

FACTOR AFFECTING CONSUMER RESISTANCE  
TO PAYPAL MOBILE PAYMENT ADOPTION: A  
STUDY OF GENERATION X CONSUMERS IN  
MALAYSIA

BY

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## TABLE OF CONTENTS

	<b>Page</b>
Copyright Page.....	ii
Declaration.....	iii
Acknowledgement.....	iv
Dedication.....	v
Table of Contents.....	vi
List of Tables.....	xii
List of Figures.....	xiv
List of Abbreviations .....	xv
Preface.....	xvi
Abstract.....	xvii

## CHAPTER 1 INTRODUCTION

1.0 Introduction.....	1
1.1 Research Background.....	1
1.2 Problem Statement.....	2
1.3 Research Objective.....	3
1.3.1 General Objective.....	4
1.3.2 Specific Objectives.....	4
1.4 Research Question.....	5
1.4.1 General Question.....	5
1.4.2 Specific Question.....	5
1.5 Significance of Study.....	6

1.6 Outline of the Study.....	7
1.7 Conclusion.....	7

## **CHAPTER 2 LITERATURE REVIEW**

2.0 Introduction.....	8
2.1 Review of Prior Empirical Studies.....	8
2.1.1 Adoption.....	8
2.1.2 Usage Barrier.....	10
2.1.3 Risk Barrier.....	12
2.1.4 Value Barrier.....	13
2.1.5 Image Barrier.....	15
2.1.6 Tradition Barrier.....	17
2.1.7 Perceived Cost Barrier.....	19
2.2 Theoretical/ Conceptual Foundations.....	21
2.3 Proposed Conceptual Framework.....	24
2.4 Hypotheses of Study.....	25
2.5 Conclusion.....	25

## **CHAPTER 3 RESEARCH METHODOLOGY**

3.0 Introduction.....	26
3.1 Research Design.....	26
3.1.1 Types of Research Design.....	26
3.1.2 Nature of Research Design.....	27
3.1.3 Time Horizon of Research Design.....	27

3.2 Data Collection Method.....	27
3.2.1 Primary Data.....	28
3.2.2 Secondary Data.....	28
3.3 Sampling Design.....	28
3.3.1 Target Population.....	29
3.3.2 Sampling Size.....	29
3.3.3 Sampling Element.....	29
3.3.4 Sampling Location.....	30
3.3.5 Sampling Period.....	30
3.3.6 Sampling Frame.....	30
3.3.7 Sampling technique.....	31
3.4 Research Instrument.....	31
3.4.1 Questionnaire.....	32
3.4.2 Questionnaire Design.....	32
3.4.3 Pilot Test.....	33
3.5 Constructs Measurement.....	34
3.5.1 Sources of the questions.....	34
3.5.2 Scale Measurement.....	36
3.5.2.1 Nominal Scale.....	36
3.5.2.2 Ordinal Scale.....	36
3.5.2.3 Interval Scale.....	37
3.5.3 Summary of the scales .....	37
3.6 Data Processing.....	38



3.7 Data Analysis.....	39
3.7.1 Descriptive Analysis.....	39
3.7.2 Reliability Analysis.....	40
3.7.3 Normality Analysis.....	41
3.7.4 Inferential Analysis.....	41
3.7.4.1 Pearson Correlation Coefficient Analysis.....	41
3.7.4.2 Multiple Linear Regression.....	42
3.8 Conclusion.....	43

## **CHAPTER 4 RESULTS AND INTERPRETATION**

4.0 Introduction.....	44
4.1 Response Rate.....	44
4.2 Descriptive Analysis.....	45
4.2.1 Frequency Distribution.....	45
4.2.1.1 Gender.....	45
4.2.1.2 Age.....	45
4.2.1.3 Cultural Heritage.....	46
4.2.1.4 Marital Status.....	46
4.2.1.5 Highest Education Completed.....	47
4.2.1.6 Monthly Allowance.....	47
4.2.1.7 Users and Non-users.....	48
4.2.2 Central Tendency.....	48
4.2.2.1 Usage Barrier (UB).....	48
4.2.2.2 Risk Barrier (RB).....	49

4.2.2.3 Value Barrier (VB).....	49
4.2.2.4 Image Barrier (IB).....	50
4.2.2.5 Tradition Barrier (TB).....	51
4.2.2.6 Perceived Cost Barrier (PCB).....	51
4.2.2.7 Adoption (A).....	52
4.3 Reliability Analysis.....	53
4.4 Normality Analysis.....	54
4.5 Inferential Analysis.....	55
4.5.1 Pearson Correlation Coefficient Analysis.....	55
4.5.2 Multiple Linear Regression.....	56
4.6 Hypothesis Testing.....	59
4.7 Conclusion.....	60

## **CHAPTER 5 CONCLUSION AND POLICY IMPLICATION**

5.0 Introduction.....	61
5.1 Summary of Statistical Analysis.....	61
5.1.1 Descriptive Analysis.....	61
5.1.2 Reliability Analysis.....	62
5.1.3 Normality Analysis.....	62
5.1.4 Inferential Analysis.....	63
5.2 Discussion of Major Findings.....	63
5.2.1 Usage Barrier and PayPal MP Adoption.....	63
5.2.2 Risk barrier and PayPal MP Adoption.....	64
5.2.3 Value Barrier and PayPal MP Adoption.....	65

5.2.4 Image Barrier and PayPal MP Adoption.....	66
5.2.5 Tradition Barrier and PayPal MP Adoption.....	66
5.2.6 Perceived Cost Barrier and PayPal MP Adoption... ..	67
5.3 Implication of the Study.....	68
5.3.1 Theoretical Implication.....	68
5.3.2 Managerial Implication.....	68
5.4 Limitations of the Study.....	70
5.5 Recommendation for Future Research.....	70
5.6 Conclusion.....	71
References.....	72
Appendices.....	79

## LIST OF TABLES

	<b>Page</b>
Table 2.1 Definition of Five Barriers in IRT.....	22
Table 3.1 Summary of Questionnaire Design.....	32
Table 3.2 Pilot Test Result.....	33
Table 3.3 Sources of the Questions.....	34
Table 3.4 Summary of Measurement Scale Used.....	37
Table 3.5 Data Preparation Steps.....	38
Table 3.6 Rule of Thumb for Reliability Test.....	40
Table 3.7 Rule of Thumb for Pearson Correlation Analysis.....	42
Table 3.8 Multiple Linear Regression Equation.....	43
Table 4.1 Gender.....	45
Table 4.2 Age.....	45
Table 4.3 Cultural Heritage.....	46
Table 4.4 Marital Status.....	46
Table 4.5 Highest Education Completed.....	47
Table 4.6 Monthly Allowances.....	47
Table 4.7 PayPal users or non-users.....	48
Table 4.8 Central Tendency for UB.....	48
Table 4.9 Central Tendency for RB.....	49
Table 4.10 Central Tendency for VB.....	49
Table 4.11 Central Tendency for IB.....	50
Table 4.12 Central Tendency for TB.....	51

Table 4.13 Central Tendency for PCB.....	51
Table 4.14 Central Tendency for A.....	52
Table 4.15 Reliability Test.....	53
Table 4.16 Normality Test.....	54
Table 4.17 Pearson Correlation Coefficient Test.....	55
Table 4.18 Model Summary.....	56
Table 4.19 Anova.....	56
Table 4.20 Coefficients.....	57
Table 4.21 Multiple Linear Equation.....	58
Table 4.22 Summary of Hypotheses.....	59

## LIST OF FIGURES

	<b>Page</b>
Figure 2.1: Theoretical Model of Innovation Resistance Theory .....	23
Figure 2.2: Proposed Conceptual Framework - Extended IRT model.....	24

## LIST OF ABBREVIATIONS

MP = Mobile payment

UB = Usage Barrier

RB = Risk Barrier

VB = Value Barrier

TB = Tradition Barrier

IB = Image Barrier

PCB = Perceived Cost Barrier

A = Adoption

IRT = Innovation Resistance Theory

## PREFACE

This thesis is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration (Corporate Management). This thesis contains work done from April 2016 to August 2016. This thesis was supervised by Encik Mohd Nizam Bin A. Badaruddin and it was solely written by Mr. Low Kok Hau



## ABSTRACT

The emergence of mobile technologies has changed the consumers' life in many ways, especially the way they make payment. One of the emerging innovations introduced by financial providers is PayPal mobile payment. The PayPal mobile payment is a fast growing payment method serves as an alternative method for the traditional payment system. However, the adoption intention of this mobile payment is low in Malaysia even though it has brought many benefits to the consumers. The study will intended to focus on the generation X consumers due to their characteristics of shunning to innovation advancements, high purchasing power and at the same time they are also one of the pre-dominant populations in Malaysia. Therefore, this study is intended to explore the resistance factors to understand the reasons for this slow adoption among generation X in Malaysia. Innovation Resistance Theory (IRT) has been employed to examine the barriers including Usage Barrier (UB), Value Barrier (VB), Risk Barrier (RB), Image Barrier (IB), Tradition Barrier (TB) and Perceived Cost Barrier (PCB). The findings of this study will enable the financial providers and business practitioners to determine individual resistance behaviour and develop solutions to eliminate the resistance barriers and act as a means of understanding how to enhance the rate of adoption in Malaysia.

**Keywords:** PayPal Mobile Payment, Innovation Resistance Theory (IRT),  
Generation X Consumers, Malaysia

## **CHAPTER 1: INTRODUCTION**

### **1.0 Introduction**

This chapter will mainly discuss about the background of the research, problem statement, research questions, research objectives and the significant of the study.

### **1.1 Background of the Study**

The emergence of mobile technology has brought many changes to the payment systems used by the consumers. In past, consumers always use coins and notes to trade with the merchants for goods and services that they want (Shin, 2010). However, the trend has change now. Consumers nowadays no longer interested in using physical monies to make payment for their purchases. Instead, they prefer to use their mobile devices to make payment (mobile payment). In MP, the consumers make payment using mobile devices such as smartphones, tablet and personal digital assistants (PDAs) by utilizing the wireless and other communication technologies (Leong, Hew, Tan, & Ooi, 2013). The PayPal mobile payment is one of the various types in m-payments. In PayPal mobile payment, the consumers are required to log in to their accounts with the email address and complete the transaction through transferring the payment to the respective seller accounts. The PayPal platform also work along with thousands of apps, provide on the go services for the consumers.

The birth of this modern payment method had enabled customers to pay for the goods and services they purchased at anywhere and anytime using their mobile devices, provide more convenient, effective and safer ways to make the transactions. The mobile payment is a fast growing payment method that serves as an alternative method to replace the traditional payment method (Tan, Ooi, Chong, Hew, 2014). Both the consumers and merchants can get benefit from the m-payments. For instance, with the introduce of mobile payment services, consumers no longer need to spend long time queuing at the checkout counter and this will increase their satisfaction towards the shop which will persuade them to shop more often and will improve the business.

As per today, there are thousands of online and mobile stores that allow the customers to make payment using PayPal platform. Though, PayPal is convenient to use and advantageous to the users, its adoption rate in Malaysia still lower compared to other countries across the globe especially among generation X consumers in Malaysia. According to Wikipedia, Generation X refers to those born between early 1960s and 1980s. They constitute 24% of the total population in Malaysia. They are in a high earning, high spending phase of life and naturally incorporate digital tools into their shopping. Hence, generation X is one of the popular targeted segments due to their population size and high purchasing power (Khor & Mapunda, 2014). Therefore, it is important to understand their intention to adopt the PayPal mobile payment.

## **1.2 Problem Statement**

The continuous advancement in mobile commerce has created huge opportunities for businesses to come up with various base services. According to the data obtained from the Malaysian Communications and Multimedia Commission (2015), Malaysia has high mobile phone penetration rate of 146.2% and 85% of the total mobile

phone users owns more than one mobile phone. This penetration rate had urged many industries in Malaysia having intention to adopt mobile commerce in their business to establish an effective ways of operating businesses. For instance, the banking industry had decided to provide the mobile payment services to its clients. (Amin, Hamid, Lada, & Anis, 2008). Besides than this, the retail industry also begins to adopt mobile payment services to provide convenient to its customers for the ease of making purchases where it allow the customers to pay for goods and services using the mobile phone. For example: M2U, RHB, CIMB clicks and PayPal m-payment.

However, even though the Malaysia mobile penetration is high but the mobile payment services have only been applied by a small number of users (Zhou, 2011). According to World Pay (2012), 0.3% of the mobile phone users in Malaysia use their mobile phones to make payment for their purchases and out of this 0.3%, only 13% of the transactions are made through PayPal platform. It is a fact that the PayPal m-payment is still in its infancy and quite foreign to the people of Malaysia especially among those who came of age in the '60s and early '80s (Leong, Hew, Tan, & Ooi, 2013).

Hence, it is imperative for the PayPal Company to understand the level of adoption of PayPal mobile payment by the customer and to investigate the factors affecting the consumer resistance to use it for financial transactions. Thus, enable the company and the banking industry to develop solutions against the issues and attract more customers to adopt the services.

### **1.3 Research Objectives**

The research objective flowed from the problem statement can help to determine the PayPal mobile payment adoption among generation X consumers in Malaysia.

### **1.3.1 General Objectives**

This segment states the main intention for carry out the research. The purpose of conducting this research is to explore the factors resisting Malaysian generation X consumers from adopting PayPal mobile payment services to perform their daily transactions, by recognizing the determinants proposed by the Innovation Resistance Theory (IRT).

### **1.3.2 Specific Objectives**

The specific objectives are as follows:

1. To test the relationships between usage barrier and PayPal mobile payment adoption among generation X consumers in Malaysia.
2. To determine the relationships between risk barrier and PayPal mobile payment adoption among generation X consumers in Malaysia.
3. To explore the relationships between value barrier and PayPal mobile payment adoption among generation X consumers in Malaysia.
4. To examine the relationships between image barrier and PayPal mobile payment adoption among generation X consumers in Malaysia.
5. To evaluate the relationships between tradition barrier and PayPal mobile payment adoption among generation X consumers in Malaysia.

6. To describe the relationships between perceived cost barrier and PayPal mobile payment adoption among generation X consumers in Malaysia.

## **1.4 Research Questions**

Several questions related to the research issues are developed in order to understand more on the research topic. The questions developed below will help to evaluate the resistance factors that affect the Malaysian consumers' decisions to use the PayPal mobile payment especially among generation X consumers.

### **1.4.1 General Question**

Which barrier(s) have the greatest influence on the Malaysian generation X consumers' to adopt PayPal mobile Payment?

### **1.4.2 Specific Questions**

1. What is the relationship between usage barrier and PayPal mobile payment adoption among generation X in Malaysia?
2. What is the relationship between risk barrier and PayPal mobile payment adoption among generation X in Malaysia?
3. What is the relationship between value barrier and PayPal mobile payment adoption among generation X in Malaysia?

4. What is the relationship between image barrier and PayPal mobile payment adoption among generation X in Malaysia?
5. What is the relationship between tradition barrier and PayPal mobile payment adoption among generation X in Malaysia?
6. What is the relationship between perceived cost barrier and PayPal mobile payment adoption among generation X in Malaysia?

## **1.5 Significant of the Study**

As mobile payment is becoming more and more important in Malaysia, there is a need to understand the reasons why the consumers resist the innovation especially among generation X consumers whom is seen as the pre-dominant populations with high purchasing power in Malaysia. Therefore, the barriers of the mobile payment adoption are vital information for the local businesses to have a better understanding on the issues as to increase the PayPal mobile payment adoption rate among the generation X. The outcomes of the research may also help financial providers to have better insight on the relationship between all the barriers and the consumers' adoption intention of PayPal mobile payment in Malaysia.

Consequently, the findings will also provide a deeper understanding of the consumer resistance behaviour about the PayPal mobile payment and induce the local businesses to develop solutions to eliminate the resistance thus enhancing the adoption rate. While there are various studies discussing on the mobile payment literature, few are emphasizing on the PayPal mobile payment. As such, this finding might be use as reference for future researchers who are interested in carry out on the similar research.

## **1.6 Outline of the Study**

This thesis comprise of five chapters. The chapter 1 will outline the background to the research, problem statement, emphasizes on the significance of the study, formulate the research objectives and research questions for the research.

Chapter 2 presents findings from the literature review related to the research topic, proposed the appropriate conceptual framework and developed relevant hypotheses based on the literature findings.

Chapter 3 focuses on the research methodology used to conduct the research, target population, sampling procedures, data collection method and measurement scales used for the study.

Chapter 4 will be presenting on the research findings and analysis of the collected data using the appropriate statistical analysis tools (Statistical Package for Social Science software - SPSS) and research techniques.

Lastly, chapter 5 consists of the discussion based on the findings, summary of the discussions and their implications, limitations with suggestions for future work.

## **1.7 Conclusion**

This chapter emphasize on the background information, research problems and important of the study. The review of the empirical past studies will be discussed in the chapter 2



## **CHAPTER 2: LITERATURE REVIEW**

### **2.0 Introduction**

The chapter 2 will be discussed on the theoretical model and past empirical studies used as guidance to conduct the research. Furthermore, conceptual framework and proposed hypotheses will also be discussed in this chapter.

### **2.1 Review of Prior Empirical Studies**

#### **2.1.1 Adoption**

According to Joubert & Belle (2013), adoption refers to the consequences of the sum of the variables that culminate into acceptance of the consumers to perform certain actions or behaviour. In this research, adoption refers to degree of consumers to use the PayPal mobile payment to perform the transaction.

One of the past study conducted by the Laukkanen, Sinkkonen, Kivijarvi, & Laukkanen (2007) revealed that all the barriers either from functional or psychological in IRT and perceived cost barrier from valence framework have significantly negative impact on the mobile commerce adoption. An online questionnaire survey was conducted on the Scandinavian bank official website with 1,151 Scandinavian bank's online users to understand the user's perception on mobile banking in Finland.

Kleijnen, Lee and Wetzels (2009) from Netherland have conducted a focus group consists of 58 respondents to explore the factors that driving consumers' intention to adopt technological innovations. Kleijnen had applied inductive and theory-based approaches to analyze the data. The findings show that the drivers of consumer resistance are significant relationship with the adoption of new technologies.

Another study carried out by Laukkanen & Kiviniemi (2010) at Finland consists of 1,551 sample sizes stated that all the 5 IRT barriers are negatively affect the intention to adopt the mobile banking. The research was conducted using the questionnaire surveys, target respondents will be on those bank consumers and the data was being analysed using the SME technique

Beside this, according to Peng, Xu and Liu (2011), their findings showed that the adoption intention of the mobile commerce and mobile banking was influenced by the perceived risk and cost of using the innovations. A total of 186 junior and senior university students in China were being invited to take part in the survey and the data collected was then analysed using the Structural Equation Modelling (SME) technique to generalize the findings.

Apart for this, Yu and Li (2015) have also conducted a research to understand consumer resistance to adopt the mobile banking in two countries Taiwan and Thailand. Online surveys were distributed to 1,861 qualified target respondents and the results showed that all the determinants in the IRT model have significant relationships with the adoption of the m-commerce and m-banking in this two country.

In short, all findings of the past studies are consistent with the hypothesis developed for this study whereby usage, risk, value, image and tradition barriers are importance factors that influence consumers' decisions to adopt PayPal m-payment.

### **2.1.2 Usage Barrier**

Usage barrier is refers to the resistance of using the new technologies due to the inconsistency of the new invention with the existing routine (Barati & Mohammadi, 2009). It is an obstruction caused by a perception that the used of new technology will required more effort compare to the existing technology (Davis, 1989).

According to the past study conducted by Mahatanankooon and Vila-Ruiz (2007), inefficiency of the innovations will negatively affect the usage of the mobile commerce. A online survey data consists of 215 university students in United States was collected by Mahatanankoon and the findings generated from the factor analysis have proved that there is a negative relationship between the inefficiency of the innovation and the adoption rate of the mobile commerce.

Another study done by Bouwman, Carlsson, Molina-Castilo & Walden (2007) also concludes that the mobile service usage was influence by the cognitive accessibility which refers to the knowledge on how to use the innovation. The research was conducted with 484 of Finnish consumers through web-based questionnaire surveys. The confirmatory factor analysis results indicated that the higher the cognitive barrier exists in the innovations, the lower the mobile commerce usage which results in lower mobile commerce adoption rate.

Besides this, Suki (2011) had conducted an empirical study to examine the impact of perceived ease of use towards the mobile services adoption in Malaysia. A total of 100 set questionnaires were distributed to the Malaysian mobile users and Multiple Linear Regression (MLR) was then employed to analyze the data collected. The results conclude that there is a positive relationship between the mobile services usage and perceived ease of use on mobile services hence usage barrier is one of the resistance factors that affecting the individual's decision to adopt the mobile commerce.

Apart from this, another researcher Rahman (2013) also performed similar research to examine whether the user's proficiency level will have effect on the mobile commerce adoption intention among consumers in Bangladesh. Interviews were carried out with 27 stakeholders of mobile commerce in Bangladesh to understand the situation and the interview transcript was then being analyze through qualitative content analysis in order to draw conclusion from the findings. The results showed that lack of literacy will generally affect the use of mobile commerce.

Lastly, Soliman and Salem (2014) has conducted a quantitative research on 378 university students in Saudi to investigate the impacts of perceived ease of use towards the intention to adopt mobile instant messenger among the university students. The data was collected using the self- administered questionnaire and then analysed using linear regression method. The findings concluded that the usage barrier will negatively affect the adoption of the mobile services, the greater effort needed to use the innovations, the lower the adoption rate of the innovation.

Hence, lack of literacy, inefficiency of the innovations and cognitive accessibility will have negative impact on the mobile commerce usage. Thus, all the findings above support our first hypothesis indicated that usage barrier is significantly affecting the consumer's intention to adopt the PayPal mobile payment.

### **2.1.3 Risk Barrier**

Risk Barrier is defined as any uncertainty inherent in technological innovations which will lead to undesirable outcomes. In mobile commerce, the fear of security breaches and loss of confidential information are most common reason discouraging consumers from adopting the mobile transaction services (Marett, Pearson, Person, & bargiel, 2015). The more uncertainty occurs in the innovations, the lower its acceptance (Dunphy & Herbig, 1995).

According to Brown, Cajee, Davies & Stroebel (2003), the research team had conducted a research on 162 mobile users in South Africa to examine the relationship between the perceived risk and the mobile banking adoption intention. The data was collected using questionnaire surveys and interpret using Multiple Linear Regression (MLR). The outcomes of the research showed that the perceived risk is negatively affecting the consumer's willingness to adopt the mobile banking service.

Apart from this, another researcher Shin (2009) also conducted similar research in Korea to investigate the relationship between perceived risk and mobile wallet adoption intention. A total of 296 samples were obtained among the Korea universities student and SME technique was being adopted to analyze the data collected. The finding reveals that consumer's acceptance on the mobile wallet is negatively affected by the level of risk perceived by the consumers for using the innovation.

In addition, another empirical study is done by Luo, Li, Zhang and Shim (2010) to understand how does the perceived risk affecting the consumer's acceptance towards the innovations. The data needed is collected though survey of 180 undergraduate business students in USA and the findings proved that the higher the risk perception towards the innovations, the lower the innovation acceptance will be. Partial Least Square (PLS) is being adopted to analyze the data obtained for the study.

Besides this, Munusamy, Annamalah & Chellia (2012) had conducted a quantitative study to measure the effect of the perceived risk on the mobile service usage among bank consumers in Malaysia. Based on the surveys done from the selected target respondents, the result showed that perceived risk is negatively affecting the consumers' intention of using the mobile banking to perform their transaction.

Furthermore, another research conducted by Joubert and Belle (2013) had also conducted a research to explore the factors that driving the consumers' intention to use mobile phones to perform transactions. A total of 110 qualified respondents in South Africa participated in the research and Partial Least Square (PLS) is applied to analyze the obtained data. The analysis indicates that perceived risk negatively affecting the consumers' intention to use the mobile commerce. Among all the perceived risks, vendor risk is one of the risks that the consumers will concern when adopting the mobile services.

In short, all the findings discovered from the journal articles on perceived risk showed that perceived risk negatively affecting the mobile commerce adoption intention. Thus, it helped to develop second hypothesis for the study which risk barrier is significantly affecting the PayPal mobile payment adoption among Malaysian middle aged consumers.

#### **2.1.4 Value Barrier**

According to Rammile & Nel (2012), value barrier is defined as the barrier occurs when the consumers believe that the cost of learning and using the technology will outweighs the benefits that the innovations can bring to them. In other words, it is not worthwhile for the consumers to use the innovations if the new products or service does not offer more performance-to-price than its substitutions (Morar, 2013).

Antiooco and Kleijneed (2010) have carried out a research to understand the relationship between the value perceived by the innovation and users adoption intention on the technological innovation. The study was carried out by collecting data from 229 postgraduates' student study in Netherlands universities. The data was then analyzed using the Partial Least Squares (PLS) which the results shows that lack of value of using the innovations will negatively impact the adoption of that particular technological innovations.

In addition, another similar study also conducted by Aslam, Khan, Tanveer & Amber (2011) to examine the effect of the perceived value to the adoption rate on the electronic banking. A total of 520 respondents from 10 banks in Pakistan were been interview using the structured questionnaires and the data then was analyzed using SPSS software to draw conclusion for the study. The results indicated that value barrier is negatively influencing the consumers to engage in electronic banking. The lower the advantage provided by the technological innovations, the lower consumers' acceptance towards the internet banking.

Besides this, Kazi (2013) in Pakistan have decided to carry out a research to examine whether perceived usefulness of using the innovations will have any impact on the consumer' decision to adopt electronic banking services. The research was conducted through self-administered questionnaires of 220 university students and Multiple Linear Regression (MLR) technique was being used to analze the collected data. From the findings, the researcher concluded that the perceived usefulness is positively affecting the internet banking adoption. In other words, the less benefit offered by the internet banking services, the less amount of consumers intend to use the services.

Similarly, another researcher Agwu (2013) from United Kingdom had also conducted similar research to investigate the impact of the value barrier towards the adoption technological innovations. Data used for the study was collected from 630 target respondents and the results from the data obtained proved that the performance-to-

price value bring by the innovations does have negative impact on the consumers intention to adopt the internet banking services

Apart from this, Maity (2014) have carried out a quantitative research to study the consumer attitude towards the mobile service adoption. The research was conducted using the data obtained from 9066 mobile service users from several countries - Thailand, India, Bangladesh, Sri Lanka and Pakistan through online surveys and analyze using SPSS software. It is proven that value perceived from using the mobile services is affecting consumer acceptance on mobile commerce. The higher the value perceived, the higher the adoption rate in mobile commerce.

Thus, from the literature review, all the results showed that the technological adoption rate is affected by the perceived value and perceived usefulness of the technological innovations. Hence, third hypothesis can be proposed for the study which stated that PayPal mobile payment adoption is significantly affecting by value barrier exists in PayPal mobile payment service.

### **2.1.5 Image Barrier**

According to Elbadrawy & Aziz (2011), image barrier is refer to barrier in technological innovation emerges from the negative “hard-to-use” image towards the innovations and perceived complication of use of that particular innovations. This barrier might occur especially in mobile banking sectors where some of the bank customers might perceive the innovations too complicated to use so they instantaneously form a bad image of the mobile banking, preventing them from using the mobile banking services.



According to Kuisma, Laukkanen, and Hiltunen (2007), the team had carried out an interview with 30 Finnish bank customers to understand the resistance factors towards online banking in Finland. The interviewing script was analyze using means-end and laddering techniques and the results showed that the perceived image of the innovations is negatively influencing the intention to adopt the online banking in Finland.

In addition, another empirical study done by Elbadrawy and Aziz (2011) revealed that image barrier is the cause behind consumer's resistance towards the m-banking adoption in Egypt. The research was conducted with the 380 Alexandria and Cairo's consumers through online surveys and ANOVA is then used to draw a general conclusion from the data collected. The findings indicate that m-banking adoption intention among the postponers, opponents and rejectors in Egypt is negatively influence by the image barrier perceived in the innovation.

The empirical study done by Lian, Liu and Liu (2012) indicated that image barrier is the main reason why the consumer refuse to engage in online purchasing. Lian have conducted the research with total of 178 useful responses from the undergraduate students in selected Taiwan universities. A regression analysis then is used to test the developed hypothesis and the findings proved that image barrier is significant affecting the consumer's adoption intention on buying products and services online.

Besides than this, Rammile and Nel (2012) had also conducted similar research to examine the relationship between image barrier and mobile payment adoption. A total of 288 non mobile banking users in South Africa was interview through survey questionnaire prepared by the research team to determine the mobile payments acceptance. Covariance based SEM is used as an analysis tool to analyze the collected data and results shows that the higher image barrier perceived by the innovation, the lesser the user's intention to adopt the innovation.

Apart from this, Bakhit (2014) had also conducted a research to identify the factors that resist consumer's acceptance towards innovations. Survey data from 50 household in North Lebanon was obtained to study on the issues. Based on the data, the findings indicated that image barrier has moderate impact towards the innovation acceptance in North Lebanon.

In short, all the empirical studies showed that image barrier is negatively influence the consumer's intention to adopt the mobile commerce and mobile banking. Hence, it helped to propose another hypothesis for the research which image barrier perceived in the technological innovations (PayPal mobile payment) is significantly influencing the consumers 'acceptance on the mobile payment services.

### **2.1.6 Tradition Barrier**

According to Mohtar, Abbas & Baig (2015), tradition barrier implies that the changes bring by the technological innovation may affect the user's existing routines. In other word, tradition barrier occurs when the innovations will change the consumer's values, behaviour and the ways to perform certain actions.

A past study done by Molesworth and Suortti (2002) has indicated that tradition barrier will lower the consumer's intention to perform online high-cost purchase. Molesworth conducted an individual semi-structured interview with 8 students & staffs from university in England to study the relationship between the tradition barrier and adoption intention of online purchase. The findings from the interviews concluded that tradition barrier does bring negative impact to the intention to adopt online purchase.

According to Dasgupta, Paul, and Fuloria (2011), there is a negative relationship between tradition barrier and the behavioural intention towards the mobile banking adoption. In other words, the greater the tradition barrier exists in the innovations, the more resists the consumers to use the innovations. The study was conducted with 325 of bank customers in India through survey questionnaire and regression analysis has been employed to analyze the answers captured in the questionnaire.

Besides this, another research had been carried out by Elbadrawy, Aziz, and Hamza (2012) to explore the main factors that preventing consumers from using the mobile banking. The research is conducted with a total of 229 bank customers at selected bank in Egypt. A t-test is used to analyze the data obtained from the bank customers and the results showed that tradition barrier is one of the main factors against the adoption of m-banking in Egypt.

In addition, Lian and Yen (2013) also conducted a research in Taiwan to examine on how the tradition barrier would affect the mobile buying intention in the cosmetic industry. Lian had had decided to conduct surveys with 178 Small and Medium Enterprise (SME) in Taiwan to gain more in-depth information for the study. The obtained datasets then is analyze using Multiple Linear Regression (MLR) and the findings showed that the mobile buying adoption is negatively affected by the tradition barrier perceived from using the innovations.

Lastly, research study done by Gutner (2014) also proved that tradition barrier does influence the mobile applications adoption rate. The research was done through a set of questionnaire surveys in Germany. A total number of qualified 752 mobile phone users participated in the surveys and Structural Equation Modelling (SEM) techniques was applied to examine the relationship between perceive tradition barrier and mobile application adoption.

Thus, most of the past studies on tradition barrier indicated that the tradition barrier is one of the main barriers that affecting the consumer's acceptance on mobile banking services. Hence, it helped to propose the fifth hypothesis for the study which stated that tradition barrier is significantly affecting the PayPal mobile payment adoption.

### **2.1.7 Perceived Cost Barrier**

Perceived cost barrier is defined as the additional charges that need to be paid by the users to use the new technological innovation (Lu, Yang, Chau & Cao, 2011). It is refers to the extent to which user believes that it is costly to adopt new innovations. Cost consists of smartphone purchase price, communication fees, additional service charges, broadband subscription fees and maintenance fees. All of this costs incurred can slow down the expansion of the mobile payment services.

Past literature review had indicated that cost barrier is one of the important factor that will influence consumers' intention to adopt mobile services. A research was done by Luarn and Lin (2005) in Taiwan concluded that perceived cost barrier have negative relationship with the mobile banking adoption rate. Total of 180 set of questionnaires was distributed to the traditional branch-based bank customers and SEM was employed to analyze the data. The finding shows that cost barrier has negative relationship with the mobile banking adoption intention among bank customers in Taiwan.

Besides this, Sripalawat, Thongmak and Ngramyarn (2011) had conducted an empirical research to understand the relationship between the cost barrier and adoption intention of the mobile banking in Thailand. A total of 195 valid responses were collected from bank customers and mobile users who stay in Bangkok metropolitan area. The data was collected through a series of questionnaires prepared

by the research team and analyze using Multiple Linear Regression. The outcomes generated from the MLR indicate that consumer's intention to adopt the mobile banking is negatively influence by the cost barrier perceived for using the innovations.

Based on the research done by Yu (2012), perceived cost barrier are the second most important causes that resist the consumer acceptance towards the mobile banking adoption intention. Structured based questionnaire were distributed to respondents in major city in Taiwan and a total of 441 valid responses was collected for the research. Partial Least Squares Regression (PLSR) has been employed to analyze data collected and the findings proved the hypothesis developed where the cost barrier is negatively affecting the consumer's intention to adopt the mobile banking services.

In addition, a study by Chong (2013) found that the cost barrier affects the continuance intention of mobile banking among consumers in China. A total of 410 Chinese mobile banking users responded to the survey and SEM technique is used to analyze the data. The findings indicated that the amount of additional cost charged by using the mobile banking services is one of the reasons preventing consumers continue to use the mobile services.

Lastly, Pham and Ho (2015) have conducted a quantitative research about whether perceived cost has any relationship with the intention to adopt mobile payments in Taiwan. The data was collected from 402 online consumers through web- based surveys and analyze using structural modelling analysis. It is then concluded that perceived cost barrier is negatively affecting the mobile payment adoption intention in Taiwan.

All the past studies showed that the cost barrier is negatively affecting the consumer's intention to adopt the new technological innovation. Thus, the above studies can help to develop last hypothesis for the research which PayPal mobile payment adoption in Malaysia is significantly affected by the perceived cost barrier.

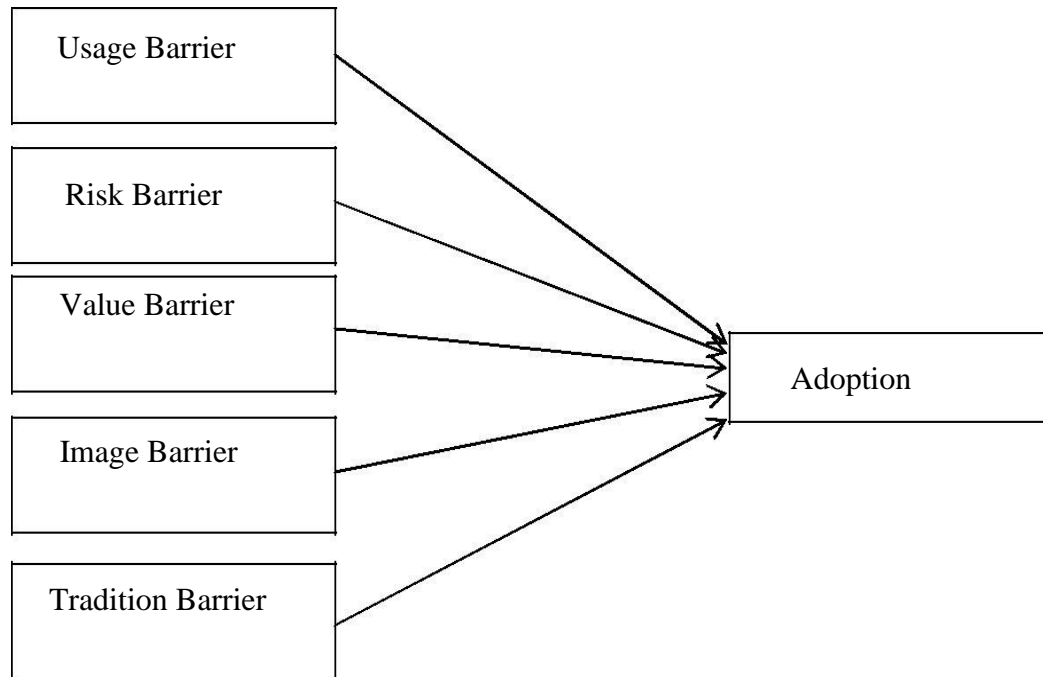
## **2.2 Theoretical / Conceptual Foundations**

Innovation Resistance Theory (IRT) model developed by Ram and Sheth (1989) is employed in this study to explore the factor affecting Malaysian generation X consumers resistance to PayPal mobile payment adoption. Innovation resistance is the resistance by the users due to the changes imposed by the new technological innovations (Ram & Sheth, 1989). To the extent that the users can accept changes on how they can obtain the information about, purchase or use of new technology. According to Ram (1987), the risk alertness and conflicts brought by innovation are two main reasons why the consumers resist innovation. The IRT model is adopted by the researchers to examine the inability of the users to accept new technologies and it is widely being applied in the context of electronic commerce environment (Lian & Yen, 2013). Additionally, present study indicates that many researchers have adopted the IRT theory to explore the consumer's acceptance of online shopping. Lian, Liu, and Liu (2012) had applied IRT to study the user recognition in e-shopping while Molesworth and Suoritti (2002) had adopted IRT in examine the consumers responses to online car buying. Moreover, Gurtner (2014) has also used the IRT to study the factors that drive consumer's resistance toward the intention to use the m- health applications. Lastly, Bakhit (2014) had carry out a research study to evaluate the consumer's resistance to green technologies using the IRT model.

Table 2.1: Definition of Five Barriers in Innovation Resistance Theory

<b><u>Functional Barrier</u></b>	
<b>Usage Barrier (UB)</b>	UB is concern with the usability of innovation resulted when the innovation is not same with current plan and practice. More effort and time is needed to familiar and use the technology.
<b>Value Barrier (VB)</b>	VB refers to performance –to-price value perceived by the innovation against other alternative solutions. This simply stated that if the innovation does not offer greater value than the existing products, then consumers may not feel motivated to adopt the innovation
<b>Risk Barrier (RB)</b>	RB refers to the insecurity that users experience or perceive in innovations. The more risky the innovation, the lower its acceptance. Example, some consumers might be afraid of making any mistakes when using the technology which eventually discouraging them from adopt the technology
<b><u>Psychology Barrier</u></b>	
<b>Tradition Barrier (TB)</b>	TB exists when users prefer to have direct interaction with the respective person instead of using the arm-length technologies. High tradition barrier will exists when the technologies bring a huge effect to one's social norm, societal and family values.
<b>Image Barrier (IB)</b>	IB comes into place when one's has negative perception on the technology or the bad image on respective company who introduce the technology.

Figure 2.1: Theoretical Model of Innovation Resistance Theory



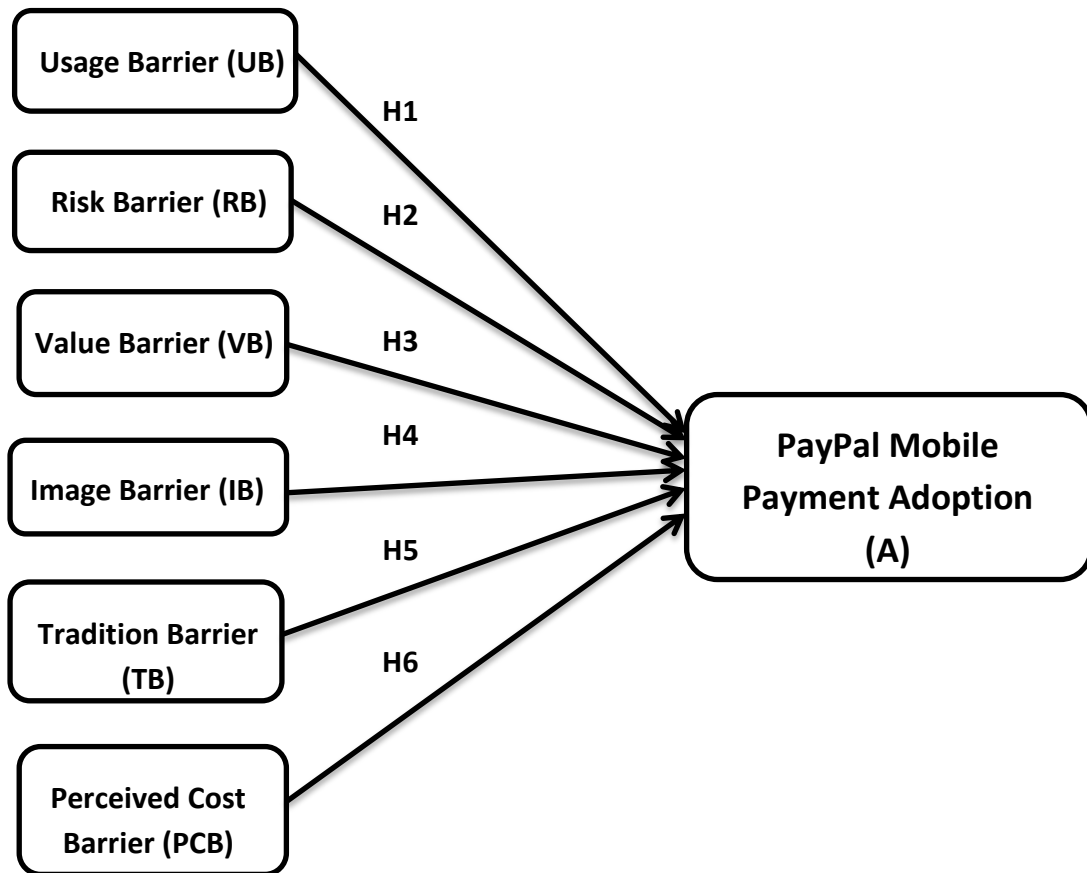
Adopted from: Ram and Sheth (1989)

All the five key determinants from the IRT model will be included as independent variables for the research, specifically usage, risk, value, image and tradition barriers. Apart from this, perceived cost barrier also will be adopted as the additional variable to study the resistance factors towards adopting the PayPal mobile payment among middle aged consumers in Malaysia.



## 2.3 Proposed Conceptual Framework

Figure 2.2: Proposed Conceptual Framework of Resistance Factors to PayPal Mobile Payment Adoption among Generation X Consumers in Malaysia



Adapted from: Peng, Xu and Liu (2011)

## **2.4 Hypotheses of Study**

- H1: There is a significant relationship between usage barrier (UB) and PayPal mobile payment adoption.
- H2: There is a significant relationship between risk barrier (RB) and PayPal mobile payment adoption.
- H3: There is a significant relationship between value barrier (VB) and PayPal mobile payment adoption.
- H4: There is a significant relationship between image barrier (IB) and PayPal mobile payment adoption.
- H5: There is a significant relationship between tradition barrier (TB) and PayPal mobile payment adoption.
- H6: There is a significant relationship between perceived cost barrier (PCB) and PayPal mobile payment adoption.

## **2.5 Conclusion**

This chapter 2 had discussed about the review on the theoretical model applied and related past journal articles that had been used to develop the conceptual framework and hypotheses for the study. The research methodology and sampling plan for the study will be further discussed in next chapter.

## **CHAPTER 3: RESEARCH METHODOLOGY**

### **3.0 Introduction**

Chapter 3 provides a general review on the research design, target population, sampling design, the variables and measurement and data analysis techniques. Besides, pilot test also included under this chapter to examine the consistency and accuracy of the research questionnaire survey.

### **3.1 Research Design**

Research design is an overall strategy used by the researchers to integrate different study components in a rational and reasonable way to achieve the research objectives (Burns and Bush, 2010). According to Malhotra & Peterson (2006), it outlines the necessary procedures that are required to collect information needed to solve the research problem.

#### **3.1.1 Types of Research Design**

The research can either be a qualitative and quantitative single stage design or a multistage mixed method research design (Kothari, 2004). Quantitative research design is been applied in this research as its enable the researcher to verify the theories through testing the developed hypotheses. The quantitative research design use numerical coding and statistics procedure to process the required information, provide in-depth insight to the phenomena of interest. Apart from that, this research design also helps to identify the characteristics of an observed phenomenon and explore the possible correlations relationship among the variables (Sekaran & Bougie, 2010). A set of questionnaire contain of a series of the closed ended question will be used to gather the relevant data form the target respondents.

### **3.1.2 Nature of Research Design**

The nature of the design can be in either description, explanatory, exploratory or any combination of these (Sekaran, 2003). Since, the study is aim to determine the barriers that resulting the Malaysian middle-aged consumers' resist to use the PayPal m-payment; the nature design will be descriptive. According to Malhotra & Peterson (2006), a descriptive study can provide information which can help the researcher to understand the behaviour, attitudes or characteristics of a particular group of target respondents and demonstrate association between the variables being tested.

### **3.1.3 Time Horizon of Research Design**

Quantitative design can be further classified into longitudinal or cross-sectional design. A cross-sectional study is applied for this research since the research is conduct at one time point or only over a short time period. According to Kate (2006), cross-sectional study is one-time data collection approach that helps the researcher to find the commonness of the outcome being studied over a certain time point. In other words, the information collected using the cross-sectional design will only reflect the outcome that exists at that specific time point.

## **3.2 Data Collection Method**

Data collection method refers to the process of collecting valid data for the target variables in an established systematic fashion. In general, data can be categorized into two major groups which are primary and secondary data. Both types of the data will be applied in the study to gather information needed to examine the proposed hypotheses and achieved the research objectives.

### **3.2.1 Primary Data**

Primary data refer to those first handed data that being observed or gathered direct from the subjects they're interested in, help to understand a specific issue or testing a hypothesis. The primary data can be collected using several appropriate methods such as survey, interviews and direct observations and etc. (Malhora, 2008). For this research, self-administered survey will be used to gather the needed information. Questionnaires will be distributed to the target respondents to collect the data. The questionnaire is a series of questions with various scales designed for the purpose of gathering useful data from the respondents.

### **3.2.2 Secondary Data**

Secondary data refer to facts and figures that already been recorded or readily available from other sources before the research at hand. Such data is cheaper and easily to obtain than the primary data (Malhora, 2008). Secondary data can be obtained from the journals, published books and online articles. In this study, most of the secondary data are obtain from UTAR Digital Library and some are obtain from the google search engine.

## **3.3 Sampling Design**

Kothari (2004) defines sampling design as the process to select a small number of units for study purpose to represent the whole population. Therefore, the findings extracts from the sample can be applied to make inferences on the target population. The sampling process will help to outline the target population, sample size, sampling techniques and sampling location (Malhotra & Peterson, 2006).

### **3.3.1 Target Population**

Target population consists of those elements that fit into certain desired specification and about which inferences are to be made on the topic of interest (Malhotra, 2009). Thus the target population of this study will be consists of all the generation X consumers who stay in Penang and Kedah. The reason for choosing generation X because they are the one in a high earning, high spending phase of life and constitute about 30% of the mobile phone users in Malaysia (Malaysian Communications and Multimedia Commission, 2014). Penang and Kedah are chosen due to their penetration rate of 143.8 and 121.9 respectively (Malaysian Communications and Multimedia Commission, 2014).

### **3.3.2 Sampling Size**

The sampling size is defined as the number of samples in a study. The sample is a small part of the target population in a study (Sekaran & Bougie, 2010). According to Zikmund, Babin, Carr, and Griffin (2009), a research should have a sample size of 200-450 if there is no sampling frame that can be used. Since, this study does not have any sampling frame; the sample size is decided based on the specific range that is suggested in the past literature studies. Hence, the sample size use in this study will be 300.

### **3.3.3 Sampling Element**

The sampling element defined as the desired number of elements that need to be involved in the research (Hair, Money, Samouel, & Page, 2007). The sampling elements are the target respondents which the info is desired (Malhotra & Peterson, 2006). The sampling elements of this study are those Malaysian consumers who stay in Penang and Kedah, between ages of 35 to 55 years old, owning a smartphone and credit card and earns salary minimum of RM 1000 per

months. In this study, preference was given to the Malaysian citizens so that the findings can be generalized in the Malaysian context. Apart from that, this study also has placed an important emphasis on consumers who have smartphone and credit card because these are the people who are more likely to adopt the PayPal mobile payment.

### **3.3.4 Sampling Location**

Sampling location refers to the places that being selected to carry out the survey. Past studies shows that most of the research were conducted in Selangor and Johor and not many study been carry out in other states in Malaysia. Therefore, as an innovative step, this research will be conducted in Penang and Kedah. Penang and Kedah are two states represent the northern side of Peninsular Malaysia with considerable high mobile phone penetration rate of 143.8% and 121.9% respectively (Malaysian Communications and Multimedia Commission, 2014).

### **3.3.5 Sampling Period**

Sampling period is referring to the time duration for carry out the survey that is needed for the research purposes. The sampling period for this research was from 20//05/2016 to 27/05/2016.

### **3.3.6 Sampling Frame**

A sampling frame refers to the complete list or set of directions for determining the target population for the research such as directory listing, mailing listing and etc. (Malhotra & Peterson, 2006). There will be no sampling frame for this study due to the difficulty in obtaining a complete list of generation X consumers in the targeted areas.

### **3.3.7 Sampling Technique**

According to Zikmund (2003), sampling technique refers to the strategy that been used to choose the sample element for the study. There are two major categories in sampling technique which are probability sampling and non-probability sampling. Since there is no sampling frame available in this study, hence a non-probability sampling approach will be applied to select the suitable sample elements for the study. Convenience sampling, judgemental sampling, quota sampling and the snowball sampling are four types of non-probability sampling techniques that can be commonly found in the research (Sekaran & Bougie, 2010). Again since no sampling frame available in the study, the most suitable techniques used to conduct the survey with huge number of responses will be on the convenient sampling techniques. According to Weir and Jones (2009), convenient sampling usually having a sample size with a range between 150 to 450 and often the respondents are selected to be involved in the survey because they are easily accessible to the researcher. This research is only interested in reaching a sample size of 300 respondents.

## **3.4 Research Instrument**

Research instrument is referring to the measurement tools (questionnaire, interview, observation) designed to obtain the valuable data on the topic of interest from the target respondents (Sekaran & Bougie, 2010). Thus, it is important for the research to choose the appropriate research instrument to collect the data.



### 3.4.1 Questionnaires

Questionnaire is the research instrument applied to conduct the research. It contained series of questions which aim to gain useful information from the target respondents toward the topic being study (Sekaran & Bougie, 2010). The main reason choose to use questionnaire is because it can accommodate large sample size for the purpose of quantitative analysis and produce precise estimates for the topic of interest. The questionnaire can be further classified into two categories which are structured and unstructured questionnaire. For this study, structured questionnaire was used to gather information about the barriers that prevent generation X consumers from adopt the PayPal m-payment. The reason for choosing the structured questionnaire is it helps to reduce the interviewer bias, less costly & time consuming and improve participation (Hair, Babin, Money, & Samouel, 2003)

### 3.4.2 Questionnaire Design

Questionnaire design refers to the process of translating the variables of the study into a series of written question to gather feedback or opinion of the respondents (Malhotra, 2002). A well designed questionnaire will motivates the target respondent to provide complete and accurate opinion for the topic of interest. Table 3.1 shows the summary of questionnaire design for the study.

Table 3.1: Summary of Questionnaire Design

Section	Number of Questions	Questions	Scales used
A	7	Target respondents demographic profile	Nominal and Ordinal scales
B	30	Independent and dependent variables question	Interval scales

### 3.4.3 Pilot test

Pilot test had been applied to examine the consistency and accuracy of the questionnaire that is used to obtain information for the study. It helps to refine the questions in the questionnaire before the actual data collection take place (Zikmund, 2003). According to Zikmund (2003), the appropriate sample size used for pilot test is 20 to 30. Therefore, Total 20 Malaysian middle aged consumers were asking to fill up the questionnaires to obtain the critics and suggestions regarding on the questionnaire. The questionnaire then was re-structured after receiving feedback from the respondents. The collected data from the 20 respondents is interpreted using the SPSS software to test its reliability. Table 3.2 shows the outcome for the pilot test. Based on the SPSS output, the results indicate that all the variables are reliable since the alpha values are more than 0.70.

Table 3.2 Pilot Test Result (SPSS)

<b>Variables</b>	<b>No. of Items</b>	<b>Cronbach's Alpha</b>
Usage Barrier	4	0.737124
Risk Barrier	5	0.723516
Value Barrier	5	0.762374
Image barrier	4	0.742145
Tradition Barrier	4	0.795127
Perceived Cost Barrier	4	0.764583
Adoption	5	0.834618

### 3.5 Constructs Measurement (Scale and Operational Definitions)

#### 3.5.1 Sources of the questions

Table 3.3 Sources of the Questions

Variables	Items	Descriptions	Sources
<b>Usage Barrier (UB)</b>	<b>UB1</b>	I find that PayPal platform are difficult to use	Adapted and modified from Laukkanen, Sinkkonen, Kivijarvi (2007)
	<b>UB2</b>	I find that PayPal platform are inconvenient to use	
	<b>UB3</b>	I find that PayPal platform are inefficient compare to pay in cash	
	<b>UB4</b>	I find that instruction provided on the PayPal platform is unclear	
<b>Risk Barrier (RB)</b>	<b>RB1</b>	I am afraid for making any mistakes in the process of using PayPal mobile payment	Adapted and modified from Laukkanen, Sinkkonen, Kivijarvi (2007)
	<b>RB2</b>	I am afraid of entering wrong information during the payment process	
	<b>RB3</b>	I am afraid for expose of privacy if using the PayPal platform	Adapted and modified from Peng, Xu, and Liu (2011)
	<b>RB4</b>	I am afraid for any unreasonable or fraudulent charges if using the PayPal services	
	<b>RB5</b>	I am afraid for faultiness in the function of PayPal mobile payment	
<b>Value Barrier (VB)</b>	<b>VB1</b>	For me, using PayPal mobile payment is uneconomical	Adapted and modified from Laukkanen, Sinkkonen, Kivijarvi (2007)
	<b>VB2</b>	For me, using PayPal does not increase the ability to control my own financial matters	
	<b>VB3</b>	For me, using PayPal services does not offer any extra benefits when compared to cash payment	
	<b>VB4</b>	For me, using PayPal does not eliminate the constraint of time when conducting the transactions	Adapted and modified from Elbadrawy and Aziz (2011)
	<b>VB5</b>	For me, PayPal is not a good substitutes for traditional cash payment	

<b>Image Barrier (IB)</b>	<b>IB1</b>	PayPal projected a very negative image	Adapted and modified from Laukkanen, Sinkkonen, Kivijarvi (2007)
	<b>IB2</b>	PayPal mobile payment are perceived to be difficult to use	
	<b>IB3</b>	New technology are always too complicated to use	
	<b>IB4</b>	New technology are always too complicated to use	
<b>Tradition Barrier (TB)</b>	<b>TB1</b>	I feel impatient with the PayPal mobile applications	Adapted and modified from Mahatanankoon and Ruiz (2007)
	<b>TB2</b>	I prefer to face-to-face communicate with the seller to purchase goods and services that I want	
	<b>TB3</b>	I prefer to use physical forms of payment for my transactions	
	<b>TB4</b>	I prefer to made purchase through computer rather than using mobile phones or tablets	
<b>Perceived Cost Barrier (PCB)</b>	<b>PCB1</b>	I would be charged more to use the PayPal services	Adapted and modified from Spripalawat, Thongmak and ngramyarn (2011)
	<b>PCB2</b>	Total costs to perform the transactions via mobile phone are more expensive than using other payment channel (cash/computer)	
	<b>PCB3</b>	Mobile payment expenses are burdens for me	
	<b>PCB4</b>	Network connection fees for perform mobile payment are expensive	
<b>Adoption (A)</b>	<b>A1</b>	I intend to use the PayPal mobile payment	Adapted and modified from Lian and Yen (2013)
	<b>A2</b>	I intend to learn how to use PayPal platform to perform my transaction	
	<b>A3</b>	I intend to use PayPal mobile services in future	
	<b>A4</b>	I intend to use PayPal to perform my transaction more often	Adapted and modified from Peng, Xu and Liu (2011)
	<b>A5</b>	I intend to recommend the PayPal services to my friends	

### **3.5.2 Scale Measurement**

Measurement scales are usually used by researchers to categorize or quantify the variable of the study (Sekaran, 2003). Generally, scales of measurement involved in the statistical analysis can be categorized into four common groups which are nominal, ordinal, interval and ratio scale; these are simply ways to group different types of variables and each scale will have its own characteristics. Several scales of measurement are being applied in the study.

#### **3.5.2.1 Nominal Scale**

The nominal scale consists of allocating the data into certain categories or groups. It is commonly applied only for categorization purposes, no rank order and quantitative value is conveyed (Hair et al., 2007). Cultural preference, race and gender are some of the nominal scale examples. Nominal scale is usually being adopted at the beginning of the questionnaire to gather information on the respondents' demographic profile and frequency distributions will be applied to understand the data measured in nominal scale. Variables grouped under this scale are also known as categorical variables.

#### **3.5.2.2 Ordinal Scale**

The ordinal scale refers to a scale of measurement on which the obtained information is categorized and ranked in a meaningful way (Sekaran & Bougie, 2010). It helps to indicate the relative extent to which the subjects possess some characteristics and determine whether the subject has more or less of characteristics than others. For this study, ordinal scale is also used in the first section of the questionnaire to gather information about the respondent's demographic profile.

### 3.5.2.3 Interval Scale

The last type of measurement scale used in this study will be the interval scale where it helps to give order to the items and also possess equal intervals (Zikmund et al., 2010). The 5-point Likert scale is being use in this study because it able to help to indicate the degree of agreement and preferences with each of the statements mentioned in the questionnaire which normally ranging from Strongly Disagree to Strongly Agree (Zikmund et al., 2010). The interval scale is use in the second part of the questionnaire to gather information about the variables used in the study.

### 3.5.3 Summary of the scales used in the questionnaire

Table 3.4 Summary of Measurement Scale Used

<b>Items</b>	<b>Measurement</b>	<b>Scale of Measurement</b>
Gender	Nominal	Dichotomous scale
Age	Ordinal	Category scale
Cultural Heritage	Ordinal	Category scale
Marital Status	Nominal	Dichotomous scale
Highest Education Completed	Nominal	Category scale
Monthly income	Ordinal	Category scale
Have you done any PayPal mobile payment before	Nominal	Dichotomous scale
Usage Barrier (UB)	Interval	5 – point Likert scale
Risk Barrier (RB)	Interval	5 – point Likert scale
Value Barrier (VB)	Interval	5 – point Likert scale
Image Barrier (IB)	Interval	5 – point Likert scale
Tradition Barrier (TB)	Interval	5 – point Likert scale
Perceived Cost Barrier (PCB)	Interval	5 – point Likert scale
PayPal Mobile Payment Adoption (A)	Interval	5 – point Likert scale

### 3.6 Data Processing

The collected data is required to go through several data preparation stages before start interpret to ensure the data obtained are complete, accurate, valid and filled by qualified respondents (Sekaran, 2003). Table 3.5 show five steps involved in preparing data for analysis.

Table 3.5 Data Preparation Step

<p><b><u>Step 1: Questionnaire Checking</u></b></p> <p>The first step in data processing will be the questionnaire checking. At this stage, all the questionnaire return back from the target respondents were checked to prevent for any incompletes, ambiguous pattern of responses, variance in responses, missing page, or answered by unqualified respondents. This will enable the researches to take appropriate actions before data is being analyze (Malhotra, 2008).</p>
<p><b><u>Step 2: Editing</u></b></p> <p>After checking for completeness, the researcher then will proceed to the editing stage where all returned questionnaires will be reviewed again to improve the accuracy and precision. The researchers will screen the questionnaires to identify responses which are illegible, incomplete, inconsistent and ambiguous (Kothari, 2004). Any unsatisfactory results will be corrected immediately before proceeding to the next stage.</p>
<p><b><u>Step 3: Coding</u></b></p> <p>The third stage in data preparation will be the data coding stage. At this stage, all the responses in each questionnaire will be assigning with a numerical code so that it can be easily interpret using the statistical tools (Kothari, 2004).</p>

#### **Step 4: Transcribing**

After all the data has been coded, the data then will be transfer into computers. Data transcribing refer to the process where the coded data from the questionnaire or coding sheets is transfer to discs or directly into the computer by keypunching or other means. In this research, the coded data is transfer to excel file (Malhotra and Peterson, 2006).

#### **Step 5: Data Cleaning**

Once all the coded data has been transfer into the computer, the researcher is required to perform the data cleaning to check for the consistency and performing treatment to any missing responses. According to Malhotra (2008), this stage is similar with editing stage where the researchers will consistently checking the data to exclude any responses that are out of range, inconstant or data that having extreme values.

### **3.7 Data Analysis**

Data analysis is referring as the method used to convert raw data gathered from the target respondents into more meaningful and appropriate manner through various types of statistical tools. The transformed data then can be used by the researchers to make general conclusions about the study. In this study, the data collected from the target respondents will then be interpret using SPSS software.

#### **3.7.1 Descriptive Analysis**

Descriptive analysis refer to technique applied by the researchers to groups and summarize the collected primary data into a more easily and understandable form of data (Zikmund et al., 2010). In descriptive analysis, there are two common techniques used to present the data in more appropriate way such as the frequency distribution and central tendency. Thus both types of techniques will be applied in



the study to summarize the target respondents' demographic profile. The distribution will help to generate useful statistics value and meaningful graphic display, make it easy for the researchers to interpret the data obtain from the respondents. Meanwhile, the central tendency is used to determine the mode, median, mean and standard deviation of each and every item in the questionnaire, searching for general trend on the data (Malhora & Peterson, 2006). Results generated from the data will be presented in pie chart, a more understandable form.

### 3.7.2 Reliability Analysis

Reliability test refer to one of the statistical analysis tools used to make sure that the measurement is consistent across the various items being tested and free from any errors that may affect the outcomes of the study. According to Zikmund (2003), it is important for the researchers to conduct reliability test before proceed to other statistical analysis to make sure the measurement free from any unfairness. Generally, there are many types of reliability test that can be applied to examine the consistency and validity of the questionnaire. Test-retest, parallel form and internal consistency reliability test is some of the common method used to test the reliability. In this study, internal consistency test will be applied to determine the consistency of the measures. The test is measured using Cronbach's coefficient alpha ( $\alpha$ ) which usually ranges from 0 to 1. Data that get alpha value above 0.6 is consider reliable whereas below than 0.6 indicates unsatisfactory reliable and will be discarded from further analysis (Cronbach and Shavelson, 2004). The rule of thumb for interpreting the Cronbach Alpha for each variable is shown in table 3.6:

Table 3.6 Rule of Thumb for Reliability Test

Coefficient Alpha ( $\alpha$ )	Internal Consistency
0.81 to 0.95	Very Good
0.71 to 0.80	Good
0.61 to 0.70	Fair
< 0.60	Poor

### **3.7.3 Normality Analysis**

Normality test is a test used by the researchers to check whether the data obtained from the target respondents are normally distributed. Basically there are two method to test the normality of the data which is numerically and numerically.in this study, the normality of the data is examine through skewness and kurtosis value of each items used in variables. According to Bryne (2010), the variables is said to be normally distributed if the skewness and kurtosis value is between the range of  $\pm 2$  and  $\pm 7$  respectively. The distribution is said to be positively skewed if the value of the skewness is positive and vice versa.

### **3.7.4 Inferential Analysis**

The inferential analysis is carry out to generalize the findings generated from the sample data gathered and draw a conclusion about the target population being study (Gabrenya, 2003). In this study, Person Correlation test and Multiple Linear Regression is used to determine the strengths and association between the dependent and independent variables.

#### **3.7.4.1 Pearson Correlation Coefficient Analysis**

Person Correlation test is applied in the study to examine the strength and direction between two variables and is represented by symbol  $r$  (Malhora & Peterson, 2006). The coefficient value is always between -1 to +1. The “+” symbol indicate positive relationship whereas the “-” symbol indicate for negative relationships. According to Hair, Black, Babin, & Anderson (2009), the coefficient value in any research should not greater than 0.95 to avoid multicollinearity issue exists among the independent variables. The general rule use to interpret the Pearson Correlation analysis is shown in table 3.7.

Table 3.7 Rule of Thumb for Pearson Correlation Analysis

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

#### **3.7.4.2 Multiple Linear Regression**

This study also used multiple linear regression technique to test the relationship between variables and examine the proposed hypotheses developed from the theoretical framework. MLR is chosen because there are more than one independent variables to be analyze with the dependent variable (Meyers, 2005). The MLR help to indicate the relationships among the IVs with DV and examine the strength and the direction of the relationships. The multiple linear equations for this study are as table below:

Table 3.8 Multiple Linear Regression Equation

<b>Multiple Linear Equation</b>	
<b><math>Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6</math></b>	
Where:	
Y = Dependent Variable = PayPal mobile payment adoption (A)	
X1 = 1 <sup>st</sup> Independent Variable = Usage Barrier (UB)	
X2 = 2 <sup>nd</sup> Independent Variable = Risk Barrier (RB)	
X3 = 3 <sup>rd</sup> Independent Variable = Value Barrier (VB)	
X4 = 4 <sup>th</sup> Independent Variable = Image Barrier (IB)	
X5 = 5 <sup>th</sup> Independent Variable = Tradition Barrier (TB)	
X6 = 6 <sup>th</sup> Independent Variable = Perceived Cost Barrier (PCB)	
$\alpha$ = the intercept of the regression line.	
$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ & $\beta_6$ = regression coefficient for X1, X2, X3, X4, X5 & X6	

### 3.8 Conclusion

The most important part of conducting a research is the research methodology. It will provide guidelines for the researchers on how and ways to conduct the research. In overall, this chapter had discussed on the design used in the research, sampling design, research instrument used, data collection method and the data analysis techniques that applied in the study. Next chapter will be discussed on the findings that generated using SPSS software.

## **CHAPTER 4: RESULTS AND INTERPRETATION**

### **4.0 Introduction**

Chapter 3 is mentioned about the research design, data collection method, sampling design, research instrument, construct measurement, and the data analysis techniques used to conduct the research study. This chapter will be discussed on the outcomes of the various analysis techniques that have been conducted using SPSS statistical analysis software.

### **4.1 Response Rate**

In total, 300 set of questionnaires were randomly distributed to target respondents allocated in Penang and Kedah. Out of these 300 questionnaires, only 200 questionnaires were completed. Thus, the response rate of this study is 66.67%. A study should respond rate more than 30% in order for it to be considered as acceptable (Sekaran and Bougie 2010). Therefore, this study is acceptable as the response rate is exceeding 30%. The 200 set of questionnaires then was analysed using the SPSS statistical tools to generate conclusion for the phenomena of interest.

## 4.2 Descriptive Analysis

### 4.2.1 Frequency Distribution

#### 4.2.1.1 Gender

Table 4.1 Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Female	75	37.5	37.5	37.5
Male	125	62.5	62.5	100.0
Total	200	100.0	100.0	

Source: SPSS Output

Table 4.1 shows the gender information of the target respondents for the research. According to the table 4.1, out of 200 valid target respondents, 125 (62.5%) of them are males and 75 (37.5%) are females.

#### 4.2.1.2 Age

Table 4.2 Age

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 35-39	42	21.0	21.0	21.0
40-44	56	28.0	28.0	49.0
45-49	64	32.0	32.0	81.0
50-54	38	19.0	19.0	100.0
Total	200	100.0	100.0	

Source: SPSS Output

Table 4.2 illustrates the target respondent's age information. Out of 200 respondents, 64 (32%) of them is between the age category of 45 to 49 years old. While, 56 (28%) of them fall under age category ranged from 40 to 44 years old followed by 42 (21%) respondents with age category of 35 until 39 years old. Lastly, only 38 (19%) of them are fall under age of 50 to 54 years old.

#### 4.2.1.3 Cultural Heritage

Table 4.3 Cultural Heritage

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Malay	42	21.0	21.0	21.0
Chinese	125	62.5	62.5	83.5
Indian	33	16.5	16.5	100.0
Total	200	100.0	100.0	

Source: SPSS Output

Table 4.3 depicts the cultural heritage information of the target respondent for the study. According to the outcome shown in table 4.3, majority of the respondents are Chinese respondents which constitute 62.5% of total target respondents, then followed by 42 (21%) are Malay respondents and 33 (16.5%) are Indian respondents,

#### 4.2.1.4 Marital Status

Table 4.4 Marital Status

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Single	22	11.0	11.0	11.0
Married	178	89.0	89.0	100.0
Total	200	100.0	100.0	

Source: SPSS Output

The SPSS output shown in Table 4.4 indicates that 178 (89%) out of the 200 target respondents are married while the remaining 22 (11%) respondents are single.

#### 4.2.1.5 Highest Education Completed

Table 4.5 Highest Education Completed

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid High School	108	54.0	54.0	54.0
Diploma	34	17.0	17.0	71.0
Degree	45	22.5	22.5	93.5
Postgraduate	13	6.5	6.5	100.0
Total	200	100.0	100.0	

Source: SPSS Output

Table 4.5 illustrates the highest education level of the target respondents. According to the output, 108 (54%) respondents highest education qualification are only with high school level followed by degree level with 45 (22.5%) respondents; 34 (17%) of the them are diploma holders and only 13 (6.5%) of the total 200 respondents are postgraduate holders. All the target respondents are with educational background at least high school level.

#### 4.2.1.6 Monthly Allowance

Table 4.6 Monthly Allowances

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid less than 1000	28	14.0	14.0	14.0
1001 - 3000	106	53.0	53.0	67.0
3001 - 5000	22	11.0	11.0	78.0
above 5001	44	22.0	22.0	100.0
Total	200	100.0	100.0	

Source: SPSS Output

Table 4.6 visualizes the monthly allowance of the target respondents. A total of 106 (53%) respondents fall under income category of RM 1,001 to RM 3,000. Followed by 44 (22%) respondents who having monthly allowance above RM 5,001, 28 (14%) of them with income less than RM 1,000 and lastly 22 (11%) of the respondents fall under income category of RM 3,001 to RM 5,000.



#### 4.2.1.7 Users and Non-users

Table 4.7 PayPal user or non-users

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid PayPal user	172	86.0	86.0	86.0
Non users	28	14.0	14.0	100.0
Total	200	100.0	100.0	

Source: SPSS Output

The results shown in table 4.7 indicate the PayPal users and non-users status of the target respondents. A total of 172 (86%) of the target respondents have been using PayPal service before while the remaining 28 (14%) out of 200 respondents are non-PayPal users.

#### 4.2.2 Central Tendency

##### 4.2.2.1 Usage Barrier (UB)

Table 4.8 Central Tendency for UB

No.	Questions	Mean	Mode
UB1	I find that PayPal platform are difficult to use	4.3500	4.00
UB2	I find that PayPal platform are inconvenient to use	4.3900	5.00
UB3	I find that PayPal platform are inefficient compare to pay in cash	4.2300	4.00
UB4	I find that instruction provided on the PayPal platform is unclear	4.1200	4.00

Source: SPSS Output

The Usage Barrier central tendency summary table is shown in Table 4.8. The mean score for all the variable related statements is within the range of 4.12 to 4.39. The UB2 has the highest mean score, meanwhile UB4 has the lowest mean score. On the other hand, majority of the mode score related to the UB is 4 which indicate that the respondents have “Agreed” to the most of the UB questions in the survey.

#### 4.2.2.2 Risk Barrier (RB)

Table 4.9 Central Tendency for RB

No.	Questions	Mean	Mode
<b>RB1</b>	I am afraid for making any mistakes in the process of using PayPal mobile payment	4.1000	4.00
<b>RB2</b>	I am afraid of entering wrong information during the payment process	4.0250	4.00
<b>RB3</b>	I am afraid for expose of privacy if using the PayPal platform	4.0200	4.00
<b>RB4</b>	I am afraid for any unreasonable or fraudulent charges if using the PayPal services	4.0650	4.00
<b>RB5</b>	I am afraid for faultiness in the function of PayPal mobile payment	4.0400	4.00

Source: SPSS Output

Table 4.9 shows the central tendency summary table for variable called Risk Barrier. The mean score for all the variable related statements is within the range of 4.02 to 4.10. The RB1 has the highest mean score, while RB3 has the lowest mean score. On the other hand, all mode score related to the RB is 4, which indicates that the respondents have “Agreed” to all the statements related to RB.

#### 4.2.2.3 Value Barrier (VB)

Table 4.10 Central Tendency for VB

No.	Questions	Mean	Mode
<b>VB1</b>	For me, using PayPal mobile payment is uneconomical	3.8650	4.00
<b>VB2</b>	For me, using PayPal does not increase the ability to control my own financial matters	4.0300	4.00
<b>VB3</b>	For me, using PayPal services does not offer any extra benefits when compared to cash payment compare to pay in cash	3.9200	4.00
<b>VB4</b>	For me, using PayPal does not eliminate the constraint of time when conducting the transactions	3.9900	4.00
<b>VB5</b>	For me, PayPal is not a good substitutes for traditional cash payment	3.9400	4.00

Source: SPSS Output

The central tendency summary table for variable called Value Barrier is shown in Table 4.10. The mean score for all the statements in VB is within the range of 3.865 to 4.03. The VB2 has the highest mean score, while VB1 has the lowest mean score. On the other hand, all mode score related to the VB is 4 which indicates that the respondents have “Agreed” to all the statements related to VB.

#### 4.2.2.4 Image Barrier (IB)

Table 4.11 Central Tendency for IB

No.	Questions	Mean	Mode
<b>IB1</b>	PayPal projected a very negative image	3.5150	4.00
<b>IB2</b>	PayPal mobile payment are perceived to be difficult to use	3.6100	4.00
<b>IB3</b>	New technology are always too complicated to use	3.4950	3.00
<b>IB4</b>	The reputation of the PayPal company is not so good	3.4650	3.00

Source: SPSS Output

Table 4.11 shows the Image Barrier central tendency summary table. All the statement used in Image barrier mean score is within the range of 3.465 to 3.610. The IB2 has the highest mean score, while IB4 has the lowest mean score. On the other hand, the mode score related to the IB is 3 & 4 which indicates that the respondents have “Agreed” to most of the IB statements and “Neither Agreed or Disagreed” to the remaining of the Image Barrier statements in the survey.

#### 4.2.2.5 Tradition Barrier (TB)

Table 4.12 Central Tendency for TB

No.	Questions	Mean	Mode
<b>TB1</b>	I feel impatient with the PayPal mobile applications	3.5650	3.00
<b>TB2</b>	I prefer to face-to-face communicate with the seller to purchase goods and services that I want	3.6400	4.00
<b>TB3</b>	I prefer to use physical forms of payment for my transactions	3.8300	4.00
<b>TB4</b>	I prefer to made purchase through computer rather than using mobile phones or tablets	3.6750	4.00

Source: SPSS Output

Table 4.12 shows the central tendency summary table for variable called Tradition Barrier. The mean score for all the variable related statements is within the range of 3.565 to 3.830 The TB3 has the highest mean score, while TB1 has the lowest mean score. On the other hand, majority of the mode score related to the TB is 4 which indicate that the respondents have majority “Agreed” to all the statements related to Tradition Barrier.

#### 4.2.2.6 Perceived Cost Barrier (PCB)

Table 4.13 Central Tendency for PCB

No.	Questions	Mean	Mode
<b>PCB1</b>	I would be charged more to use the PayPal services	3.8600	4.00
<b>PCB2</b>	Total costs to perform the transactions via mobile phone are more expensive than using other payment channel (cash/computer)	3.8200	4.00
<b>PCB3</b>	Mobile payment expenses are burdens for me	3.6950	4.00
<b>PCB4</b>	Network connection fees for perform mobile payment are expensive	3.6700	4.00

Source: SPSS Output

The central tendency summary table for Perceived Cost Barrier is shown in Table 4.13. All the variable related statements mean score is within the range of 3.67 to 3.86. The PCB1 has the highest mean score, while PCB4 has the lowest mean score. On the other hand, the mode score related to the PCB is 4 which indicates that the respondents have “Agreed” to all the statements related to Perceived Cost Barrier.

#### 4.2.2.7 Adoption (A)

Table 4.14 Central Tendency for A

No.	Questions	Mean	Mode
A1	I intend to use the PayPal mobile payment	1.7150	2.00
A2	I intend to learn how to use PayPal platform to perform my transaction	1.6150	2.00
A3	I intend to use PayPal mobile services in future	1.7750	2.00
A4	I intend to use PayPal to perform my transaction more often	1.3250	1.00
A5	I intend to recommend the PayPal services to my friends	1.6200	2.00

Source: SPSS Output

Table 4.14 shows the central tendency summary table for dependent variable called Adoption. The mean score for all the variable related statements is within the range of 1.325 to 1.775. The A3 has the highest mean score, while A4 has the lowest mean score. On the other hand, most of the mode score related to the A is 2 which indicates that the respondents have “Disagreed” to all the statements related to Adoption of the PayPal mobile payment.

### 4.3 Reliability Analysis

Table 4.15 Reliability Test

Variables	No of Items	Cronbach's Alpha	Level of Reliability
Usage Barrier (UB)	4	0.768	Good reliability
Risk Barrier (RB)	5	0.825	Very good reliability
Value Barrier (VB)	5	0.844	Very good reliability
Image Barrier (IB)	4	0.835	Very good reliability
Tradition Barrier (TB)	4	0.786	Good reliability
Perceived Cost Barrier (PCB)	4	0.817	Very good reliability
Adoption (A)	5	0.852	Very good reliability

Source: SPSS Output

The SPSS output of the reliability test is shown in Table 4.15. According to Sekaran and Bougie (2010), the Cronbach's Alpha must at least minimum of 0.7 to be said as reliable. Since, the Cronbach's Alpha for all the variables used is more than 0.75, therefore all the variables used in the research are considered reliable for the study. In addition, the highest level of reliability in the independent variables is Value Barrier with alpha value of 0.844 meanwhile Usage Barrier has alpha value 0.768 only which is the lowest level of reliability among all the independent variables. Apart from this, the alpha value for dependent variable (Adoption) is 0.852 which indicate very good reliability.

## 4.4 Normality Analysis

Table 4.16 Normality Test

	N	Skewness	Kurtosis
UB1	200	-0.243	-0.677
UB2	200	-0.514	-0.626
UB3	200	-0.226	-0.621
UB4	200	-0.265	-0.762
RB1	200	-0.153	-1.068
RB2	200	-0.039	-1.126
RB3	200	-0.116	-0.684
RB4	200	-0.073	-0.727
RB5	200	-0.044	-0.710
VB1	200	0.203	-1.015
VB2	200	-0.033	-0.712
VB3	200	0.120	-1.047
VB4	200	0.009	-0.544
VB5	200	-0.056	-.281
IB1	200	-0.060	-2.017
IB2	200	-0.454	-1.812
IB3	200	0.020	-2.020
IB4	200	0.141	-2.000
TB1	200	0.443	-0.711
TB2	200	0.387	-0.654
TB3	200	0.125	-0.483
TB4	200	0.216	-0.458
PCB1	200	0.122	-0.815
PCB2	200	0.152	-0.687
PCB3	200	0.469	-0.803
PCB4	200	0.257	-0.509
A1	200	-0.671	-0.815
A2	200	-0.057	-1.116
A3	200	-0.049	-0.249
A4	200	1.283	0.652
A5	200	0.074	-0.921

Source: SPSS Output

Table 4.16 illustrates the normality test output for the research. According to the Table 4.16, all the variables used in the study are normally distributed since the skewness values is between the ranges of  $\pm 2$  while all the kurtosis value for the variables is between  $\pm 7$ .

## 4.5 Inferential Analysis

### 4.5.1 Pearson Correlation Coefficient Analysis

Table 4.17 Pearson Correlation Coefficient Test

Variables	UB	RB	VB	IB	TB	PCB	A (DV)
UB	1						
RB	-0.602	1					
VB	0.440	0.394	1				
IB	-0.144	-0.214	-0.226	1			
TB	-0.497	0.200	-0.321	-0.613	1		
PCB	0.582	-0.433	0.566	0.381	-0.486	1	
A (DV)	-0.278	-0.357	-0.416	-0.124	-0.312	-0.356	1

Source: SPSS Output

The Pearson Correlation Coefficient analysis outcome is shown in Table 4.17. The results showed that all the correlation coefficient value are from 0.164 to 0.613 between each independent variable which indicate that there is small but definite relationship within each two variables. On the other hand, the dependent variable has all negative correlation values with each independent variable used in the study indicated that an increase on each independent variable will cause a decrease in dependent variable (A). In addition, no multicollinearity issues is found on this study since all the coefficient is lower than 0.9.



## 4.5.2 Multiple Linear Regression

Table 4.18 Model summary

Model	R	R Square	Adjusted R Square
1	0.805	<b>0.648</b>	0.637

Source: SPSS Output

Table 4.18 shows the multiple linear regression summaries for the study. The R square value refers to the percentage of the dependent variable variation that is explained by the independent variables. For this study, the R square value is 0.648 which indicate that 64.8% of the variations in dependent variable (Adoption) can be explained by all the six independent variables used in the research (Usage Barrier, Risk Barrier, Value Barrier, Image Barrier, Tradition Barrier and Perceived Cost Barrier). However, there is still left other 35.2% unexplained by the model used which indicated that there are still other additional factors that are able to affect the Malaysian generation X consumers decisions to use PayPal mobile payment which have not been discussed in this study.

Table 4.19 Anova

Model	F Statistic	Sig.
1	59.197	0.0001

Source: SPSS Output

Table 4.19 shows the outcomes of F-Statistics for this research. The applied model is said to be significant if P-value less than 0.05 (Malhora & Peterson, 2006). The SPSS output shown in Table 4.19 indicated that the overall p-value for the study is 0.0001 which is less the 0.05, therefore the model used is said to be significant. The F value for this study is 59.197 concluded that there is a linear relationship between all the variables used in the study. Thus, the model adopt in this study is said to be a good descriptor to describe the relationship between the dependent and predictor variables. Hence, all the barriers (UB, RB, VB, IB, TB, and PCB) are significant in explaining the variance in PayPal m-payment Adoption.

Table 4.20 Coefficients

Model	Unstandardized Coefficients	Beta	P – Value	Significant or Insignificant
1 (Constant)	6.304	-	0.000	-
<b>Usage Barrier</b>	-0.229	-0.290	0.000	Significant
<b>Risk Barrier</b>	-0.213	-0.393	0.000	Significant
<b>Value Barrier</b>	-0.179	-0.367	0.000	Significant
<b>Image Barrier</b>	-0.199	-0.185	0.000	Significant
<b>Tradition Barrier</b>	-0.209	-0.366	0.000	Significant
<b>Perceived Cost Barrier</b>	-0.180	-0.384	0.000	Significant

Source: SPSS Output

Table 4.20 illustrates summary of the Multiple Linear Regression. The output indicated that all the independent variables used in the study is significantly affecting the dependent variable since all the p-value is less than the alpha value 0.05. Apart from that, all the independent variables in this study also have a negative relationship with the dependent variable. In addition, based on the table 4.20, it can also be observed that the Risk Barrier (0.393) has the highest impact on the dependent variable followed by Perceived Cost Barrier (0.384), Value Barrier (0.367), Tradition Barrier (0.366) and Usage Barrier (0.290) whereas the image barrier (0.185) has the lowest influence on the dependent variable. The Multiple Linear Regression equation for this study and its explanation are as table 4.21.

Table 4.21 Multiple Linear Equation

Equation
$A = 6.304 - 0.229 (UB) - 0.213 (RB) - 0.179 (VB) - 0.199 (IB) - 0.209 (TB) - 0.180 (PCB)$

**Explanation**

<p><b>UB = <math>\beta_1</math> = -0.229</b></p> <p>There is negative relationship between Usage Barrier and PayPal mobile payment adoption among Malaysian generation X consumers. When the UB increases by 1 unit, the PayPal mobile payment adoption will decrease by 0.229 units.</p>
<p><b>RB = <math>\beta_2</math> = -0.213</b></p> <p>There is negative relationship between Risk Barrier and PayPal mobile payment adoption among Malaysian generation X consumers. When the RB increases by 1 unit, the PayPal mobile payment adoption will decrease by 0.213 units</p>
<p><b>VB = <math>\beta_3</math> = -0.179</b></p> <p>There is negative relationship between Value Barrier and PayPal mobile payment adoption among Malaysian generation X consumers. When the VB increases by 1 unit, the PayPal mobile payment adoption will decrease by 0.179 units</p>
<p><b>IB = <math>\beta_4</math> = -0.199</b></p> <p>There is negative relationship between Image Barrier and PayPal mobile payment adoption among Malaysian generation X consumers. When the IB increases by 1 unit, the PayPal mobile payment adoption will decrease by 0.199 units</p>

$$TB = \beta_5 = -0.209$$

There is negative relationship between Tradition Barrier and PayPal mobile payment adoption among Malaysian generation X consumers. When the TB increases by 1 unit, the PayPal mobile payment adoption will decrease by 0.209 units

$$PCB = \beta_6 = -0.180$$

There is negative relationship between Perceived Cost Barrier and PayPal mobile payment adoption among Malaysian generation X consumers. When the PCB increases by 1 unit, the PayPal mobile payment adoption will decrease by 0.180 units

## 4.6 Hypothesis Testing

Table 4.22 Summary of Hypotheses

Hypothesis	P-value	Accepted/ Rejected	Reason
<b>H1:</b> There is a significant relationship between usage barrier (UB) and PayPal mobile adoption.	0.000	Accepted	P-value < 0.05
<b>H2:</b> There is a significant relationship between risk barrier (RB) and PayPal mobile adoption.	0.000	Accepted	P-value < 0.05
<b>H3:</b> There is a significant relationship between value barrier (VB) and PayPal mobile adoption.	0.000	Accepted	P-value < 0.05
<b>H4:</b> There is a significant relationship between image barrier (IB) and PayPal mobile adoption.	0.000	Accepted	P-value < 0.05
<b>H5:</b> There is a significant relationship between tradition barrier (TB) and PayPal mobile adoption.	0.000	Accepted	P-value < 0.05

<b>H6:</b> There is a significant relationship between perceived cost barrier (PCB) and PayPal mobile adoption	0.000	Accepted	P-value < 0.05
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The summary of the hypothesis for the study is shown in Table 4.21. All the six variables developed for the study is accepted since all the variables p-value is less than alpha value, 0.05.

## 4.7 Conclusion

In summary, this chapter has discussed about the results of the various data analysis techniques that have been conducted in this study using both the SPSS software. The chapter 5 will be discussing about the overall summary of the findings, the implications and limitations of the study, as well as some of the suggestions for the future studies.

## **CHAPTER 5: CONCLUSION AND POLICY IMPLICATIONS**

### **5.0 Introduction**

Chapter 5 will be discussed on the summary of the descriptive and inferential analysis output. Apart from this, the implications & limitations as well as some future recommendations for the study will also be included under this chapter.

### **5.1 Summary of Statistical Analysis**

The total number of survey being used for the study is 200. The summary of the results is shown as below:

#### **5.1.1 Description Analysis**

##### **Frequency Distribution**

All the target respondents own a smartphone, credit card and almost all of them have performed transaction using PayPal services before. The majority of the target respondents for this research are male respondents with 62.5% of the total target respondents while female respondents only occupy 37.5%. Most of the target respondents are Chinese respondents (62.5%), falls under age category of 45 to 49 (32%) and most of them are married (89%). In addition, most of the respondents only have education qualification until high school level (54%) and with monthly allowance ranging from RM 1,001 to RM 3,000 (53%)

### **Central Tendency**

According to SPSS analysis, the items UB2, RB1, VB2, IB2, TB3, PCB1 and A3 has the highest mean score while UB4, RB3, VB1, IB4, TB1, PCB4 and A4 has the lowest mean score. All the independent variables (UB, RB, VB, IB, TB, and PCB) are more towards “Agreed” and the mode score is 4. Meanwhile, the dependent variable (A) more towards “Disagreed” and has a mode score of 2.

### **5.1.2 Reliability Analysis**

#### **Reliability Analysis**

According to the rule of thumb, all the variables included in the study are said to be reliable since all the Cronbach Alpha value are more than 0.7.

### **5.1.3 Normality Analysis**

#### **Normality Analysis**

According to the skewness and kurtosis value obtained from the normality test, all the variables used in the study are normally distributed since the skewness value is between  $\pm 2$  whereas the kurtosis value is between the range of  $\pm 7$ .

### 5.1.4 Inferential Analysis

#### **Pearson Correlation Analysis**

Based on the Pearson Correlation Analysis, majority of the independent variables show small but definite relationship with each other. The IB and UB have the weakest correlation while TB and IB have the strongest correlation. All the independent variables (UB, RB, VB, IB, TB and PCB) has negative relationship with the dependent variable (PayPal mobile payment adoption among Malaysian generation X consumers)

#### **Multiple Linear Regression**

According to the MLR analysis, 64.8% of variance in the response variable is able to be explained by all the IVs mentioned in the study. The model apply in this study is said to be good fit to predict the DV since the F-value from the spss software is bigger than F-value obtained from the F table. Based on analysis, the coefficients indicate that all the IVs (UB, RB, VB, IB, TB and PCB) are significantly affecting the PayPal MP adoption among Malaysian middle aged consumers. Additionally, the results also indicate that among the IVs, Risk Barrier has the greatest impact towards the PayPal adoption whereas the Image Barrier has the lowest impact toward the adoption.

## 5.2 Discussions of Major Findings

### 5.2.1 Usage Barrier and PayPal Mobile Payment Adoption

**H1:** There is a significant relationship between usage barrier (UB) and PayPal mobile payment adoption.



The hypothesis for Usage Barrier (UB) was supported in this research since its P-value is less than 0.05. UB has a negative relationship and it is significantly influencing the PayPal mobile payment adoption among Malaysian generation X consumers. The greater the efforts need by the consumers to use the PayPal platform, the lower the PayPal m-payment adoption rate. The outcome generated from the analysis are consistent with the findings from past studies conducted by Bouwman et al. (2007); Mahatanankoon and Vila-Ruiz (2007); Suki (2011); Rahaman (2013) and Soliman & Salem (2014). The results concluded that usage barrier is negatively affecting the adoption of the PayPal mobile services in Malaysia. The finding from this study indicates that the most of the Malaysian middle aged consumers may not choose to use the PayPal services if greater effort is needed to use the PayPal platform. Apart from this, inefficiency of the platform and insufficient instructions provided by PayPal company and business practitioners also cause majority of the middle aged consumers resist toward the acceptance of the PayPal mobile payment services.

### **5.2.2 Risk Barrier and PayPal Mobile Payment Adoption**

**H2:** There is a significant relationship between risk barrier (RB) and PayPal mobile payment adoption.

The hypothesis for Risk Barrier (RB) was accepted in this study since its P-value is less than 0.05. Hence, it is statistically proven that RB is significantly affecting the PayPal adoption. Our result agrees with previous empirical study done by Brown et al. (2003); Shin (2009); Jourbert & Belle (2009); Luo et al. (2010); Munusamy et al. (2012) which concluded that user's perceived risk is negatively influencing consumers resists to complete transactions using mobile phone. The results from this study show that the higher the risk perceived by the consumers,

the lesser the number of the Malaysian generation X consumers will choose to adopt the PayPal m-payments. According to Ram and Sheth (1989), most of the consumers are afraid their private personal information will leak by using the mobile payment. Besides this, lack of education platform to promote on the security awareness also will cause the risk barrier towards the acceptance of the PayPal mobile payment in Malaysia.

### **5.2.3 Value Barrier and PayPal Mobile Payment Adoption**

**H3:** There is a significant relationship between value barrier (VB) and PayPal mobile payment adoption.

The hypothesis for Value Barrier (VB) was supported in this study since its P-value is less than 0.05. It is statistically proven that VB is negatively affecting the consumer decision to adopt PayPal mobile services. The results for VB in this study are consistent with the past studies done by Agwu (2013), Kazi (2013) and Maity (2014) which conclude that a barrier in perceived value will have negative relationship with the adoption towards newly technological innovations. According to Ram and Sheth (1989), users are more likely to accept new technological innovation only if the new innovations bring greater performance-to-price value compare to existing services. From the findings, it conclude that most of the middle aged consumers in Malaysia have no intention to use PayPal mobile payments if the newly mobile payment methods does not provide any extra benefit to them compare to the traditional cash payments.

#### **5.2.4 Image Barrier and PayPal Mobile Payment Adoption**

**H4:** There is a significant relationship between image barrier (IB) and PayPal mobile payment adoption.

The hypothesis for Image Barrier (IB) was accepted in this study since its P-value is less than 0.05. It is statistically proven that PayPal adoption is negatively influence by the image barrier perceived by the PayPal m-payment. This results are consistent with the past studies conducted by Rammile and Nel (2012), Elbadrawy and Aziz (2011) and Bakhit (2014) which indicate that image barrier is negatively affecting the consumers acceptance towards the innovations. According to Elbadrawy and Aziz (2011), the existence of image barrier is mainly due to the negative impressions of users towards the innovations. The results shows that majority of our target respondents resist towards the PayPal mobile payment due to negative thought and bad experience in using the PayPal services previously.

#### **5.2.5 Tradition Barrier and PayPal Mobile Payment Adoption**

**H5:** There is a significant relationship between tradition barrier (TB) and PayPal mobile payment adoption.

The hypothesis for Tradition Barrier (TB) was supported in this study since its P-value is less than 0.05. It is statistically proven that TB is negatively influence the PayPal mobile payment adoption among Malaysian generation X consumers. The outputs for TB in this study are aligned with the past studies performed by Lian and Yen (2013), Molesworth and Suortti (2001) and Gutner (2014) which proved that TB is one of the major resistance factors toward the acceptance of mobile payment. According to Ram and Sheth (1989), TB is barrier exist when the

innovations resulting a cultural changes in consumer's existing social norm, societal and family values. The finding in the study shows that majority of our target respondents prefer to use physical forms of payments rather than using PayPal mobile payment.

### **5.2.6 Perceived Cost Barrier and PayPal Mobile Payment Adoption**

**H6:** There is a significant relationship between perceived cost barrier (PCB) and PayPal mobile payment adoption.

The hypothesis for Perceived Cost Barrier (PCB) was accepted in this study since its P-value is less than 0.05. It is statistically proven that the consumer's acceptance towards the PayPal mobile payment services is negatively affected by the perceived cost barrier exist in using the services. The results for PCB in this study are aligned with the past studies done by Lu et.al (2011), Pham and Ho (2015), Chong (2013) and Yu (2012) which revealed that cost barrier is one of the major important factors in affecting the consumer's acceptance towards adoption of mobile payment service. According to Lu et.al (2011), PCB refers to additional expenses that need to be paid by the consumers to use the mobile payment services. From the results, it indicate that the expensive transaction fees, high broadband subscription fees and additional service charges is important reasons that preventing middle aged consumers in Malaysia from adopting the PayPal mobile services.

## **5.3 Implication of the Study**

### **5.3.1 Theoretical Implication**

Previously, there are limited studies conducted in terms of the PayPal mobile payment adoption intention among generation X consumers, especially in the Malaysian context. Thus, this research study will help contribute to the literature world by examine on the factor affecting middle aged consumers resistance to PayPal mobile payment adoption in the Malaysian context. Furthermore, this study also provides an insight on the obstructive factors that hindered the Malaysian middle aged consumers from adopting the PayPal mobile payment services. In addition, the Innovation Resistance Theory (IRT) employed in this study also can be applied to study other technological innovation adoption intention in future such as Near Field Communication (NFC) and Direct Mobile Billing.

### **5.3.2 Managerial Implication**

This study is significant and beneficial to those banking institutions and business practitioners that offer the PayPal m-payment services to the consumers as the findings from the research able to provide useful information on the factors that resists Malaysian middle aged consumers from adopting the mobile payment services. These findings also able to help those involved parties to develop solution to enhance the PayPal m-payment adoption rate among Malaysian generation X consumers.

Meanwhile, since many present articles are focus on examine the driving factors towards mobile commerce adoption in foreign countries thus this study will on be focusing on PayPal mobile payment adoption and the target respondents for this study will be on Malaysian generation X consumers. Hence, the findings from this study will make a positive contribution to the future researchers who wished to conduct similar research to understand the consumer's behaviour intention towards certain newly technological innovations in Malaysia especially among those middle aged consumers.

Additionally, the findings indicate that all the factors apply in the study have significant negative relationship toward the PayPal acceptance among Malaysian consumers. Among all the factors, risk barrier and perceived cost barrier have the greatest impact on the Malaysian consumer's decision to adopt PayPal m-payment. By referring this study, the marketers can have ideas to improve the consumer's acceptance towards the PayPal mobile services. Hence, PayPal Holding, Inc. and other parties involved should take some action to eliminate unnecessary additional charges or enhancing the security on the platform in order to attract more consumers to use the PayPal transaction services.

Lastly, the usage barrier, value barrier, image barrier and tradition barrier also play significant role in affecting the Malaysian middle aged consumer's decisions to use the PayPal mobile payment services. Thus, based on the findings, the respective parties involved need to put concern on this matter and implement strategies to minimize the barriers in order to attract more potential adopters. A user friendly, effective and efficient platform would help to attract consumers to adopt the PayPal services. In other word, the business practitioners and marketers should design the PayPal platform so that it enables the consumers to learn to use the platform easily and impose less technical skills.

## **5.4 Limitations of the Study**

Basically, there are few limitations can be found in this study. First of all, the study was carry out at Penang and Kedah which is only represent the northern side of the peninsular Malaysia due to time constraint and the target respondents chosen was only on middle aged Malaysian consumers who got own a mobile phone and a credit card, hence the findings for this study cannot be generalized to all the Malaysian consumers. Second, most of the journals used in this study are generate from overseas so some of the variables used may not be suitable to predict the outcome for the study. Apart from this, there are still other variables that can influence the Malaysian generation X consumers to adopt the PayPal services since the R Square value for the study is just only 64.8% which in other words there are still left 35.2% variation in the dependent variable is unexplained in this study.

## **5.5 Recommendations for Future Research**

Future researchers are encouraged to carry out study on all states in Malaysia on multi-generational consumers if time permits so that the findings can be used to represent all the target population in Malaysia. On the other hand, future researchers are advised to include larger sample size in future studies in order to obtain more valuable data and findings. In addition, future researchers are also suggest to consider other additional factors such as compatibility, variety of services and availability of substitutes into the proposed model to enhance the prediction on the outcome. This will help to improve the R Square value in turn improve the predictability.

Beside this, future researchers also are suggested to review more Malaysia journals instead of other non-Asia countries journals when conducting similar research so that it able to develop more significant variables that will help in predicting the acceptance of mobile payment among consumers in Malaysia. Lastly, future researchers are also advised to conduct mixed mode research study rather than quantitative study alone if time permits so that more precise and in-depth information can be collected from the respondents which in turn will help to develop more reliable research instruments to examine the resistance factors towards the acceptance of the newly technological innovations among Malaysian consumers.

## **.5.6 Conclusion**

The main objective of conducting this study is to explore the resistance factors that affecting the Malaysian generation X consumers from adopting the PayPal mobile payment. An Innovation Resistance Theory (IRT) has been employed in the study to predict the outcome. The results from the research show that all the six independent variables (Usage Barrier, Risk Barrier, Value Barrier, Image Barrier, Tradition Barrier and Perceived Cost Barrier) applied in the study have significant negative relationship with the PayPal mobile payment adoption among middle aged consumers in Malaysia. The findings can be used as references for those banking sectors, merchants, governments and marketers to formulate their business and marketing strategies to attract more future adopters.



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**APPEDICES**

**Factors Affecting Consumer Resistance to PayPal  
Mobile Payment Adoption: A Study of Generation  
X Consumers in Malaysia**

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Dear respondent,

I am a final year postgraduate student of Master of Business Administration, from University Tunku Abdul Rahman (UTAR). The purpose of this survey is to identify the resistance factors affecting the adoption of PayPal mobile payment among Generation X consumers in Malaysia.

Thank you for your participation.

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**Instruction:**

1. There are SEVEN (7) pages in this questionnaire. Please answer ALL questions which are needed in ALL pages.
2. Completion of this questionnaire will take you approximately 5 to 10 minutes.
3. The content of this questionnaire will be kept strictly confidential and will be used only for academic research purpose.



## Section A: Demographic Profile

*In this section, we are interested in your background in brief. Please tick your answer and your answer will be kept strictly confidential.*

1. Gender : ☐ Male  
☐ Female
2. Age : ☐ 35 – 39 years old  
☐ 40 – 44 years old  
☐ 45 – 49 years old  
☐ 50 – 54 years old
3. Cultural Heritage : ☐ Malay  
☐ Chinese  
☐ Indian
4. Marital Status : ☐ Single  
☐ Married
5. Highest Education Completed: ☐ High School  
☐ Diploma  
☐ Degree  
☐ Master and above
6. How much is your monthly allowance?  
☐ RM 1,001 – RM 3,000  
☐ RM 3,001 – RM 5,000  
☐ RM 5,001 above
7. Have you done any PayPal mobile payment before?  
☐ Yes  
☐ No

## **Section B: Evaluate the Resistance Factors Affecting the Adoption of PayPal Mobile Payment among Generation X Consumers in Malaysia**

*In this section, we seek for your opinion regarding the important of different types of barriers that influence the PayPal mobile payment among the consumers in Malaysia. Please indicate the extent to which you agreed or disagreed with each statement using 5 points Likert scale.*

*(1) = Strongly Disagree    (2) = Disagree                      (3) = neither agree nor disagree  
(4) = Agree                      (5) = Strongly Agree*

*Please circle one number per line to indicate the extent to which you agreed or disagreed with the following statements.*

### **1. Usage Barrier (UB)**

Circle the number that best describes your response to each statement.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. I find that PayPal platform are difficult to use.	1	2	3	4	5
2. I find that PayPal platform are inconvenient to use.	1	2	3	4	5
3. I find that PayPal platform are inefficient compare to pay in cash.	1	2	3	4	5
4. I find that instruction provided on the PayPal platform is unclear.	1	2	3	4	5

## 2. Risk Barrier (RB)

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. I am afraid for making any mistakes in the process of using PayPal mobile payment.	1	2	3	4	5
2. I am afraid of entering wrong information during the payment process.	1	2	3	4	5
3. I am afraid for expose of privacy if using the PayPal platform.	1	2	3	4	5
4. I am afraid for any unreasonable or fraudulent charges if using the PayPal services.	1	2	3	4	5
5. I am afraid for faultiness in the function of PayPal mobile payment.	1	2	3	4	5

### 3. Value Barrier (VB)

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. For me, using PayPal mobile payment is uneconomical.	1	2	3	4	5
2. For me, using PayPal does not increase the ability to control my own financial matters.	1	2	3	4	5
3. For me, using PayPal services does not offer any extra benefits when compared to cash payment.	1	2	3	4	5
4. For me, using PayPal does not eliminate the constraint of time when conducting the transactions.	1	2	3	4	5
5. For me, PayPal is not a good substitutes for traditional cash payment.	1	2	3	4	5

#### **4. Image Barrier (IB)**

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. PayPal projected a very negative image.	1	2	3	4	5
2. PayPal mobile payments are perceived to be difficult to use.	1	2	3	4	5
3. New technologies are always too complicated to use.	1	2	3	4	5
4. The reputation of the PayPal Company is not so good.	1	2	3	4	5

#### **5. Tradition Barrier (TB)**

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. I feel impatient with the PayPal mobile applications.	1	2	3	4	5
2. I prefer to face-to-face communicate with the seller to purchase goods and services that I want.	1	2	3	4	5
3. I prefer to use physical forms of payment for my transactions.	1	2	3	4	5
4. I prefer to made purchase through computer rather than using mobile phones or tablets.	1	2	3	4	5

### **6. Perceived Cost Barrier (PCB)**

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. I would be charged more to use the PayPal services.	1	2	3	4	5
2. Total costs to perform the transactions via mobile phone are more expensive than using other payment channel.	1	2	3	4	5
3. Mobile payment expenses are burdens for me.	1	2	3	4	5
4. Network connection fees for perform mobile payment are expensive.	1	2	3	4	5

### **7. PayPal Mobile Payment Adoption (A)**

The following statements are seeking your opinion regarding the impacts of the adoption of the PayPal mobile payment with various types of barriers given. Circle the number that best describes your response to each statement.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. I intend to use the PayPal mobile payment.	1	2	3	4	5
2. I intend to learn how to use PayPal platform to perform my transaction.	1	2	3	4	5
3. I intend to use PayPal mobile services in future.	1	2	3	4	5
4. I intend to use PayPal to perform my transaction more often.	1	2	3	4	5

5. I intend to recommend the PayPal services to my friends.	1	2	3	4	5
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Thank you for your valuable time, opinion and comments.  
~The End~