to be willing to depend on the trustee (Chung and Kwon, 2009).

Meanwhile, Lewicki, McAllister and Bies (1998) defined trust as believe of the positive expectations about the conduct of others. Rousseau et al., (1998), stated that trust is a mental state containing the aim to receive weaknesses based on positive expectations of the purposes or actions of another.

Trust is a significant element that affects the user attitude and it determines the achievement of technology's acceptance like e-commerce (Chen and Barnes, 2007). According to McKnight and Chervany (2001), trust is a crucial element in a relationship particularly when uncertainty and risk exist. In Mobile banking services, trust includes making a one time or repeat purchase and acting on information provided by the trustee that could be the mobile vendor, the bank, and others (Chung and Kwon, 2009).

There are three perspectives on trust, namely, Personality theorists, Sociologists and economists and Social psychologists. Personality theorists suggested that trust is a confidence or feeling, starts from person's character and formed by first life experiences. Sociologists and economists believed that trust is a phenomenon that a person place on institutions. On the other hand, Social

psychologists concentrated on dealing with those who built or terminated trust at the group or interpersonal level (McKnight and Chervany, 2001),

Many researchers believed that trust is a significant influence in determining the adoption of e-banking. Among the researchers that investigated the influence of trust are Nor, Sutanonpaiboon and Mastor (2010). They conducted a survey on the impact of cultural traits on the intention to use internet banking at four public universities in Malaysia. Their respondents were final year business students and Master of business students. The findings revealed that perceived usefulness, perceived ease of use and trust have a significant effect on the intention to use internet banking among Malay and Chinese ethnic groups.

Keonig-Lewis et al., (2010) also conducted an online survey using 263 young respondents in Germany to examine the obstacles of adopting mobile banking services. The findings revealed that trust and credibility were two important indicators in lowering the whole perceived risk of mobile banking.

2.5 PERCEIVED VALUE

Perceived value is seen as a significant element that affects the actions of users. There are many arguments among researchers regarding the definition of Perceived value. Vinson, Munson and Nakanishi (1977) proposed that value is seen as an enduring belief that monitors human attitude. Meanwhile, perceived values will include all aspects such as objective and subjective, quantitative and qualitative.

The perceived value is generally seen as a trade-off between beneficial and sacrifice which is the whole evaluation towards what is received and what is given. (Zeithaml, 1988). The perceived value was developed from an alternative capacity for functional, physical performance or utilitarian (Sheth, Newman and Gross, 1991).

Perceived Value have been validated in research of Mobile Banking usage in India by Dasgupta, Paul and Fuloria (2011). They found that besides TAM factors which are Perceived Usefulness and Perceived Ease of Use, other elements such as Perceived image, Perceived Value, Self-Efficacy, Perceived Credibility and Tradition also significantly influenced Mobile Banking usage in India.

2.6 SOCIAL NORMS

The social environment is a factor that stimulates individuals to use mobile banking services. Social norms can be defined as the influenced of family, kin, co-workers, friends or media in the decision making of a consumer to use products or services. It is believed that the use of mobile banking would be possible if the behavior of customers is influenced by the people around them (Ajzen, 1991).

Several studies have observed the relationship between social norms and mobile banking adoption. Riquelme and Rios (2010) found that social norms, usefulness, and social risk were important factors that influenced the intention of 600 customers of internet banking in Singapore to adopt mobile banking services. Meanwhile, Aboelmaged and Gebba (2013) examined the effects of TAM and TPB variables that include social norms on the intention of mobile banking intention. The researchers used self-administered questionnaire on 119 undergraduate and postgraduate students of universities in Dubai. The results of this study showed that social norms are positive and significant influence mobile banking adoption. However, Amin et al., (2007) found in their study that social norms do not have any strong influenced on the intention to adopt mobile banking services.

3

METHODOLOGY

3.0 CHAPTER INTRODUCTION

This chapter will discuss the methodology of this research. Specifically, this chapter will explain the research procedures, questionnaire design, sampling design, data collection methods and hypotheses testing methods. The dependent variable in this research is Mobile Banking Adoption while the independent variables are Perceived usefulness, Perceived ease of use, Awareness, Trust, Perceived value and Social norms.

3.1 RESEARCH DESIGN

According to Sekaran and Bougie (2013) a research design is a blueprint for the collection, measurement, and analysis of data, based on the research questions of the study. The research design was made after the researcher had identified the variables in the theoretical framework. In this research, the researcher chooses to use descriptive study and the purpose of a descriptive study is to collect data that describe the features of individuals, events or situations.

3.2 DATA COLLECTION METHOD

Generally, there are two types of data collection methods, through primary and secondary method. Data collection method is an integral part of each study and in this research, the researcher use primary data as collection method.

3.2.1 Primary data

According to Sekaran and Bougie (2013), primary data refers to information obtained directly by the researcher on the variables of interest for the specific purpose of the study. The sources of primary data are through interviews, administered questionnaires, or observations.

In this study, a questionnaire is us as a main form of data collection from respondent. There are three types of data collection methods that can use to collect data through a questionnaire which are administered personally, mailed to the respondents, or electronically distributed. In this study, distributing a self-administered questionnaire to all respondents is being used. Besides that, to make respondents understand with questions, the researcher provides two languages which are English and Malay.

3.3 QUESTIONNAIRE DESIGN

A questionnaire is a pre-formulated written set of questions to which respondents record their answers. A questionnaire is an efficient data collection tool when a study is descriptive or explanatory in nature (Sekaran and Bougie, 2013). Besides that, questionnaires are usually time consuming and lower cost. The main reason of questionnaire design is to gather huge numbers of quantitative data.

In this research, the questionnaire was designed to examine factors influencing mobile banking adoption among generation Y. There are two sections in the questionnaire. In the first section, respondents were asked questions regarding their common background, such as gender, age, religion, ethnic group, marital status, state of origin, education background level, number of semesters, working experience and pride of working experience, work category, experience in using hand phone, and the period of using mobile banking. Meanwhile, section B questions related dependent variable and independent variables were asked and were adapted from several authors.

In addition, the items for the independent and dependent variables were adopted from the previous literature and measured using Six Point Likert Scale that starts from the value of 1 to 6 as shown in Table 3.1 below:

Table 3.1:

The value for Six Likert Scale

Number	Value
1	Strongly Disagree
2	Disagree
3	Slightly Disagree
4	Agree
5	Slightly Agree
6	Strongly Agree

Source: Zikmund et al., (2010)

Table 3.2 below shows the summary of the items in the questionnaire that was used in this study.

Table 3.2:

Summary of the questionnaire design

Variables	No. of items	Items
Gender	1	Section A: Item 1
Race	1	Section A: Item 2
Age	1	Section A: Item 3
Marital Status	1	Section A: Item 4
Religion	1	Section A: Item 5
Level of Study	1	Section A: Item 6
No. of semester	1	Section A: Item 7
Working Experience	1	Section A: Item 8
Occupation	1	Section A: Item 9
Hand Phone users	1	Section A: Item 10
Mobile Banking User	1	Section A: Item 11
Period of using Mobile Banking	1	Section A: Item 12

Variables	No. of items	Items
Perceived Usefulness	**5**	Sections B: Item 1-5
Perceived Ease of Use	**5**	Sections B: Item 6-10
Awareness	**5**	Sections B: Item 11-15
Trust	**7**	Sections B: Item 16-22
Perceived Value	**5**	Sections B: Item 23-27
Social Norms	**7**	Sections B: Item 28-34
Adoption of Mobile Banking	**6**	Sections B: Item 35-40

The source of the independent and dependent variables of the questionnaire as follows:

1. **Perceived Usefulness:** consists of the 5 items that were adapted from Davis, (1989).
2. **Perceived Ease of Use:** consists of the 5 items that were adapted from Davis, (1989).
3. **Awareness:** consists of the 5 items that were adopted from Lee et. al.,(2005).
4. **Trust:** consists of the 7 items that were adopted from Wang et al., (2006) and Amin, (2007).

5. **Perceived Value:** consists of the 5 items that were adopted from Akturan and Tezcan, (2012) and Lee et. al., (2005).
6. **Social Norms:** consists of the 7 items that were adopted from Amin (2007).
7. **Adoption of Mobile Banking:** consists of the 6 items that were adopted from Wang et al., (2006)

3.4 SAMPLING DESIGN

According to Sekaran and Bougie (2013), Surveys are beneficial and powerful in finding solutions to the research questions through data collection and subsequent analysis. However, if the population is not correctly targeted, then it can do more damage than good. In addition, sampling is the process of selecting the right individuals, object or events as representative of the entire population. The designs of the samples are the important aspect of a survey. The reasons for using a sample, rather than gathering data from the entire population, are self-evident. In this study, a Simple Random Sampling is used whereby each element in the population has an equal chance of being chosen as a subject in the sample.

3.4.1 Target Population

The population of this research consists of students from Universiti Utara Malaysia. Population can be described as the entire group of people, events or things of interest that the researcher wishes to study (Sekaran and Bougie, 2013). According to the Student Affairs Department, Universiti Utara Malaysia, the numbers of students in UUM are twenty thousand and based on Sekaran and Bougie (2013) the sample size of 400 respondents is considered adequate to represent the whole UUM students.

3.4.2 Sample Size

A Sample is a subset of the population. According to Malhotra (2004), sampling size can be described as the amount of segments to be counted in the research. Moreover, if we compare between large and small samples, larger samples will provide more trustworthy findings as compared to small samples.

In this study, the population was defined as students at Universiti Utara Malaysia and the sample size is 400 respondents among those students. Meanwhile, out of 400 questionnaires distributed only 382 were returned and usable, 5 were unreturned, 3 were incomplete and 10 were rejected because respondents were not generation Y respondents.

3.5 PILOT TEST

Before collecting a real data from respondents, pilot tests of data collection tools and procedures were conducted. Among the advantages of conducting a pilot test is that it can identify errors, remove mistakes and make corrections to the questionnaire. Meanwhile, to validate the questionnaire, the minimum number of respondents that appropriate for a pilot test is 20 to 40 respondents (Chua, 2011). In this study, 30 UUM students were chosen as respondents for the pilot test to answer the questionnaire. This pilot test was conducted in March 2014.

3.6 RELIABILITY

According to Worthen, Borg and White (1993) reliability test measures of how stable, reliable, trustworthy, and consistent a test in measuring the same thing in each time. In other words, Reliability is a clue of the degree to which measures are

without bias and free from error. It is the degree of consistency between two measures of the similar items (Mehrens and Lehman, 1987)

According to Sekaran and Bougie (2013), Cronbach's Alpha (a) is a reliability coefficient that indicates how well the items in a set are positively correlated to one another. Cronbach's Alpha is frequently used as an estimate of the reliability of test scores. Hair, Money and Samouel (2007) used Cronbach Alpha as a guide to show the strength of the measurements. If the value of the Cronbach's Alpha exceeds 0.95, the specific elements have to be revised to make sure that it measures different characteristics for that specific concept. Table 3.3 below shows the explanation of Cronbach's Alpha value.

Table 3.3:

Explanation of Cronbach's Alpha value

Cronbach's Alpha Value	**Explanation**
< 0.6	Weak
0.6 to < 0.7	Moderate
0.7 to < 0.8	Good
1.8 to < 0.9	Very Good
> 0.9	Excellent

Source: Hair et. al., (2007)

The results of the pilot test from this research are shown in Table 3.4. The results revealed that the reliability coefficients of the independents and dependents are between 0.78 until 0.92. Therefore, the measures of independents and dependent variables in this research are considered acceptable since all the alpha value is 0.7 and above.

Table 3.4:

Reliability Test

Variables	Items	Cronbach's Alpha	Cronbach's Alpha
		Pilot Test	**Real Test**
Perceived Usefulness	5	0.85	0.87
Perceived Ease of Use	5	0.89	0.86
Awareness	5	0.87	0.86
Trust	7	0.92	0.92
Perceived Value	5	0.83	0.85
Social Norms	7	0.78	0.89
Adoption of Mobile Banking	6	0.86	0.91

3.7 NORMALITY TEST

In statistics, normality tests are used to define whether the data set is well-modeled by a normal distribution or not. Besides that, normality tests are also used to calculate how likely it is for random variables underlying the data set are normally distributed**.** In this study, the output of a Q-Q Plot or normal Quantile-Quantile is used (Hair et. al., 2007)

From the result, it can be summarized that the data of this research are normally distributed. According to the Q-Q Plot theory, if the data are normally distributed the statistic points will be near to the diagonal line. Meanwhile, if the statistic points are away from the line in an obvious non-linear pattern, the statistics are considered not normally distributed. The Q-Q plots for each variable are shown in the Table 3.5 till table 3.11 below.

Table 3.5:

Normal Q-Q Plot of Perceived Usefulness

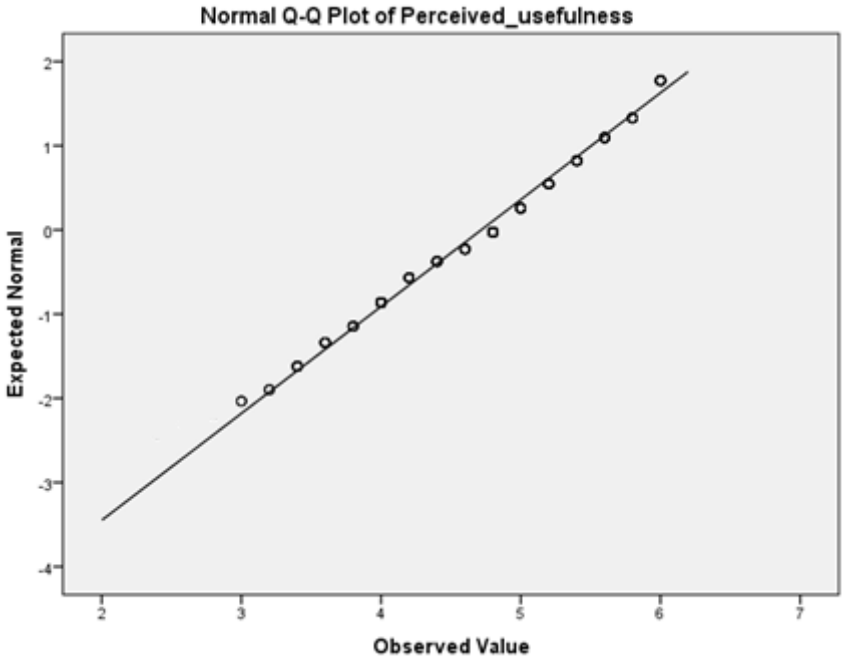


Table 3.6:

Normal Q-Q Plot of Perceived Ease of Use

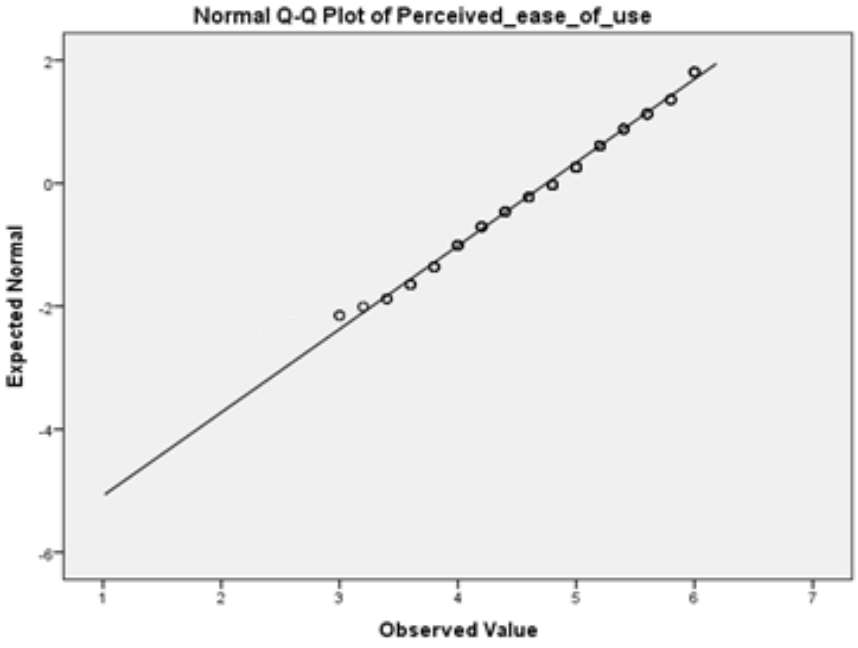


Table 3.7:

Normal Q-Q Plot of Awareness

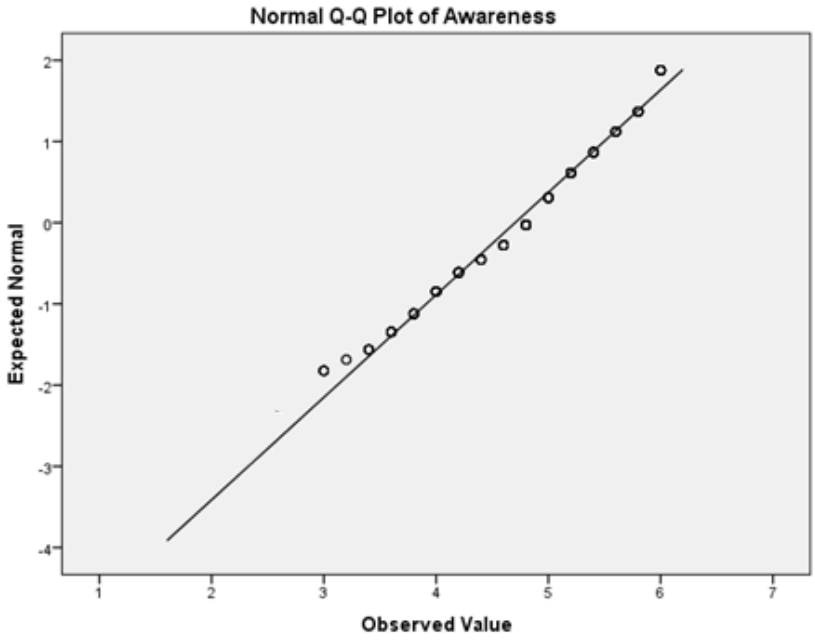


Table 3.8:

Normal Q-Q Plot of Trust

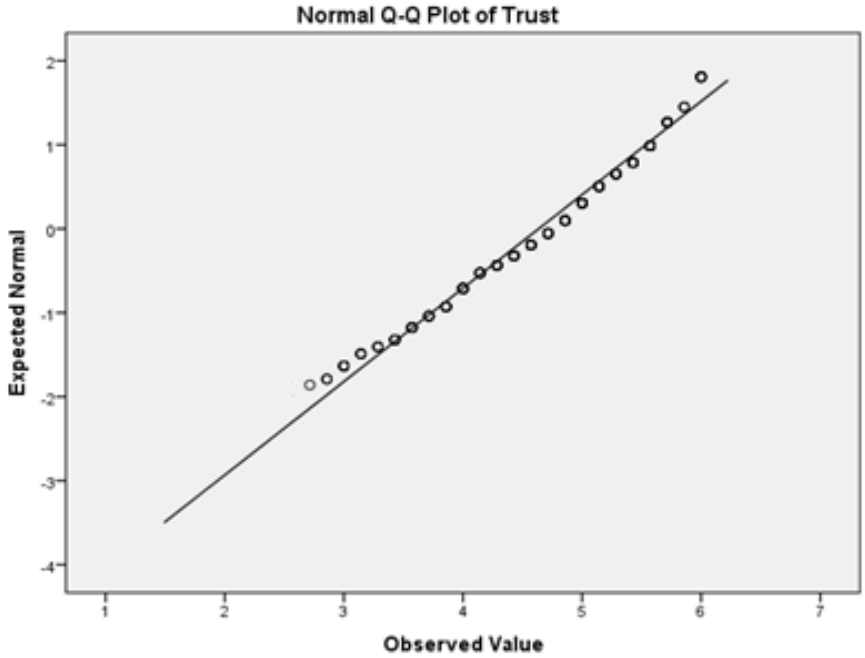


Table 3.9:

Normal Q-Q Plot of Perceived Value

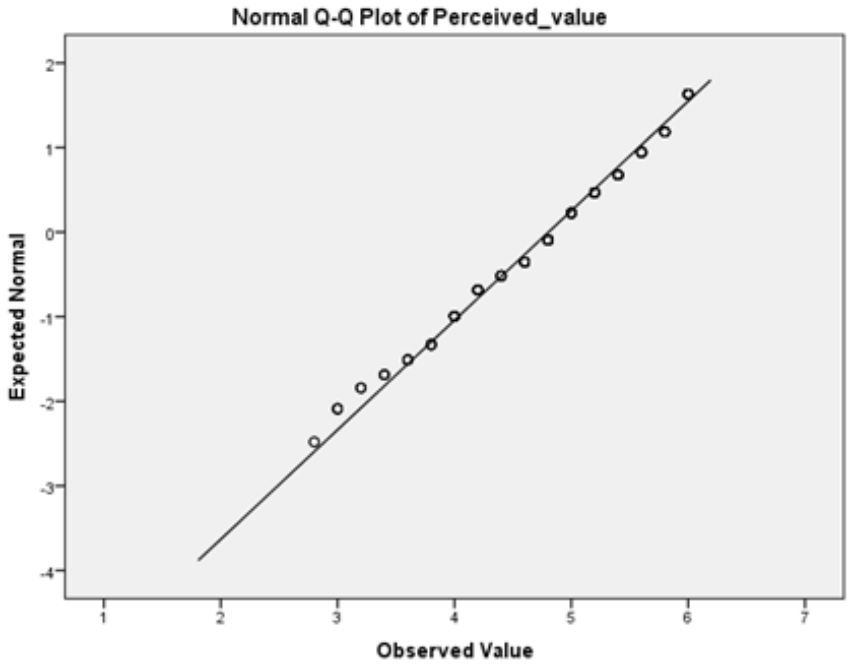


Table 3.10:

Normal Q-Q Plot of Social Norms

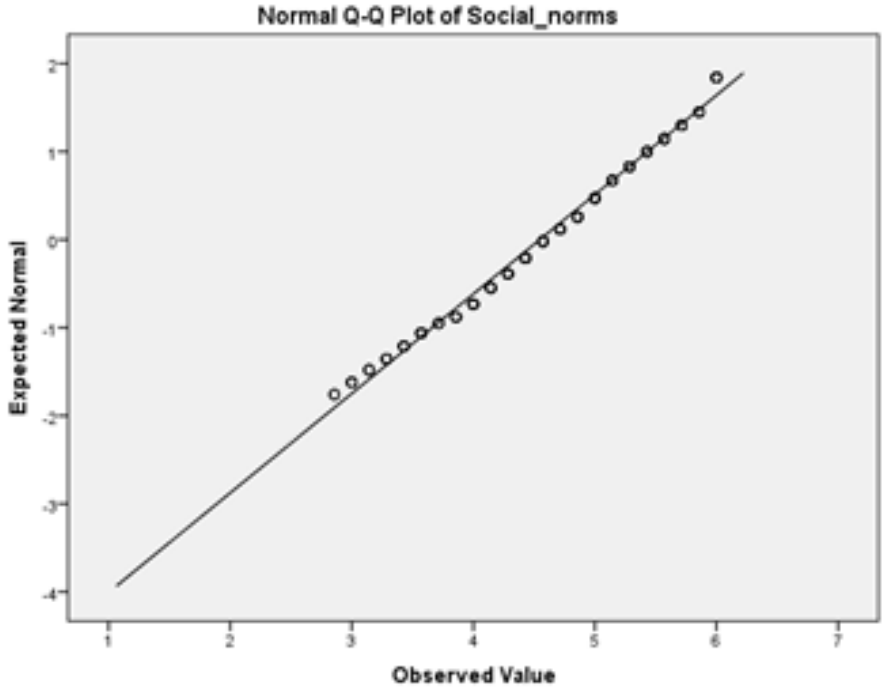
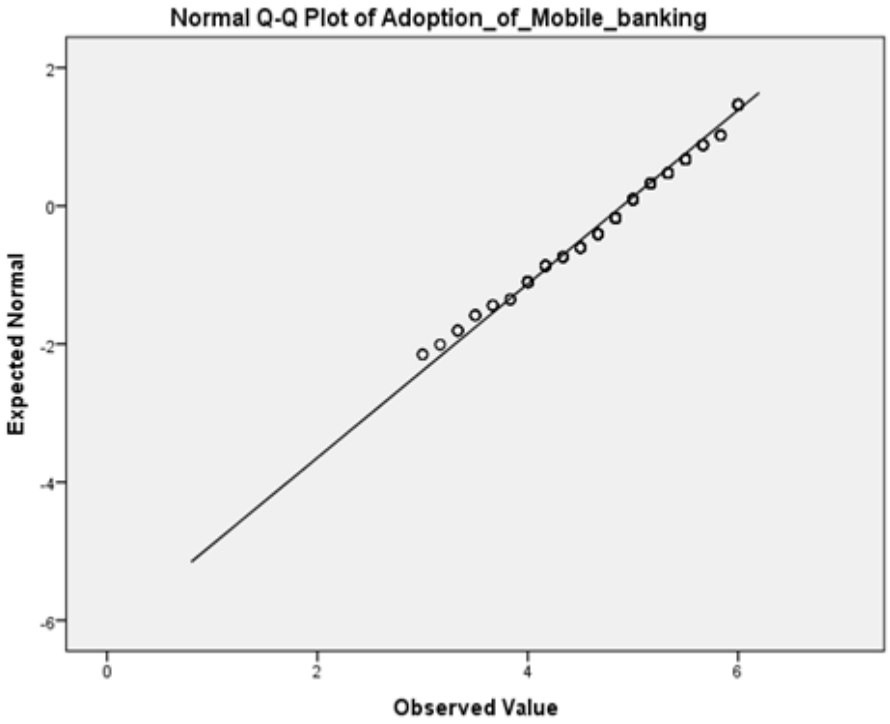


Table 3.11:
Normal Q-Q Plot of Mobile Banking Adoption



3.8 DATA PROCESSING METHOD

The data of this research were analyzed using Statistical Package of Social Science (SPSS) 20.0 computer software. In this study, data were investigated using several statistical techniques which are descriptive statistics (frequency, mean, mode, median, standard deviation and variance) and using inferential statistics (reliability, correlation and regressions). The SPSS software will help researchers to make analysis with more accurate and interpret the data from questionnaire result.

3.8.1 DESCRIPTIVE STATISTICS

In this study, descriptive statistics were used to describe the characteristics of the population or sample regarding to their demographic background, such as gender, age, race, level of education, period of using mobile banking and others.

3.8.2 T-TEST

There are two types of t-tests which are Independent-Samples T-Test and Paired Samples T-Test. The Independent-Samples T-Test is used to compare the mean scores of two dissimilar groups of conditions or people (Sekaran and Bougie, 2013). In this study, Independent Samples T-test will evaluate differences among male and female on Mobile Banking Adoption.

3.8.3 PEARSON CORRELATION COEFFICIENT

Correlation (r) is used to define the strength and direction of the linear connection between two variables or people (Sekaran and Bougie, 2013). In this research, Correlation analysis was conducted to determine the relationship between the Independent Variables which are Perceived usefulness, Perceived ease of use, Awareness, Trust, Perceived value, Social norms and the dependent variable (Mobile Banking Adoption).

Therefore, based on Choudhury (2009) guidelines on the Pearson correlation coefficient (Pearson Correlations) shown in Table 3.12 below:

Table 3.12:

Strength of relationship for Correlation (r)

Value of r	Strength of relationship
-1.0 to 0.5 or 0.5 to 1.0	Strong
-0.5 to -0.3 or 0.3 to 0.5	Moderate
-0.3 to -0.1 or 0.1 to 0.3	Weak
-0.1 to 0.1	None or very weak

Source: Choudhury (2009)

3.8.4 REGRESSION ANALYSIS

In this research, standard multiple regression will be used to determine the influenced between a dependent variable and other independent variables. This technique can prove the strong elements that influenced the mobile banking adoption.

A multiple linear regression equation was developed based on the following formula:

Multiple Regression: **Y = a + b1X1 + b2X2 + b3X3 + b4X4+b5X5+b6X6**

Where:

Y= Mobile Banking Adoption

X= the independent variable that we are using to predict Y

a= the intercept

b= the slope

4

FINDINGS

4.0 CHAPTER INTRODUCTION

This section will elaborate on the findings of this study. In this study, several statistical methods were used to analyze data. Among statistical method that used by researchers are descriptive statistic and inferential statistics. The descriptive statistic includes frequency, mean, mode, median, standard deviation and variance. Meanwhile, inferential statistics include Reliability, one-way ANOVA, Correlation, and Regression.

4.1 DEMOGRAPHIC DATA

In this study, the numbers of respondents are 382 and the Questions regarding demographic data are Gender, Ethnic Group, Age, Marital Status, Religion, Education Level, Number of semesters, working experience, period of working experience, and Working field. Respondents were also asked whether they are using hand phone and mobile banking services and the period of respondents using Mobile banking services.

4.1.1 Gender of Respondents

Table 4.1 below shows the results of gender of respondents. The result shows that 168 or 44% respondents are male, while 214 or 56% respondents are female. Hence, the majority of respondents from Universiti Utara Malaysia that are involved in this study are female.

Table 4.1:

Gender of respondents

Gender	Frequency	Percent
Male	168	44.0
Female	214	56.0
Total	**382**	**100**

4.1.2 Ethnic Group of Respondents

The ethnic group of respondents is shown in Table 4.2. The result reveals that the majority of the participants are Malays respondents 208 or 54.5%. This is followed by Chinese 81 respondents (21.2 %). Next, Indian 65 respondents (17.0 %) and the smaller group is others ethnic group which is 28 respondents (7.3 %).

Table 4.2:

Race of respondents

Race	Frequency	Percent
Malay	208	54.5
Chinese	81	21.2
Indians	65	17.0
Others	28	7.3
Total	**382**	**100**

4.1.3 Age of Respondents

This study will examine the involvement of generation Y in mobile banking adoption. Therefore, the age of respondents that researchers take into account will start from respondents that are born from 1977 until 2000. Table 4.3 showed that the majority of respondents that are involved in this study were between 20 to 25 years old and the number of participants are 269 respondents or 70.4 %. This is followed by respondents who were in the aged 26-31 years old, the result showed that the numbers of people that involve in this range of group are 81 or 21.2 %. On the other hand, the table showed that the minority respondent that involves in this study were people who aged between 32 to 37 years old and the respondents that involved in this study were 32 respondents or 8.4%.

Table 4.3:

Age of Respondents

Age	**Frequency**	**Percent**
20 – 25	269	70.4
26 - 31	81	21.2
32 - 37	32	8.4
Total	**382**	**100**

4.1.4 Marital status of Respondents

Table 4.4 below shows the marital status of respondents. Out of 382 respondents, 319 respondents (83.5%) are single, and 53 respondents (13.9%) are married. On the other hand, 10 respondents (2.6%) are divorced.

Table 4.4:

Marital status of Respondents

Status	**Frequency**	**Percent**
Single	319	83.5
Married	53	13.9
Divorced	10	2.6
Total	**382**	**100**

4.1.5 Religion of Respondents

Table 4.5 below shows the religion of respondents. The majority of the respondents in this study is Muslims with 233 respondents or (61.0%), followed by Christians 78 respondents or (20.4%), Buddhists 33 respondents or (8.6%), Hindus 34 respondents or (8.9%) others with 4 respondents or (1.0 %)

Table 4.5:

Religion of Respondents

Religion	Frequency	Percent
Muslims	233	61.0
Christians	78	20.4
Buddhists	33	8.6
Hindus	34	8.9
Others	4	1.0
Total	**382**	**100**

4.1.6 Education level of Respondents

The education level of the respondents is shown in Table 4.6. The table revealed that the majority of participants that were involved in this research were first degree students with the number of respondents are 236 respondents (61.8 %). Followed by Master Students 109 respondents or 28.5 % and the remaining of the 37 respondents (9.7%) were PhD students.

Table 4.6:

Education level of Respondents

Education	Frequency	Percent
First Degree	236	61.8
Master Degree	109	28.5
PhD	37	9.7
Total	**382**	**100**

4.1.7 Number of Semester

Based on the table 4.7 below, it is found that respondents from semester 1 and 2 that were involved in this research were 136 respondents or (35.6 %), 151 respondents or (39.5%) were students from semester 3 and 4. On the other hand, respondents from semester 5 and 6 were 56 respondents or (14.7%). Meanwhile, the remaining respondents were from semester 7 and 8 with a number of participants were 39 or 10.2%.

Table 4.7:

Number of Semester

Number of Semester	Frequency	Percent
1 – 2	136	35.6
3 – 4	151	39.5
5 – 6	56	14.7
7 – 8	39	10.2
Total	**382**	**100**

4.1.8 Working experience

Table 4.8 below shows the working experience of respondents. The results showed that 206 respondents or 53.9 % had working experience. Meanwhile, 46.1 % or 176 respondents in this research do not have any working experience.

Table 4.8:

Working experience

Working experience	Frequency	Percent
Yes	206	53.9
No	176	46.1
Total	**382**	**100**

4.1.9 Periods of Working Experience

The Table 4.9 shows the period of working experience of the respondents. The table reveals that there are 174 or 45.5 % respondents do not have any working experience. Meanwhile, 135 or 35.3% respondents have working experience for 1 until 3 years. For a period of 4 and 6 years, this study showed that 31 (8.1%) respondents have working experience. Followed by period 7 until 9 years, it is found that 17 (4.5 %) participants have working experience. Subsequently, for the maximum period, which is 10 and above, there are also 25 (6.5%) respondents having working experience.

Table 4.9:

Periods of Working Experience

Period of experience	Frequency	Percent
0 years	174	45.5
1-3	135	35.3
4-6	31	8.1
7-9	17	4.5
10 and above	25	6.5
Total	**382**	**100**

4.1.10 Respondents Occupation

The table below reveals that 29 or 7.6 % participants are from the government sector, while 89 respondents or 23.3% are from the private sector. In addition, 58 respondents or 15.2 % are self-employed and 206 respondents or 53.9 are not working.

Table 4.10:

Respondents Occupation

Respondents Occupation	Frequency	Percent
Government	29	7.6
Private	89	23.3
Self-employed	58	15.2
Others	206	53.9
Total	**382**	**100**

4.1.11 Hand Phone Users

This question was asked to examine whether respondents owned hand phone or not. The Table 4.11 shows that all 382 respondents own hand phones.

Table 4.11:

Hand Phone Users

Hand Phone Users	Frequency	Percent
Yes	382	100
No	0	0
Total	**382**	**100**

4.1.12 Mobile Banking Users

Table 4.12 shows the number of respondents that had adopted or not adopted mobile banking services. The result reveals that 191 respondents or 50% had already adopted mobile banking services while 191 respondents or 50 % never adopt mobile banking service.

Table 4.12:

Mobile Banking Users

Mobile Banking Users	Frequency	Percent
Yes	191	50
No	191	50
Total	**382**	**100**

4.1.13 Period of Using Mobile Banking Services by Respondents

The Table 4.13 shows the period of respondents Using Mobile Banking Services. The table reveals that there are 193 respondents or (50.5%) do not have any experience in using mobile banking services. Meanwhile, 102 respondents or 26.7% have 1 to 3 years' experience of using mobile banking services. On the other hand, the table showed that 46 respondents or 12.0% already adopt Mobile Banking in their banking transactions between 4 to 6 years. Similarly, 21 respondents or 5.5% had already adopted Mobile Banking in their banking transactions for 7 to 9 years. The Table also revealed that 20 respondents (5.2%) had adopted Mobile Banking more than 10 years.

Table 4.13:

Period of Using Mobile Banking

Period using Mobile Banking	Frequency	Percent
0	193	50.5
1-3	102	26.7
4-6	46	12.0
7-9	21	5.5
10 and above	20	5.2
Total	**382**	**100**

4.2 DESCRIPTIVE STATISTICS OF VARIABLES

Table 4.14 showed the mean and the standard deviation for each independent variable (Perceived Usefulness, Perceived Ease of Use, Awareness, Trust, Perceived Value and Social Norms) and dependent variable (Mobile banking adoption). Mobile banking adoption has the highest mean value which is 4.88 and the value of standard deviation value is 0.79. Meanwhile, the lowest mean value was 4.64 for Trust with standard deviation 0.89.

Table 4.14:
Descriptive Statistics of all Variables

	Mean	**Standard Deviation**
Perceived Usefulness	4.72	0.79
Perceived Ease of Use	4.75	0.74
Awareness	4.70	0.79
Trust	4.64	0.89
Perceived Value	4.80	0.77
Social Norms	4.55	0.88
Mobile Banking Adoption	4.88	0.79

4.2.1 Perceived Usefulness

Table 4.15 shows the mean and standard deviation for Perceived Usefulness. The greatest leading factor in measuring Perceived Usefulness is "Overall, mobile banking is advantageous" with a mean value of 4.83. Whereas, the item with the lowest scored with a mean value of 4.52 was "Mobile banking gives the joy of controlling my financial transactions".

Table 4.15:

Mean and Standard Deviation of Items measuring Perceived Usefulness

Items	Mean	Standard Deviation
Using mobile banking services will improve my performance in conducting transactions	4.75	0.91
Mobile banking gives the joy of controlling my financial transactions	4.52	1.06
Mobile banking made communications with banks much easier	4.74	0.99
I think mobile banking enables me to complete my banking activities conveniently and efficiently	4.76	0.93
Overall, mobile banking is advantageous	4.83	0.90
Average	**4.72**	**0.95**

4.2.2 Perceived Ease of Use

Table 4.16 shows the mean and standard deviation of Perceived Ease of Use. The maximum dominant factor in measuring Perceived Ease of Use is "It's easy for me to remember how to perform tasks with mobile banking" with a mean value of 4.83. Whereas, the item with the lowest scored with a mean value of 4.68 was "Mobile banking has more flexible ways to search information".

Table 4.16:

Mean and Standard Deviation of Items measuring Perceived Ease of Use

Items	Mean	Standard Deviation
Learning to use mobile banking was easy for me	4.77	0.85
Mobile banking has more flexible ways to search information	4.68	0.92
I find mobile banking system easy to use	4.75	0.92
It would be easy for me to become skillful at using mobile banking	4.72	0.94
It's easy for me to remember how to perform tasks with mobile banking	4.83	0.95
Average	**4.75**	**0.91**

4.2.3 Awareness

Table 4.17 shows the mean and standard deviation of Awareness. The highest dominant factor in measuring Awareness is "I have positive perception about using the mobile banking service" with a mean value of 4.74. Whereas, the item with the lowest scored with a mean value of 4.64 was "I think that I have received enough information about mobile banking".

Table 4.17:

Mean and Standard Deviation of Items measuring Awareness

Items	Mean	Standard Deviation
I think that I am aware about the benefits of mobile banking	4.73	0.95
I think that I have received enough information about mobile banking	4.64	1.04
I think that using the new mobile banking service is beneficial for me	4.70	0.94
I have positive perception about using the mobile banking service	4.74	0.97
Mobile banking is compatible to my banking needs	4.71	1.00
Average	**4.70**	**0.98**

4.2.4 Trust

Table 4.18 shows the mean and standard deviation of Trust. The highest main factor in measuring Trust is "I would trust my bank to offer secure mobile banking" with a mean value of 4.69. Whereas, the item with the lowest scored with a mean value of 4.57 was "I can always rely on mobile banking for my banking activities".

Table 4.18:

Mean and Standard Deviation of Items measuring Trust

Items	Mean	Standard Deviation
I trust that transaction that conducted through mobile banking is secure and private	4.66	1.07
I trust payments made through mobile banking channels will be processed securely	4.59	0.98
I believe my personal information on mobile banking will be kept confidential	4.63	1.06
I can always rely on mobile banking for my banking activities	4.57	1.20
I trust mobile banking	4.65	1.06
I would trust my bank to offer secure mobile banking	4.69	1.06
I trust in the technology an online bank is using	4.68	1.07
Average	**4.63**	**1.07**

4.2.5 Perceived Value

Table 4.19 shows the mean and standard deviation of Perceived Value. The highest main factor in measuring Perceived Value is "I think that using mobile banking can save me time in performing banking transactions" with a mean value of 4.89. Whereas, the item with the lowest scored with a mean value of 4.67 was "The charges for using mobile banking services will be economical".

Table 4.19:

Mean and Standard Deviation of Items measuring Perceived Value

Items	Mean	Standard Deviation
I think that using mobile banking can save my time in performing banking transactions	4.89	0.98
I think that using mobile banking can save the transaction handling fees in performing banking transactions	4.81	0.97
The use of mobile banking services is economical	4.83	0.92
Mobile banking services will be cheaper to use as compared to using other banking channel	4.80	0.96
The charges for using mobile banking services will be economical	4.67	1.03
Average	**4.8**	**0.97**

4.2.6 Social Norms

Table 4.20 shows the mean and standard deviation of Social Norms. The highest main factor in measuring Social Norms is "There are more media and advertising recommending the use of mobile banking service" with a mean value of 4.64. Whereas, the item with the lowest scored with a mean value of 4.40 was "My family uses more mobile phone banking services."

Table 4.20:

Mean and Standard Deviation of Items measuring Social Norms

Items	Mean	Standard Deviation
There are more media and advertising recommending the use of mobile banking service	4.64	1.04
My family uses more mobile phone banking services	4.40	1.24
My friends use more mobile phone banking services	4.42	1.20
My close friends think that I can use mobile banking	4.61	1.07
My close friends think that I must use mobile banking	4.61	1.11
My close friends think that I should use mobile banking	4.59	1.08
Most people surrounding with me use mobile banking	4.57	1.11
Average	**4.54**	**1.12**

4.2.7 Adoption of Mobile Banking

Table 4.21 shows the mean and standard deviation of Mobile Banking Adoption. The highest main factor in measuring Mobile Banking Adoption is "I intend to use mobile banking if the cost and times is reasonable for me" with a mean value of 5.16. Whereas, the item with the lowest scored with a mean value of 4.67 was "I will adopt mobile banking as soon as possible".

Table 4.21:

Mean and Standard Deviation of Items measuring Adoption of Mobile Banking

Items	Mean	Standard Deviation
I will adopt mobile banking as soon as possible	4.67	1.04
I will regularly use mobile banking in the future	4.82	1.00
I believe I will use mobile banking in the future	4.85	0.96
I intend to increase my use of the mobile banking in the future	4.91	0.93
I believe it is worthwhile for me to adopt mobile banking	4.97	0.91
I intend to use mobile banking if the cost and times is reasonable for me	5.16	0.84
Average	**4.89**	**0.94**

4.3 INDEPENDENT SAMPLES T-TEST

H1: There is a significant difference of Mobile Banking Adoption between genders among Generation Y in UUM.

To achieve objective 1, Independent samples t-test was used. The main reason conducting this test is to examine whether there is any difference between genders in Mobile Banking Adoption. Table 4.22 showed that the mean value for men (5.07) is higher than the mean value for women (4.76). The p-value of 0.31 for Levene'test reveals that the samples have equal variances not assumed. Thus, the significance value is equal to 0.000. As a result, the H1 is accepted.

Table 4.22:

Independent Sample T-Test between Gender and Mobile Banking Adoption

	Gender	**N**	**Mean**	**Standard Deviation**	**T**	**Sig.**
Mobile Banking Adoption	Men	168	5.07	0.717	3.927	0.000
	Women	214	4.76	0.823		

4.4 ONE-WAY ANALYSIS OF VARIANCE

The results of ANOVA for Age, Ethnic Groups, and Religion and Education level towards mobile banking adoption are shown in Table 4.23.

H2 (a): There is a significant difference between Mobile Banking Adoption and Age.

Meanwhile, in the case of Age factor, the Levene's F statistic's significance value (0.001) is less than 0.05. Therefore, the assumption of homogeneity of variance is not met between Age and Mobile Banking Adoption. The significance level is 0.000 which is below 0.05. This indicates that there is a significant difference in the mean of Age towards Mobile Banking Adoption. In this case, the Levene's F statistic's significance value was important; then as an alternative of using ANOVA, Robust Test of Equity of means is used by applying the Welch Test. Therefore, H2 is accepted.

H2 (b): There is a significant difference between Mobile Banking Adoption and Ethnic Groups.

For the Ethnics Groups factor, The Levene's F statistic's significance value (0.132) is greater than 0.05. Then, the assumption of homogeneity of variance is met between Ethnic Groups and Mobile Banking Adoption. The F value is 7.707 and was insignificant at the level of 0.000. This indicates that there is no significance difference in the mean of Race factor towards the Mobile Banking Adoption. Therefore H2(b) is rejected.

H2 (c): There is a significant difference between Mobile Banking Adoption and Religion.

Meanwhile, for Religion, The Levene's F statistic's significance value (0.147) is greater than 0.05. Hence, the assumption of homogeneity of variance is met between Religion and Mobile Banking Adoption. The F value is 5.359 and F value is insignificant at the level of 0.000. This shows that there is no significance difference in the mean of Religion aspect towards the Mobile Banking Adoption. Therefore H2(c) is rejected

H2 (d): There is a significant difference between Mobile Banking Adoption and Education Level.

Similar results are shown when the test was conducted on Education Level factor. The Levene's F statistic's significance value (0.193) is greater than 0.05. Hence, the assumption of homogeneity of variance is met between Education Level and Mobile Banking Adoption. The F value is 0.105 and F value is insignificant at the level of 0.900. This indicates that there is no significance difference in the mean of Education Level factor towards the Mobile Banking Adoption. Therefore H2(d) is rejected

Table 4.23:
One-way ANOVA

	Levene's F	P-Value
Race	0.132	0.000
Religion	0.147	0.000
Education Level	0.193	0.900

Table 4.24:
Robust Tests of Equity of Means

	Sig. Value
Age	**0.000**

4.5 CORRELATION ANALYSIS

In this research, the correlation analysis was used to test Hypothesis 3(a) to Hypothesis 3 (f). Meanwhile, Regression analysis was used to proof Hypothesis 4.

H3 (a): There is a significant relationship between Perceived Usefulness and Mobile Banking Adoption among generation Y in UUM.

Table 4.25 shows the outcome of the Pearson Correlation Test for Perceived Usefulness and Mobile Banking Adoption. Based on the significant level of 0.05, it indicated that there is a relationship between Perceived Usefulness and Mobile Banking Adoption. The positive value of the Pearson Correlation reveals the strength of association between perceived usefulness and mobile banking adoption is very strong which is r =0.548. As a result, Hypothesis 3(a) is accepted.

Table 4.25:

Correlation between Perceived Usefulness and Mobile Banking Adoption

Variable	Pearson Correlation, R	Significant P	Mean	Standard Deviation	Results
Perceived Usefulness	0.54	0.000	4.72	0.79	H3 (a) Accepted

H3 (b): There is a significant relationship between Perceived Ease of Use and Mobile Banking Adoption among generation Y in UUM.

Table 4.26 shows the Pearson Correlation Test for Perceived Ease of Use and Mobile Banking Adoption. Based on the significant level of 0.01, it showed that there is an association between Perceived Ease of Use and Mobile Banking Adoption. The positive value of the Pearson Correlation reveals the strength of the relationship between perceived ease of use and mobile banking adoption whereby r =0.508. Thus, Hypothesis 3(b) is accepted.

Table 4.26:

Correlation between Perceived Ease of Use and Mobile Banking Adoption

Variable	Pearson Correlation, R	Significant P	Mean	Standard Deviation	Results
Perceived Ease of Use	0.50	0.00	4.75	0.74	H3 (b) Accepted

H3 (c): There is a significant relationship between Awareness and Mobile Banking Adoption among generation Y in UUM.

Table 4.27 below shows the Pearson Correlation Test for Awareness and Mobile Banking Adoption. Based on the significant level of 0.01, it exposes that there are associated between Awareness and mobile banking adoption. The positive value of the Pearson Correlation reveals the strength of the relationship between Awareness and mobile banking adoption whereby r =0.570. Therefore, Hypothesis 3(c) is accepted.

Table 4.27:

Correlation between Awareness and Mobile Banking Adoption

Variable	Pearson Correlation, R	Significant P	Mean	Standard Deviation	Results
Awareness	0.57	0.00	4.70	0.79	H3 (c) Accepted

H3 (d): There is a significant relationship between the Trust and Mobile Banking Adoption among generation Y in UUM.

Table 4.28 below shows the Pearson Correlation Test for Trust and Mobile Banking Adoption. Based on the significant level of 0.01, it exposes that there are associated among Trust and mobile banking adoption. The positive value of the Pearson Correlation reveals the strength of the relationship between the Trust and mobile banking adoption whereby are =0. 570. Therefore, Hypothesis 3(d) is accepted.

Table 4.28:

Correlation between Trust and Mobile Banking Adoption

Variable	Pearson Correlation, R	Significant P	Mean	Standard Deviation	Results
Trust	0.57	0.00	4.64	0.89	H3 (d) Accepted

H3 (e): There is a significant relationship between Perceived Value and Mobile Banking Adoption among generation Y in UUM.

Table 4.29 below shows the Pearson Correlation Test for Perceived Value and Mobile Banking Adoption. Based on the significant level of 0.01, it revealed that there are associated between Perceived Value and mobile banking adoption. The positive value of the Pearson Correlation reveals the strength of the relationship between Perceived Value and mobile banking adoption whereby r =0.590. As a result, Hypothesis 3(e) is accepted.

Table 4.29:

Correlation between Perceived Value and Mobile Banking Adoption

Variable	Pearson Correlation, R	Significant P	Mean	Standard Deviation	Results
Perceived Value	0.59	0.00	0.48	0.77	H3 (e) Accepted

H3 (f): There is a significant influence between Social Norms and Mobile Banking Adoption among Generation Y in UUM.

Table 4.30 below shows the Pearson Correlation Test for Social Norms and Mobile Banking Adoption. Based on the significant level of 0.01, it exposes that there are associated between Social Norms and mobile banking adoption. The positive value of the Pearson Correlation reveals the strength of the relationship between Social Norms and mobile banking adoption whereby are =0. 627. Thus, Hypothesis 3(f) is accepted.

Table 4.30:

Correlation between Social Norms and Mobile Banking Adoption

Variable	Pearson Correlation, R	Significant P	Mean	Standard Deviation	Results
Social Norms	0.62	0.00	4.55	0.88	H3 (f) Accepted

4.6 REGRESSION ANALYSIS

H4: There is a significant influence of Perceived Usefulness, Perceived Ease of Use, Awareness, Trust, Perceived Value and Social Norms on Mobile Banking Adoption among Generation Y.

After all the independent and dependent variable were analyzed using the regression analysis. The Table 4.31 showed that Social Norms provide higher influences towards Mobile Banking Adoption among generation Y in Universiti Utara Malaysia. But, others independent variables which are Perceived Usefulness, Perceived Ease of Use, Awareness, Perceived Value and Trust did not meet the standards to be considered as the variables which affect the adoption of Mobile Banking among generations in Y UUM.

Table 4.31:
Regression for Independent and Dependent Variables

Variables	t	Significant Value
Perceived usefulness	3.090	0.002
Perceived Ease of Use	0.019	0.984
Awareness	1.779	0.076
Trust	1.461	0.145
Perceived Value	3.047	0.002
Social Norms	6.926	0.000

Table 4.32:
Results of All the Hypotheses

Hipothesis		Result
H1	There is a significant difference of Mobile Banking Adoption between gender (Female and Male) among Generation Y in UUM.	Accepted
H2(a)	There is a significant difference of Mobile Banking Adoption between Age among Generation Y in UUM.	Accepted
H2(b)	There is a significant difference of Mobile Banking Adoption between Ethnic Group among Generation Y in UUM.	Rejected
H2(c)	There is a significant difference of Mobile Banking Adoption between Religions among Generation Y in UUM.	Rejected
H2(d)	There is a significant difference of Mobile Banking Adoption between Education Level among Generation Y in UUM.	Rejected
H3(a)	There is a significant relationship between Perceived Usefulness and Mobile Banking Adoption among Generation Y in UUM.	Accepted
H3(b)	There is a significant relationship between Perceived Ease of Use and Mobile Banking Adoption among Generation Y in UUM.	Accepted
H3(c)	There is a significant relationship between Awareness and Mobile Banking Adoption among Generation Y in UUM.	Accepted
H3(d)	There is a significant relationship between Trust and Mobile Banking Adoption among Generation Y in UUM.	Accepted
H3(e)	There is a significant relationship between Perceived Value and Mobile Banking Adoption among Generation Y in UUM.	Accepted
H3(f)	There is a significant relationship between Social Norms and Mobile Banking Adoption among Generation Y in UUM.	Accepted
H4	There is a significant influence of Perceived Usefulness, Perceived Ease of Use, Awareness, Trust, Perceived Value and Social Norms on Mobile Banking Adoption among Generation Y in UUM.	Strongest influenced are Social Norms.

5

DISCUSSION, RECOMMENDATIONS AND CONCLUSIONS

5.0 CHAPTER INTRODUCTION

This chapter presents the discussion, recommendations and conclusion regarding the study of Mobile Banking Adoption towards Generation Y in UUM.

5.1 DISCUSSION

The main objective of this study is to test the effect of the independent variables which are Perceived Usefulness, Perceived Ease of Use, Awareness, Trust, Perceived Value and Social Norms towards Mobile Banking Adoption among Generation Y in UUM. In this study, all data were recorded from the respondents via a self-administered questionnaire. A sample of 382 students in Universiti Utara Malaysia took part in this research. The data from this survey were analyzed using Statistical Packages of Social Science (SPSS) version 20.0.

H1: There is a significant difference of Mobile Banking Adoption between Genders among Generation Y in UUM.

Independent samples t-test found that the mean value for men (5.07) is higher than the mean value for women (4.76). This result concludes that, men are motivated to adopt mobile banking than women. The results from this research is consistent with Wan, Luk and Chow (2005) whereby they found that male are more motivated to adopt bank technology as compared to women.

H2 (a): There is a significant difference of between Age and Mobile Banking Adoption among Generation Y in UUM.

From the Analysis of Variance analysis (ANOVA), the Levene's F statistic's significance values (0.001) are less than 0.05. Then, the assumption of homogeneity of variance is not met between Age and Mobile Banking Adoption. The significance level is 0.000 which is below 0.05. This indicates that there is a significant difference in the mean of Age towards Mobile Banking Adoption. In this case, the Levene's F statistic's significance value was important; then as an alternative of using ANOVA, Robust Test of Equity of means is used by applying the Welch Test. Thus, **H2 (a) is accepted**.

H2 (b): There is a significant difference of between Ethnic Group and Mobile Banking Adoption among Generation Y in UUM.

In terms of the respondents Ethnic Group, the result shows that the majority of respondents that are involved in this study are Malay 206 respondents or (53.9%).

Followed by, Chinese 81 respondents or (21.2 %), Indian 65 respondents or (17.0 %) and Other Ethnic group 28 respondents or (7.3%).

For the Ethnic group factor, The Levene's F statistic's significance value (0.119) is greater than 0.05. Then, the assumption of homogeneity of variance is met between Ethnic group and Mobile Banking Adoption. The F value is 7.782 and insignificant at the level of 0.000. This shows that there is no significance difference in the mean of Ethnic group aspects on the Mobile Banking Adoption. As a result, **H2 (b) is rejected.**

H2 (c): There is a significant difference of between Religion and Mobile Banking Adoption among Generation Y in UUM.

In ANOVA results, The Levene's F statistic's significance value (0.145) is greater than 0.05. Hence, the assumption of homogeneity of variance is met between Religion and Mobile Banking Adoption. The F value is 6.975 and insignificant at the level of 0.000. This indicates that there is no significance difference in the mean of Religion factor towards the Mobile Banking Adoption. As a result, **H2 (c) is rejected.**

H2 (d): There is a significant difference of between Education Level and Mobile Banking Adoption among Generation Y in UUM.

The results from ANOVA reveals that the Levene's F statistic's significance value (0.271) is greater than 0.05. Hence, the assumption of homogeneity of variance is met between Education Level and Mobile Banking Adoption. The F value is 0.082

and F value is insignificant at the level of 0.922. This indicates that there is no significance difference in the mean of Education Level factor towards the Mobile Banking Adoption. Therefore, **H2 (d) is rejected.**

H3 (a): There is a significant relationship between Perceived Usefulness and mobile banking adoption among generation Y in UUM.

This hypothesis were accepted, because the finding of the study showed that there is a relationship between an independent variable which is perceived usefulness and dependent variable which is mobile banking adoption. This finding is consistent with a previous study by Wang et al., (2006). They found that perceived usefulness was significantly to Mobile Banking Adoption.

H3 (b): There is a significant relationship between Perceived Ease of Use and mobile banking adoption among generation Y in UUM.

This hypothesis were accepted because the findings showed that there is a relationship between an independent variable which is Perceived Ease of Use and dependent variable which is mobile banking adoption. This finding is consistent with previous studies by Amin et al., (2008) who studied the factors that determine intention to use mobile banking among BIMB Bank's customers. In their study, they concluded that perceived usefulness, perceived ease of use, perceived credibility, and perceived self-efficacy is important elements in explaining the acceptance of mobile banking among Malaysian users.

H3 (c): There is a significant relationship between Awareness and Mobile Banking Adoption among generation Y in UUM.

This hypothesis were accepted because the findings showed that there is a relationship between an independent variable which is Awareness and dependent variable which is Mobile Banking Adoption. This finding is consistent with previous studies by Velmurugan and Velmurugan (2014) who found that Awareness and Perceived Ease of Use were the key factors in consumer adoption of information technology towards mobile phone usages.

H3 (d): There is a significant relationship between the Trust and Mobile Banking Adoption among generation Y in UUM.

This hypothesis were accepted because the finding showed that there is a relationship between an independent variable which is a Trust and dependent variable which is Mobile Banking Adoption. This finding is consistent with previous studies by Keonig-Lewis et al., (2010) whereby the findings revealed that Trust and Credibility were two important indicators in reducing the overall perceived risk of mobile banking in Germany.

H3 (e): There is a significant relationship between Perceived Value and Mobile Banking Adoption among generation Y in UUM.

This hypothesis were accepted because the finding showed that there is a relationship between the independent variable which is Perceived Value and dependent variable which is Mobile Banking Adoption. This finding is consistent with previous studies of Dasgupta et al., (2011). They found that besides TAM factors which is Perceived Usefulness and Perceived Ease of Use, other factors such as Perceived Image,

Perceived Value, Self-Efficacy, Perceived Credibility and Tradition also significantly influenced Mobile Banking usage among Indian customers.

H3 (f): There is a significant relationship between Social Norms and Mobile Banking Adoption among generation Y in UUM.

This hypothesis were accepted, because the finding showed that there is a relationship between Social Norms which is and mobile banking adoption. This research work is consistent with Aboelmaged and Gebba (2013) that examined the effects of TAM, TPB and social norms on the intention of mobile banking intention. Researchers investigating survey using self-administered questionnaire to 119 respondents from undergraduate and postgraduate students of universities in Dubai. The results of this study are partially supported and result showed that social norms are positive and significant influence mobile banking adoption.

H4: There is a significant influence between Perceived Usefulness, Perceived Ease of Use, Awareness, Trust, Perceived Value and Social Norms on Mobile Banking Adoption among Generation Y in UUM.

The results of Regression Analysis revealed that Social Norms have the highest influences towards Mobile Banking Adoption among generation Y in Universiti Utara Malaysia. Other independent variables which are Perceived Usefulness, Perceived Ease of Use, Awareness, Perceived Value and Trust did not meet the standards to be considered as the variables which affect the adoption of Mobile Banking among generation Y in UUM. Nevertheless, Perceived Usefulness, Perceived Ease of Use, Awareness, Perceived Value and Trust still play a specific role in the theoretical construct of adoption towards technology. Therefore, financial

institutions should use the result of this study to improve their Marketing strategy in attracting Generation Y in using Mobile Banking Services.

5.2 LIMITATIONS OF STUDY

This study has several limitations. Among the limitation in this study are as follows:

(a) Students are busy with their activities, such as classes, group discussion, curriculum and assignment. As a result, some of them refused to give co-operation to answer the questionnaire.

(b) This study was limited and specific to a small group of the population that only focuses one university only. The sample sizes in this study are 382 respondents and are considered as small size. For future research, other researchers can combine respondents from various universities.

(c) In this study, the respondents are students. This factor may decrease generalizability of the research because students' interest on the use of mobile banking may be dissimilar from the people who are already working.

5.3 CONCLUSION

The objective of this study was to investigate the Mobile Banking Adoption among Generation Y in UUM. There are six independent variables that have been tested in order to recognize which is the most significant element that influenced the adoption of Mobile Banking. Based on the results, Social Norms are the most crucial factor that influenced Mobile Banking Adoption among Generation Y in UUM.

Mobile Banking services are still in the early adoption phases, In order to create awareness to Generation Y, effective advertising should be made by financial institutions. Financial institutions must create awareness and knowledge towards the benefits of Mobile Banking Adoption among Generation Y. Firms can implement advertising strategy through promotions such as brochures, leaflets, social media, public transport ads and others.

The main objective of this advertising strategy is to educate and introduce the benefits of mobile banking services to the potential customers. If financial institutions want to grab potential customers immediately, financial institutions can allocate bank assistants at every branch to explain more detail about mobile banking services to customers. Besides that, banks could organize training courses for mobile banking users for free, and provide them available at bank branches.

References

Aboelmaged, M., and Gebba, T. R. (2013). Mobile Banking Adoption: An Examination of Technology Acceptance Model and Theory of Planned Behavior. *International Journal of Business Research and Development (IJBRD), 2*(1).

Adesina, (2012). An Empirical Investigation of the Level of Users' Acceptance of E-Banking in Nigeria. *Journal of Internet Banking and Commerce, 15*(1).

Amin, H. (2007). An Analysis of Mobile Credit Card Usage Intentions. *Information Management and Computer Security, 15(4), 260-269.*

Amin, H., Baba, R., and Muhammad, M. Z. (2007). An Analysis of Mobile Banking Acceptance by Malaysian Customers. *Sunway Academic Journal, 4*, 1-12

Alsaab, S. A. S. (2009). *SMS Banking in Saudi Arabia*. Master's thesis, Universiti Utara Malaysia

Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179-211.

Akturan, U., and Tezcan, N. (2012). Mobile Banking Adoption of the Youth Market: Perceptions and Intentions. *Marketing Intelligence and Planning, 30*(4), 444-459.

Chen, Y. H., and Barnes, S. (2007). Initial Trust and Online Buyer Behaviour. *Industrial Management and Data Systems, 107*(1), 21-36.

Chua, Y. P. (2011). *Kaedah Penyelidikan.* Kuala Lumpur: McGraw Hill Education.

Chung, N., and Kwon, S. J. (2009). Effect of Trust Level on Mobile Banking Satisfaction: A Multigroup Analysis of Information System Success Instruments. *Behavior and Information Technology, 28*(6), 549–562.

Choudhury, A. (2009). http://explorable.com/statistical-correlation. Retrieved (March 20,2014).

Commerce Investment Merchant Bank (CIMB). (2014). *Mobile Banking, your banks now fits your pocket.* Retrieved March 24,2014, from Commerce Investment Merchant Bank (CIMB): https://www.cimbclicks.com.my/mobile-banking.html

Dasgupta, S., R. Paul, and S. Gloria, Factors Affecting Behavioral Intentions Towards Mobile Banking Usage: Empirical Evidence from India, *Romanian Journal of Marketing*, Vol. 3, No. 1: 6-28, 2011.

Davis, F. D.(1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, Vol. 13, No. 3.pp. 319-340.

Devi, Y., Sebastina, J. N., and Kanchana, V. S. (2011). A study on customer awareness, opinion, reasons for opting mobile banking. *lnternational Journal Multidisciplinary Res*, *1*, 218-233.

Erickson, T. (2008). *Plugged In: The Generation Y Guide to Thriving at Work.* Harvard Business Review Press.

Fishbein, M., and Ajzen, I. (1975). *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research.* MA: Addison-Wesley.

Hair, J., Money, A., and Samouel, P. (2007). *Research Methods for Business* (7th ed.). Australia: John Wiley and Sons.

Bank Islam Malaysia Berhad. (2010, October 20). *Bank Islam Unveils Malaysia's First Mobile Banking Without Internet Access.* Retrieved March 24,2014, from Bank IslamMalaysia:http://www.bankislam.com.my/en/news/Pages/BankIslamUnveilsMalaysiaFirstMobileBankingWithoutInternetAccess.aspx

Bank Negara Malaysia. (2014). *List of Banks Offering Internet and Mobile Banking Services.* Retrieved March 22, 2014, from Bank Negara Malaysia: http://www.bnm.gov.my/index.ps&pg=ps_regulatees&eId

Kumar, A and Lim, H. (2006), Age Differences in Mobile Service Perceptions: Comparison of Generation Y and Baby Boomers, *Journal of Services Marketing, 22 (7), 568-77.*

Koenig-Lewis, N., Palmer, A., and Moll, A. (2010). Predicting Young Consumers' Take Up of Mobile Banking Services. *International Journal of Bank Marketing*, *28*(5), 410-432.

Laforet, S., and Li, X. (2005). Consumers' Attitudes towards Online and Mobile Banking in China. *International Journal of Bank Marketing,* 23(5), 362-380.

Lee, E.J., Kwon, K.N., and Schumann, D.W. (2005), Segmenting the Non-Adopter Category in the Diffusion of Internet Banking, *International Journal of Bank Marketing*, Vol. 23(5), pp. 414 - 437

Lee, K. C., and Chung, N. (2009). Understanding Factors Affecting Trust In And Satisfaction With Mobile Banking In Korea: A Modified Delone and Mclean's Model Perspective. *Interacting with Computers*, 21(5), 385-392.

Lewicki, R. J., McAllister, D. J., and Bies, R. J. (1998). Trust and distrust: New Relationships and Realities. *Academy of Management Review*, *23*(3), 438-458.

Lionberger, H.F., (1968). *Adoption of New Ideas and Practices*. Iowa State University Press, Ames, IA., USA.

Laukkanen, T. (2007). Internet vs Mobile Banking: Comparing Customer Value Perceptions. *Business Process Management Journal*, *13*(6), 788-797.

Luarn, P., and Lin, H. H. (2005). Toward An Understanding of the Behavioral Intention to Use Mobile Banking. *Computers in Human Behavior*, *21*(6), 873-891.

Malhotra, N. K (2004). *Marketing Research*: *An Applied Orientation* (4th ed.). New Delhi: Pearson Prentice Hall.

Martin, C.A., (2005), From High Maintenance to High Productivity: What Managers Need To Know About Generation Y, *Emerald Group Publishing Limited, 37(1), 39-44.*

Mayer, R. C., Davis, J. H., and Schoorman, F. D. (1995). An Integrative Model of Organizational Trust. *Academy Of Management Review*, *20*(3), 709-734.

McKnight, D. H., and Chervany, N. L. (2001). Trust and Distrust Definitions: One Bite at A Time. In *Trust in Cyber-societies* (pp. 27-54). Springer Berlin Heidelberg.

Mehrens, W. A., and Lehmann, I. J. (1987). *Using Standardized Tests in Education*. Longman/Addison Wesley Longman.

Morris, M.G. and Venkatesh, V. (2000), Age Differences In Technology Adoption Decisions: Implications for a Changing Work Force, *Personnel Psychology*, Vol. 53 No. 2, pp. 375-403.

Nor, K. M., Sutanonpaiboon, J., and Mastor, N. H. (2010). Malay, Chinese, and Internet Banking. *Chinese Management Studies*, *4*(2), 141-153.

Rogers, E.M. (1962). *The Diffusion of Innovations*, Free Press, New York, NY. 1962.475p.

Rogers, E. M., and Shoemaker, F. F. (1971). *Communication of innovations: A cross-cultural approach*. New York: Free Press, Michigan State University 1971. 476 p.

Riquelme, H. E., and Rios, R. E. (2010). The Moderating Effect of Gender in the Adoption of Mobile Banking. *International journal of bank marketing*, *28*(5), 328-341.

Rousseau, D. M., Sitkin, S. B., Burt, R. S., and Camerer, C. (1998). Not so different after all: A cross-discipline view of trust. *Academy of Management Review*, *23*(3), 393-404.

Sathye, M. (1999) Acceptance of Internet Banking by Australian Consumers: An Empirical Investigation, *International Journal of Bank Marketing*, 17,7,324-334.

Sekaran, U and Bougie, R. (2013). *Research method for business: a skill-building approach* (6th ed.). New York: Wiley and sons.

Sheth, J. N., Newman, B. I., and Gross, B. L. (1991). Why we buy what we buy: a theory of consumption values. *Journal of Business Research*, *22*(2), 159-170.

Sinisalo, J., and Karjaluoto, H. (2007). Mobile Customer Relationship Management: a Communication Perspective. *International Journal of Electronic Customer Relationship Management*, *1*(3), 242-257.

Suruhanjaya komunikasi dan Multimedia Malaysia (2013, July 08). *Hand Phone Users Survey 2012.* Retrieved March 20,2014, from Suruhanjaya komunikasi dan Multimedia Malaysia: http://www.skmm.gov.my/Resources/Statistics/Hand-phone-Surveys.aspx

Syrett, M., & Lamminman, J. (2004). Advertising and Millennials. Young Consumers: Insight and Ideas for Responsible Marketers. *International journal of bank marketing 5*(4), 62-73.

Taylor, S., and Todd, P. (1995). Decomposition and Crossover Effects in the Theory of Planned Behavior: A Study Of Consumer Adoption Intentions. *International journal of research in marketing*, *12*(2), 137-155.

Tiwari, R., and Buse, S. (2007). *The Mobile Commerce Prospects: A strategic analysis of opportunities in the banking sector* (p. 33). Hamburg: Hamburg University Press.

Tsalgatidou, A., and Pitoura, E. (2001). Business Models and Transactions in Mobile Electronic Commerce: Requirements and Properties. *Computer Networks*, *37*(2), 221-236.

Velmurugan, M. S., and Velmurugan, M. S. (2014). Consumers' Awareness, Perceived Ease of Use toward Information Technology Adoption in 3G Mobile Phones' Usages in India. *Asian Journal of Marketing*, *8*(1).

Vinson, D .E., Munson, J.M. and Nakanishi, M. (1977), An Investigation of the Rokeach Value Survey For Consumer Research Applications, In Perreault, W.E. (Ed.), *Advances in Consumer Research*, Vol 4, The Association of Consumer Research, Provo, UT, pp247-252.

Wadhe, A. P., and Ghodke, S. (2013) To Study Consumer Awareness & Perception towards Usage of Mobile Banking. *IBMRD's Journal of Management & Research.*

Wang, Y. S., Lin, H. H., and Luarn, P. (2006). Predicting Consumer Intention to Use Mobile Service. *Information Systems Journal*, *16*(2), 157-179.

Wan, W. W., Luk, C. L., & Chow, C. W. (2005). Customers' adoption of banking channels in Hong Kong. *International Journal of bank marketing*, 23(3), 255-272.

Wessels, L., and Drennan, J. (2010). An Investigation of Consumer Acceptance of M-Banking. *International Journal of Bank Marketing*, *28*(7), 547-568.

Williams K.C. and Page R.A. (2010), Marketing to the Generations, *Journal of Behavioral Studies in Business, 8-10.*

Worthen, B. R., Borg, W. R., and White, K. (1993). *Measurement and Evaluation in the Schools*. New York: Longman.

Zainol, N. F. (2011). *Factors Influencing Mobile Banking Adoption*. Master's thesis, Universiti Utara Malaysia.

Zeithaml, V. A. (1988). Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence. *The Journal of Marketing*, 2-22.

Zikmund, W., Babin, B., Carr, J., and Griffin, M. (2012). *Business Research Methods*. Canada: South-Western.

.

APPENDIX A

THE QUESTIONNAIRE

Dear respected respondents:

You are invited to participate in this research entitled **FACTORS INFLUENCING THE ADOPTION OF MOBILE BANKING AMONG Y GENERATION.** Please answer honestly and carefully all items in the questionnaire as it will influence the result of the research.

Information obtained from this questionnaire **WILL BE TREATED STRICTLY CONFIDENTIAL** and will be used solely for academic purposes.

Thanks you for your time in responding to this questionnaire.

Your participation is highly appreciated.

Sincerely,

ADILAH BINTI OTHMAN
Master of Science (Management), UUM
Email: adilahothman24@gmail.com

Kepada responden yang dihormati:

Anda telah terpilih untuk mengambil bahagian di dalam kajian yang bertajuk **FAKTOR YANG MEMPENGARUHI PENGGUNAAN MOBILE BANKING DI KALANGAN GENERASI Y.** Sila berikan jawapan anda dengan jujur dan kesemua jawapan yang anda berikan akan mempengaruhi keputusan kajian ini.

Maklumat yang diperolehi di dalam kajian ini **AKAN DIRAHSIAKAN** dan hanya akan digunakan untuk tujuan akademik sahaja.

Terima Kasih di atas masa yang diberikan oleh anda semua di dalam menjawab kajian ini.

Penglibatan anda sangat dihargai.

Yang Benar,

ADILAH BINTI OTHMAN
Master of Science (Management), UUM
Emel: adilahothman24@gmail.com

Section A: DEMOGRAPHIC PROFILE

Directions: Please select the best option that describes you
Arahan: Sila pilih pilihan terbaik yang menceritakan tentang diri anda.

1. Gender / Jantina:

( ) Male / Lelaki ( ) Female / Perempuan

2. Ethnics Groups/Kumpulan Etnik:

( ) Malay / Melayu ( ) Chinese / Cina ( ) Indian / India
( ) Others, lain-lain…… (Please state/Sila Nyatakan)

3. Age / Umur: ……. Years / Tahun

4. Marital status / Status Perkahwinan
a) Single / Bujang ( )
b) Married / Berkahwin ( )
c) Widow / Duda @ Janda ( )

5. Religion / Agama
a) Muslims / Islam ( )
b) Christians / Kristian ( )
c) Buddhists / Buddha ( )
d) Hindus / Hindu ( )
Other, please state.....

6. Level of study / Tahap Pendidikan:
( ) Degree in / Ijazah dalam …….……
( ) Masters in / Sarjana dalam ……..
( ) PhD in / PhD dalam ……

7. No. of semester / Semester.....

8. Do you have working experience / Adakah anda mempunyai pengalaman bekerja :

( ) Yes. If yes, how many years you have worked /……..
Ya. Jika ya, berapakah bilangan tahun anda bekerja ……
( ) No / Tidak

9. Occupation / Pekerjaan:
Government / Kerajaan ( )
Private / Swasta ( )
Self Employed / Bekerja Sendiri ( )
Others, please state / Lain-lain, sila nyatakan……

10. Do you have hand phone / Adakah anda mempunyai Telefon bimbit?
( ) Yes - If yes, please answer the other questions /
Ya – Jika ya, sila jawab soalan berikutnya.
( ) No - If No, your answer ends here. /
Tidak – Jika tidak, soalan anda berakhir disini

11. Do you use Mobile Banking services? /
Adakah anda menggunakan perkhidmatan *Mobile Banking?*

( ) Yes
( ) No

12. How long have you been using the Mobile Banking services? /
Berapa lamakah anda telah menggunakan perkhidmatan *Mobile Banking*?
Year / Tahun.....

SECTION B: FACTORS INFLUENCING THE ADOPTION OF MOBILE BANKING AMONG Y GENERATION

BAHAGIAN B: FAKTOR YANG MEMPENGARUHI PENGGUNAAN MOBILE BANKING DI KALANGAN GENERASI Y

Direction: Please circle the number of your answer that relates your opinion toward Mobile Banking Adoption.

Arahan: Sila bulatkan nombor jawapan anda yang anda fikirkan berkaitan dengan Adaptasi Perbankan Mudah Alih (Mobile Banking)

Strongly Disagree	**Disagree**	**Slightly Disagree**	**Slightly Agree**	**Agree**	**Strongly Agree**
1	2	3	4	5	6

No	Item	1	2	3	4	5	6
1	Using Mobile Banking Services will improve my performance in conducting transactions. / Menggunakan perkhidmatan *Mobile Banking* akan meningkatkan produktiviti saya dalam melakukan transaksi	1	2	3	4	5	6
2	Mobile banking gives the joy of controlling my financial transactions. / *Mobile banking* memberikan kegembiraan mengawal transaksi kewangan saya.	1	2	3	4	5	6
3	Mobile Banking made communications with banks much easier. / *Mobile Banking* menjadikan komunikasi dengan bank menjadi lebih mudah.	1	2	3	4	5	6
4	I think Mobile Banking enables me to complete my banking activities conveniently and efficiently. / Saya rasa *Mobile Banking* membolehkan saya untuk melengkapkan aktiviti perbankan saya dengan mudah dan cekap.	1	2	3	4	5	6
5	Overall, Mobile Banking is advantageous. / Secara keseluruhannya, *Mobile banking* sangat berfaedah	1	2	3	4	5	6
6	Learning to use Mobile Banking was easy for me. / Pengajaran untuk menggunakan perkhidmatan *Mobile Banking* mudah untuk saya.	1	2	3	4	5	6
7	Mobile Banking has more flexible ways to search information. / *Mobile Banking* mempunyai cara-cara yang lebih fleksibel untuk mencari maklumat.	1	2	3	4	5	6
8	I find the Mobile Banking system easy to use. / *Saya tahu bahawa sistem Mobile banking mudah untuk digunakan.*	1	2	3	4	5	6
9	It would be easy for me to become skillful at using Mobile Banking. /	1	2	3	4	5	6

	Sangat mudah bagi saya untuk menjadi mahir di dalam menggunakan perkhidmatan *Mobile Banking.*						
10	It's easy for me to remember how to perform tasks with Mobile Banking. / Mudah bagi saya untuk mengingati cara untuk melaksanakan tugas dengan *Mobile Banking.*	1	2	3	4	5	6
11	I think that I am aware about the benefits of Mobile Banking./ Saya merasakan bahawa saya sedar tentang faedah *Mobile Banking*.	1	2	3	4	5	6
12	I think that I have received enough information about Mobile Banking. / Saya merasakan bahawa saya menerima maklumat yang mencukupi mengenai *Mobile banking.*	1	2	3	4	5	6
13	I think that using the new mobile banking service is beneficial for me. / Saya merasakan bahawa penggunaan perkhidmatan Mobile Banking yang baru adalah bermanfaat bagi saya.	1	2	3	4	5	6
14	I have positive perception about using the Mobile Banking service. / Saya mempunyai tanggapan yang positif mengenai penggunaan perkhidmatan *Mobile Banking*.	1	2	3	4	5	6
15	Mobile Banking is compatible to my banking needs. / *Mobile Banking* serasi dengan keperluan perbankan saya.	1	2	3	4	5	6
16	I trust that transaction that conducted through Mobile Banking is secure and private. / Saya percaya bahawa transaksi yang dilakukan melalui *Mobile Banking* adalah selamat dan dirahsiakan.	1	2	3	4	5	6
17	I trust payments made through Mobile Banking channels will be processed securely. / Saya percaya bahawa bayaran yang dibuat melalui saluran *Mobile Banking* akan diproses dengan selamat.	1	2	3	4	5	6
18	I believe my personal information on Mobile Banking will be kept confidential. / Saya percaya bahawa maklumat peribadi saya yang terdapat di dalam perkhidmatan *Mobile Banking* akan disimpan secara sulit.	1	2	3	4	5	6
19	I can always rely on Mobile Banking for my banking activities. / Saya akan selalu bergantung kepada *Mobile Banking* apabila ingin melakukan aktiviti perbankan saya.	1	2	3	4	5	6
20	I trust Mobile Banking. / Saya mempercayai perkhidmatan *Mobile Banking*.	1	2	3	4	5	6
21	I would trust my bank to offer secure Mobile Banking. / Saya percaya bahawa bank saya akan menawarkan perkhidmatan *Mobile Banking* yang selamat	1	2	3	4	5	6
22	I trust in the technology an online bank is using. / Saya mempercayai teknologi atas talian yang digunakan oleh bank.	1	2	3	4	5	6
23	I think that using Mobile Banking can save my time in performing banking transactions. /	1	2	3	4	5	6

	Saya rasa penggunaan *Mobile Banking* boleh menjimatkan masa saya dalam melaksanakan transaksi perbankan.						
24	I think that using Mobile Banking can save the transaction handling fees in performing banking transactions. / Saya rasa penggunaan *Mobile Banking* dapat menjimatkan transaksi kos pengendalian sewaktu melaksanakan transaksi perbankan.	1	2	3	4	5	6
25	The use of Mobile Banking services is economical. / Penggunaan perkhidmatan *Mobile Banking* adalah sangat menjimatkan.	1	2	3	4	5	6
26	Mobile Banking services will be cheaper to use as compared to using other banking channel. / Perkhidmatan *Mobile Banking* adalah lebih murah untuk digunakan berbanding dengan penggunaan saluran perbankan yang lain	1	2	3	4	5	6
27	The charges for using Mobile Banking services will be economical. / Caj untuk menggunakan perkhidmatan *Mobile Banking* akan menjadi lebih murah.	1	2	3	4	5	6
28	There are more media and advertising recommending the use of the Mobile Banking service. / Terdapat banyak media dan pengiklanan yang mencadangkan penggunaan *Mobile Banking*.	1	2	3	4	5	6
29	My family uses more *Mobile Banking* services. / Keluarga saya selalu menggunakan perkhidmatan *Mobile Banking*	1	2	3	4	5	6
30	My friends use more Mobile Banking services. / Kawan saya selalu menggunakan perkhidmatan *Mobile Banking.*	1	2	3	4	5	6
31	My close friends think that I **can** use Mobile Banking. / Kawan baik saya merasakan bahawa saya **boleh** menggunakan *Mobile Banking.*	1	2	3	4	5	6
32	My close friends think that I **must** use Mobile Banking. / Kawan baik saya merasakan bahawa saya **mesti** menggunakan perkhidmatan *Mobile Banking.*	1	2	3	4	5	6
33	My close friends think that I **should** use Mobile Banking. / Kawan baik saya merasakan bahawa saya **harus** menggunakan perkhidmatan *Mobile Banking.*	1	2	3	4	5	6
34	Most people surrounding with me use Mobile Banking. / Kebanyakkan orang di sekeliling saya menggunakan perkhidmatan *Mobile banking*.	1	2	3	4	5	6
35	I will adopt Mobile Banking as soon as possible. / Saya akan menggunakan *Mobile Banking* secepat mungkin.	1	2	3	4	5	6
36	I will regularly use Mobile Banking in the future. / Saya akan selalu menggunakan *Mobile Banking* pada masa depan.	1	2	3	4	5	6
37	I believe I will use Mobile Banking in the future. / Saya percaya saya akan menggunakan *Mobile Banking* pada masa akan datang.	1	2	3	4	5	6
38	I intend to increase my use of the Mobile Banking in the	1	2	3	4	5	6

	future. / Saya berhasrat untuk meningkatkan penggunaan *Mobile Banking* pada masa akan datang.						
39	I believe it is worthwhile for me to adopt Mobile Banking. / Saya yakin bahawa sangat berbaloi bagi saya menggunakan *Mobile Banking*.	1	2	3	4	5	6
40	I intend to use Mobile Banking if the cost and times is reasonable for me. / Saya bercadang untuk menggunakan *Mobile Banking* jika kos dan masa penggunaan tersebut munasabah untuk saya.	1	2	3	4	5	6

"Thank you for your kind cooperation and valuable time"

"Terima kasih di atas kerjasama dan masa yang anda berikan'

APPENDIX B

THE SPSS OUTPUT

RELIABILITY FOR PILOT TEST

1- Perceived Usefulness

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.858	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Using mobile banking services will improve my performance in conducting transactions	17.47	10.809	.587	.850
Mobile banking gives the joy of controlling my financial transactions	18.23	10.185	.607	.848
Mobile banking made communications with banks much easier.	17.80	9.821	.706	.821
I think mobile banking enables me to complete my banking activities conveniently and efficiently.	17.70	9.114	.798	.794
Overall, mobile banking is advantageous	17.33	11.195	.718	.827

2-Perceived Ease of Use

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.892	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Learning to use mobile banking was easy for me	17.17	11.937	.806	.852
Mobile banking has more flexible ways to search information	17.30	12.562	.670	.883
I find mobile banking system easy to use	16.90	12.576	.748	.866
It would be easy for me to become skilful at using mobile banking	17.13	11.637	.752	.865
It easy for me to remember how to perform task with mobile banking	17.37	12.654	.710	.874

3-Awareness

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.870	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I think that I am aware about the benefits of mobile banking	17.53	11.361	.668	.849
I think that I have received enough information about mobile banking	17.83	13.385	.470	.890
I think that using the new mobile banking service is beneficial for me	17.73	11.789	.791	.826
I have positive perception about using the mobile banking service	17.67	10.092	.829	.806
Mobile banking is compatible to my banking needs	17.63	9.964	.759	.828

4-Trust

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.924	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I trust that transaction that conducted through mobile banking is secure and private	24.53	31.913	.746	.915
I trust payments made through mobile banking channels will be processes securely	24.53	30.533	.791	.910
I believe my personal information on mobile banking will be kept confidential.	24.70	30.286	.734	.916
I can always rely on mobile banking for my banking activities.	24.87	30.533	.730	.916
I trust mobile banking	24.67	28.782	.834	.905
I would trust my bank to offer secure mobile banking	24.53	30.051	.809	.908
I trust in the technology an online bank is using	24.57	33.013	.711	.918

5-Perceived Value

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.836	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I think that using mobile banking can save my time in performing banking transactions	18.10	9.403	.554	.834
I think that using mobile banking can save the transaction handling fees in performing banking transactions	18.37	8.930	.759	.766
The use of mobile banking services is economical	18.07	9.789	.744	.777
Mobile banking services will be cheaper to use as compared to using other banking channel	18.00	10.552	.641	.805
The charges for using mobile banking services will be economical	18.40	10.248	.542	.829

6-Social Norms

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.786	**7**

Item Statistics

	Mean	Std. Deviation	N
There are more media and advertising recommending the use of mobile banking service	4.40	1.037	30
My family uses more mobile phone banking services.	3.67	1.295	30
My friends use more mobile phone banking services.	3.73	1.363	30
My close friends think that I can use mobile banking	4.07	1.311	30
My close friends think that I must use mobile banking	4.30	1.088	30
My close friends think that I should use mobile banking	4.10	1.185	30
Most people surrounding with me use mobile banking	4.27	1.048	30

Mobile Banking Adoption

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.869	6

Item Statistics

	Mean	Std. Deviation	N
I will adopt mobile banking as soon as possible	4.20	1.095	30
I will regularly use mobile banking in the future	4.47	1.137	30
I believe I will use mobile banking in the future	4.47	1.106	30
I intend to increase my use of the mobile banking in the future	4.57	1.006	30
I believe it is worthwhile for me to adopt mobile banking.	4.53	1.074	30
mobile banking if the cost and times is reasonable for me	5.07	.785	30

RELIABILITY FOR REAL TEST

1- Perceived Usefulness

Case Processing Summary

		N	%
Cases	Valid	382	100.0
	Excluded[a]	0	.0
	Total	382	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.876	5

Item Statistics

	Mean	Std. Deviation	N
Using mobile banking services will improve my performance in conducting transactions	4.75	.914	382
Mobile banking gives the joy of controlling my financial transactions	4.53	1.066	382
Mobile banking made communications with banks much easier.	4.74	.995	382
I think mobile banking enables me to complete my banking activities conveniently and efficiently.	4.76	.930	382
Overall, mobile banking is advantageous	4.83	.905	382

2- Perceived Ease of Use

Case Processing Summary

		N	%
Cases	Valid	382	100.0
	Excluded[a]	0	.0
	Total	382	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.861	5

Item Statistics

	Mean	Std. Deviation	N
Learning to use mobile banking was easy for me	4.77	.847	382
Mobile banking has more flexible ways to search information	4.68	.922	382
I find mobile banking system easy to use	4.75	.923	382
It would be easy for me to become skilful at using mobile banking	4.72	.945	382
It easy for me to remember how to perform task with mobile banking	4.83	.952	382

3-Awareness

Case Processing Summary

		N	%
Cases	Valid	382	100.0
	Excluded[a]	0	.0
	Total	382	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.863	5

Item Statistics

	Mean	Std. Deviation	N
I think that I am aware about the benefits of mobile banking	4.73	.950	382
I think that I have received enough information about mobile banking	4.64	1.043	382
I think that using the new mobile banking service is beneficial for me	4.70	.947	382
I have positive perception about using the mobile banking service	4.74	.974	382
Mobile banking is compatible to my banking needs	4.71	1.000	382

4-Trust

Case Processing Summary

		N	%
Cases	Valid	382	100.0
	Excluded[a]	0	.0
	Total	382	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.927	7

Item Statistics

	Mean	Std. Deviation	N
I trust that transaction that conducted through mobile banking is secure and private	4.66	1.079	382
I trust payments made through mobile banking channels will be processes securely	4.59	.981	382
I believe my personal information on mobile banking will be kept confidential.	4.63	1.066	382
I can always rely on mobile banking for my banking activities.	4.57	1.201	382
I trust mobile banking	4.65	1.069	382
I would trust my bank to offer secure mobile banking	4.69	1.062	382
I trust in the technology an online bank is using	4.68	1.078	382

5- Perceived Value

Case Processing Summary

		N	%
Cases	Valid	382	100.0
	Excluded[a]	0	.0
	Total	382	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.851	5

Item Statistics

	Mean	Std. Deviation	N
I think that using mobile banking can save my time in performing banking transactions	4.89	.983	382
I think that using mobile banking can save the transaction handling fees in performing banking transactions	4.81	.970	382
The use of mobile banking services is economical	4.83	.927	382
Mobile banking services will be cheaper to use as compared to using other banking channel	4.80	.962	382
The charges for using mobile banking services will be economical	4.67	1.030	382

6-Social Norms

Case Processing Summary

		N	%
Cases	Valid	382	100.0
	Excluded[a]	0	.0
	Total	382	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.897	7

Item Statistics

	Mean	Std. Deviation	N
There are more media and advertising recommending the use of mobile banking service	4.64	1.040	382
My family uses more mobile phone banking services.	4.40	1.240	382
My friends use more mobile phone banking services.	4.42	1.201	382
My close friends think that I can use mobile banking	4.61	1.071	382
My close friends think that I must use mobile banking	4.61	1.119	382
My close friends think that I should use mobile banking	4.59	1.084	382
Most people surrounding with me use mobile banking	4.57	1.115	382

7-Mobile Banking Adoption

Case Processing Summary

		N	%
Cases	Valid	382	100.0
	Excluded[a]	0	.0
	Total	382	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.911	6

Item Statistics

	Mean	Std. Deviation	N
I will adopt mobile banking as soon as possible	4.67	1.043	382
I will regularly use mobile banking in the future	4.82	1.000	382
I believe I will use mobile banking in the future	4.85	.969	382
I intend to increase my use of the mobile banking in the future	4.91	.939	382
I believe it is worthwhile for me to adopt mobile banking.	4.97	.910	382
I intend to use mobile banking if the cost and times is reasonable for me	5.16	.844	382

DEMOGRAPHIC ANALYSIS

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	168	44.0	44.0	44.0
	Female	214	56.0	56.0	100.0
	Total	382	100.0	100.0	

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-25	269	70.4	70.4	70.4
	26-31	81	21.2	21.2	91.6
	32-37	32	8.4	8.4	100.0
	Total	382	100.0	100.0	

Marital status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	319	83.5	83.5	83.5
	Married	53	13.9	13.9	97.4
	Widow	10	2.6	2.6	100.0
	Total	382	100.0	100.0	

Race

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Malay	208	54.5	54.5	54.5
	Chinese	81	21.2	21.2	75.7
	Indian	65	17.0	17.0	92.7
	Others	28	7.3	7.3	100.0
	Total	382	100.0	100.0	

Religion

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Muslim	233	61.0	61.0	61.0
	Christian	78	20.4	20.4	81.4
	Buddha	33	8.6	8.6	90.1
	Hindu	34	8.9	8.9	99.0
	Others	4	1.0	1.0	100.0
	Total	382	100.0	100.0	

Level of study

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Degree	236	61.8	61.8	61.8
	Master	109	28.5	28.5	90.3
	PHD	37	9.7	9.7	100.0
	Total	382	100.0	100.0	

No.of semester

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-2	136	35.6	35.6	35.6
	3-4	151	39.5	39.5	75.1
	5-6	56	14.7	14.7	89.8
	7-8	39	10.2	10.2	100.0
	Total	382	100.0	100.0	

Working experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	206	53.9	53.9	53.9
	No	176	46.1	46.1	100.0
	Total	382	100.0	100.0	

Respondent occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Government	29	7.6	7.6	7.6
	Private	89	23.3	23.3	30.9
	self-employed	58	15.2	15.2	46.1
	Others	206	53.9	53.9	100.0
	Total	382	100.0	100.0	

Do you have hand phone?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	382	100.0	100.0	100.0

Do you using mobile banking services?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	191	50.0	50.0	50.0
	No	191	50.0	50.0	100.0
	Total	382	100.0	100.0	

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Perceived_usefulness	382	2.20	6.00	4.7209	.78765	-.395	.125	-.221	.249
Perceived_ease_of_use	382	1.20	6.00	4.7497	.73602	-.562	.125	1.194	.249
Awareness	382	1.80	6.00	4.7031	.79019	-.540	.125	.156	.249
Trust	382	1.71	6.00	4.6391	.89819	-.654	.125	.224	.249
Perceived_value	382	2.00	6.00	4.8010	.77140	-.377	.125	-.201	.249
Social_norms	382	1.29	6.00	4.5509	.88497	-.574	.125	.374	.249
Valid N (listwise)	382								

INDEPENDENT SAMPLES TEST

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Adoption_MobileBanking	Male	168	5.0744	.71733	.05534
	Female	214	4.7593	.82308	.05626

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Adoption_MobileBanking	Equal variances assumed	1.189	.276	3.927	380	.000	.31506	.08023	.15730	.47282
	Equal variances not assumed			3.992	375.832	.000	.31506	.07892	.15988	.47024

One-way ANOVA

1-Age

Test of Homogeneity of Variances

Adoption_MobileBanking

Levene Statistic	df1	df2	Sig.
7.501	2	379	.001

ANOVA

Adoption_MobileBanking

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10.190	2	5.095	8.418	.000
Within Groups	229.384	379	.605		
Total	239.574	381			

Robust Tests of Equality of Means

Adoption_MobileBanking

	Statistic[a]	df1	df2	Sig.
Welch	11.680	2	86.343	.000
Brown-Forsythe	12.710	2	141.476	.000

a. Asymptotically F distributed.

2-Race

Test of Homogeneity of Variances

Adoption_MobileBanking

Levene Statistic	df1	df2	Sig.
1.885	3	378	.132

ANOVA

Adoption_MobileBanking

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	13.808	3	4.603	7.707	.000
Within Groups	225.765	378	.597		
Total	239.574	381			

Robust Tests of Equality of Means

Adoption_MobileBanking

	Statistic[a]	df1	df2	Sig.
Welch	7.996	3	103.668	.000
Brown-Forsythe	9.385	3	213.171	.000

a. Asymptotically F distributed.

3- Education

Test of Homogeneity of Variances

Adoption_MobileBanking

Levene Statistic	df1	df2	Sig.
1.653	2	379	.193

ANOVA

Adoption_MobileBanking

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.133	2	.066	.105	.900
Within Groups	239.441	379	.632		
Total	239.574	381			

Robust Tests of Equality of Means

Adoption_MobileBanking

	Statistic[a]	df1	df2	Sig.
Welch	.143	2	103.024	.867
Brown-Forsythe	.120	2	199.437	.887

a. Asymptotically F distributed.

4- Religion

Test of Homogeneity of Variances

Adoption_MobileBanking

Levene Statistic	df1	df2	Sig.
1.708	4	377	.147

ANOVA

Adoption_MobileBanking

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12.889	4	3.222	5.359	.000
Within Groups	226.685	377	.601		
Total	239.574	381			

Robust Tests of Equality of Means

Adoption_MobileBanking

	Statistic[a]	df1	df2	Sig.
Welch	5.566	4	15.026	.006
Brown-Forsythe	7.419	4	93.239	.000

a. Asymptotically F distributed.

Correlations

		Adoption_MobileBanking	Perceived_usefulness	Perceived_ease_of_use	Awareness	Trust	Perceived_value	Social_norms
Adoption_MobileBanking	Pearson Correlation	1	.547**	.508**	.570**	.570**	.588**	.626**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	382	382	382	382	382	382	382
Perceived_usefulness	Pearson Correlation	.547**	1	.728**	.642**	.581**	.553**	.482**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
	N	382	382	382	382	382	382	382
Perceived_ease_of_use	Pearson Correlation	.508**	.728**	1	.708**	.589**	.528**	.493**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000
	N	382	382	382	382	382	382	382
Awareness	Pearson Correlation	.570**	.642**	.708**	1	.736**	.634**	.537**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000
	N	382	382	382	382	382	382	382
Trust	Pearson Correlation	.570**	.581**	.589**	.736**	1	.656**	.580**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
	N	382	382	382	382	382	382	382
Perceived_value	Pearson Correlation	.588**	.553**	.528**	.634**	.656**	1	.602**

	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
	N	382	382	382	382	382	382	382
Social_norms	Pearson Correlation	.626**	.482**	.493**	.537**	.580**	.602**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	382	382	382	382	382	382	382

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

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Social norms, Perceived usefulness, Perceived value, Trust, Perceived ease of use, Awareness[b]	.	Enter

a. Dependent Variable: Adoption_MobileBanking

b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.716[a]	.513	.505	.55789

a. Predictors: (Constant), Social_norms, Perceived_usefulness, Perceived_value, Trust, Perceived_ease_of_use, Awareness

b. Dependent Variable: Adoption_MobileBanking

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	122.858	6	20.476	65.789	.000[b]
	Residual	116.716	375	.311		
	Total	239.574	381			

a. Dependent Variable: Adoption_MobileBanking

b. Predictors: (Constant), Social_norms, Perceived_usefulness, Perceived_value, Trust, Perceived_ease_of_use, Awareness

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.023	.213		4.807	.000
	Perceived_usefulness	.174	.056	.173	3.090	.002
	Perceived_ease_of_use	.001	.064	.001	.019	.984
	Awareness	.113	.064	.113	1.779	.076
	Trust	.076	.052	.086	1.461	.145
	Perceived_value	.167	.055	.163	3.047	.002
	Social_norms	.299	.043	.334	6.926	.000

a. Dependent Variable: _MobileBanking Adoption

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.1131	6.0057	4.8979	.56786	382
Std. Predicted Value	-3.143	1.951	.000	1.000	382
Standard Error of Predicted Value	.033	.179	.071	.025	382
Adjusted Predicted Value	3.1101	6.0057	4.8973	.56859	382
Residual	-2.99615	1.61247	.00000	.55348	382
Std. Residual	-5.371	2.890	.000	.992	382
Stud. Residual	-5.403	2.900	.001	1.004	382
Deleted Residual	-3.03298	1.62331	.00063	.56685	382
Stud. Deleted Residual	-5.619	2.929	.000	1.010	382
Mahal. Distance	.304	38.048	5.984	5.359	382
Cook's Distance	.000	.148	.003	.010	382
Centered Leverage Value	.001	.100	.016	.014	382

a. Dependent Variable: Adoption_MobileBanking