

SUPERVISOR DECLARATION

“I hereby declare that I have checked this project and in my opinion, this report is adequate in terms of scope and quality for the award of the degree of Bachelor of Technology Management (Innovation)”

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Date :

THE RETAILERS ACCEPTANCE TOWARDS NEAR FIELD
COMMUNICATION MOBILE WALLET TECHNOLOGY IN MALACCA
MALAYSIA

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DECLARATION

“I hereby declare that the work of this exercise is mine except for the quotations and summarize that have been duly acknowledge”

Signature :

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DEDICATION

To my beloved parents and siblings, thank you for raising me and support me until now. A Special thanks to my supervisor, panels and my friends for helping me throughout the project towards accomplishing my thesis.

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I would like to express my greatest thankfulness to the most precious persons in my life who are my father and mother for all the effort they put to raise me with full of love, caring and happy to see me a successful person in my life. Without them, I am nothing and I would like to extend my thanks for their moral and financial support. Thank you to the God for giving me wisdom, strength, support and knowledge in exploring things, and also make this Final Year Project possible.

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ABSTRACT

The mobile phone has become as a basic necessity of humans life. It has been useful to human's life in many ways and one them was near filed communication mobile wallet where it act as a payment tool. This technology is really very useful and effective technology to the human where it provides several of benefits. Some of them are, help in protect their valuable belongings, faster transactions, time saving and more secure. Some of the developed country has been adopted this technology and it is in practice now. However, in Malaysia it has not been implemented yet. The main purpose of this study is to implement this great technology in our country. So that, this research is focus on the retailers readiness to adopt this technology in their retails outlets. This is because, if they are not ready for this technology, it is not possible to implementing it in our country. A total of 100 questionnaires were coded and analyzed with statistical techniques. This research contributes to an understanding of how retailers look upon the adoption of near filed communication mobile wallet in their retail outlet.

Keywords: Mobile Wallet, Retailers acceptance, Malacca.

ABSTRAK

Telefon bimbit telah menjadi sebagai satu keperluan asas kepada kehidupan manusia. Telefon bimbit menyumbangkan banyak kebaikan kepada kehidupan manusia dalam pelbagai situasi dan salah satu daripadanya ialah dompet mudah alih di mana ia bertindak sebagai alat pembayaran. Teknologi ini mempunyai banyak kebaikan antaranya ialah, membantu dalam melindungi barang-barang berharga mereka, urus niaga lebih cepat, menjimatkan masa dan lebih selamat. Beberapa negara maju telah menggunakan teknologi ini dan ia adalah dalam amalan. Bagaimanapun, di Malaysia ia belum dilaksanakan lagi. Tujuan utama kajian ini adalah untuk melaksanakan teknologi yang hebat ini di negara kita. Maka, kajian ini fokus kepada kesediaan peruncit untuk menerima pakai teknologi ini di kedai runcit mereka. Ini kerana, jika mereka tidak bersedia untuk teknologi ini, ia tidak mungkin untuk melaksanakannya di negara kita. Sebanyak 100 soal selidik telah dikodkan dan dianalisis dengan teknik statistik. Kajian ini menyumbang kepada pemahaman bagaimana peruncit melihat terhadap penggunaan dompet mudah alih komunikasi melaksanakan di kedai runcit mereka.

Kata Kunci: Dompet mudah alih, Penerimaan Peruncit, Melaka.

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LIST OF ABBREVIATIONS

EOU	=	Ease of Use
HCE	=	Host- Card-Emulation
NFC	=	Near Field Communication
PAD	=	Portable Application Description
RFID	=	Radio Frequency Identification
SE	=	Secure Element
SPSS	=	Statistical Package for Social Science
TAM	=	Technology Acceptance Model
U	=	Usefulness
UI	=	Usage Intention

LIST OF SYMBOLS

%	=	Percent
<	=	Greater-than
>	=	Less-than
=	=	Equals

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CHAPTER 1

INTRODUCTION

1.0 Introduction

This chapter covers the background of the study, which defines what is near field communication mobile wallet and how does it work. Then it is followed by the problem statement which states the ultimate problem that need to solve at the end of this research. Three main research objectives of study as well as questions have been clearly discussed in this chapter. Besides that, it is further with scope of study, which describes about the range or scale of this research in clearly. On the other hand, it is continued to limitation that faced while conducting this research and also describes the significant or important of this study. Eventually it is concluded with brief summary of the overall chapter.

1.1 Background of study

The mobile phone has become as a basic necessity of human life. Generally it is use for communication, to access internet, safety and business purpose. According to Malaysian Communication and Multimedia Commission (2014), there were 87.9% of Malaysian mobile phone users in Malaysia in 2014. Continuous development and evolution of mobile phone has initiated to develop new features in smart phone, where it

is used as a payment tool at the point-of-sale terminal without involving any cash or cards. The great initiative was known as “Mobile Wallet”.

First of all, what is smart phone? Smart phone was a device that makes human life better faster and easier. This device is far different from a normal mobile phone which has simple basic function as what land line phone do provides. It is integrated with several of software that provides by Google android and Apple store which enable most of our daily life activities get done in a matter of seconds. Whereas, wallet can be define as a leather bag that allows a person to carry his or her valuable belongings like money, debit and credit cards, driving license, and other bonus or rewards cards in one physical bag. Advancement of technology and effort of futuristic thinker of public sake has developed the mobile wallet technology, which combines the both smart phone and physical wallet into one to make humans shopping experience smoother and easier. The mobile wallet is a new concept that enable people to make their shopping without physical cash money or cards either at POS terminal or even online shopping.

Mobile wallet can be define as a software application that store financial details of a user such as, credit and debit cards information, loyalty cards, tickets, receipt and vouchers in cloud system and enable a user to retrieve them to made payment directly at any POS terminal. It is totally different from conventional wallet where it utilizes the cloud-base system to store digital information of users securely in their smart phone rather than bring bulk amount of cash in wallet. It is user friendly, where it allows the users to directly pay for their things they purchase all around the world without using cash money or even credit card at retail outlets. Generally it is 4 digits pin and thumb lock based system that made difficult to steal the information and highly secure than traditional one.

Whereas, Near Field Communication technology (NFC) is software that enable mobile phone to communicate through Radio Frequency Identification (RFID) at POS terminals to transmit the digital information needed to made payment. Thus, NFC mobile wallet is a cashless and card-less payment method which enables the users to

bring only mobile phone for their shopping instead of physical wallet which carries some money, cards and coupons. For instance, the popular mobile wallet is Apple Pay, Google wallet and PayPal.

Retailers are who act as seller of the product either as a supplier of others product or selling their own product as per customers' needs and want. Retailers also provide several of services to the end users for commercial purpose. Whatever it is, the fundamental reason for conducting a business is for exchange of money either in term of cash payment or credit and debit cards. Hence, in order to implement the mobile wallet technology in Malaysia, it is important to study about are there the retailers are ready to accept this technology.

The focus of this research is about to study which factors that contributed retailer's acceptance towards near field communication mobile wallet in their retail outlets. Three factors have been identified as an attribute of this study which is perceived value, perceive risk and adoption of new technology. There are many factors that may contribute to the retailer's acceptances but in considering the fact of Malaysian culture, these factors are more appropriate to this study. This is because, this technology is still new in Malaysia and many do not know about what is mobile wallet in details. As prove the INDERSCEINCE (2014) stated in their research that, the mobile wallet service is not implemented in Malaysia yet. Therefore, this research is mainly being conducting to find out what is mobile wallet and how the factors; perceived value, perceive risk and adoption of new technology will gives impact towards retailer's decision to accept this technology.

1.2 Problem Statement

According to The Star Online (2015), there were 19,299 streets and commercial crime has been filed in 2012 and it is showing rise over 2013. Current streets and

commercial crimes such as armed robbery at shop, house-braking, pick pocket, snatch theft and E-commerce fraud like credit and debit card hacking has led to retailers lost bulk amount of money and as for the public they lost their money, identity cards and many of their valuable belongings.

TYPE OF CRIMES EXPERIENCED	2012 to 2014 %	2005 to 2011 %
House theft	42.4	42.7
Snatch theft	76.4	70.8
Car theft	21.5	26.0
Theft in a taxi	9.0	4.2
Other theft	16.0	20.8
Physical assault	27.8	21.9
Rape	2.1	1.0
Other crime	16.0	8.3

Note: Only for those with direct experience of a crime

Figure 1.1: The crime rate in Malaysia from 2012 to 2014

(Source: The expert survey 2014 in Malaysia)

From the figure above it is clear that, crime rate in Malaysia is still at serious stage and in order to overcome this problem systematically, there is a need for more safety and innovative technologies that can help people to ensure their belongings are always safe.

Introduce of the new invention of near field communication mobile wallet technology has emerged as a solution for this problem. This is because, the mobile wallet technology does not involve any direct cash payment, so that, there is no point of retailers and public being prey of robbery. However, in order implementing this technology in Malaysia, it is necessary to study the acceptance of the retailers towards electronic-payment of mobile wallet technology in their retail outlets. This is because, the knowledge of retailers in Malaysia towards mobile wallet technology is still at an early stage and many do not realize of the presence of this technology and its usage (INDERSCEINCE, 2014). The retailer's perception and knowledge are also varying and

influenced by multi opinions. In short, this research was focused on investigating about what is mobile wallet and its application and the willingness of the retailers in Melaka in accepting the mobile wallet payment in their retail outlets.

1.3 Research Objectives:

The aim of this study is to find out the retailer acceptance towards near field communication mobile wallet based on these two factors; perceive value, perceive risk. The goal will be achieved through the following research objective;

- 1) To examine the relationship between the perceived value of adopting near field communication “mobile wallet” and retailer’s acceptance towards this technology in Melaka.
- 2) To examine the relationship between the perceived risk of adopting near field communication “mobile wallet” and the retailer’s acceptance towards this technology in Melaka.
- 3) To identify the most significant factor that contributes to retailer’s acceptance towards near field communication mobile wallet in Melaka.

1.4 Research Questions:

Based on research objective, the research questions are as follows;

- 1) What is the relationship between the perceived value of adopting near field communication “mobile wallet” and the retailer’s acceptance towards this technology in Melaka?

- 2) What is the relationship between the perceive risk of adopting near field communication “mobile wallet” and the retailers acceptance towards this technology in Melaka?
- 3) What is the most significant factor that contribute to retailer’s acceptance towards near field communication mobile wallet in Melaka?

1.5 Scope of the study

This research was focused on the retailer’s acceptance towards NFC mobile wallet in Melaka Malaysia. Based on the problem statement, this research is carried out in order to reduce the commercial base crime rate and to find out the retailers perception. Grounded on technology acceptance theory, two factors have been chosen in order to measure the acceptance of the retailers in this research. The factors are perceived value, perceived risk of adopting NFC mobile wallet.

In order to reach at more specific research objectives and to clarify the theoretical contribution of this research, a literature review was presented in next chapter starting with what is mobile wallet, near field communication (NFC), cloud base system, perceived value, perceived risk and main service providers. It is followed by an appropriate theoretical framework with integration of those two factors that identified earlier together with the hypothesis testing of this study. Data collection was conducted in Melaka with 100 retailers selected randomly. Eventually, the discussion of this research is carried out and followed by the conclusion and recommendation.

In short, first of all the researcher study thoroughly about what is mobile wallet and it perceived value and risk in details. Then it follows by investigating the knowledge of the retailers towards Near Field Communication mobile wallet technology. Eventually the study was furthered on to find out about how the factors perceived value and risk of

mobile wallet impact the willingness of the retailers in Melaka to accept the mobile wallet technology.

1.6 Limitations of the study

There is some limitation while conducting this study, there are;

1.6.1 Limited time

First and foremost was the time given is only 28 weeks. Thus I have limited the scope of the study to more specific and narrow to the topics cover. Simply due to the time constraints my sample size of data collection also limited to 100 respondent that chosen randomly.

1.6.2 Limited resources

Another limitation of this study was limited resources available. Since my research was covers latest technology, I found difficulties in getting the information for my topics from trustful resources. We are not encouraged to refer to the internet source as a main source of study. However, the journal, books and other trusted literature on the topic covered is also very few.