THE IMPACT OF MOBILE PAYMENT SERVICES ON BANGKOK ONLINE SHOPPER PERCEPTION

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A THEMATIC PAPER SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF MANAGEMENT COLLEGE OF MANAGEMENT MAHIDOL UNIVERSITY 2017

Thematic paper
entitled
THE IMPACT OF MOBILE PAYMENT SERVICES ON BANGKOK ONLINE SHOPPER PERCEPTION

was submitted to the College of Management, Mahidol University
for the degree of Master of Management
on
January 7, 2017

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ACKNOWLEDGEMENTS

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ABSTRACT

This paper represents a qualitative study on consumer perception of mobile payments. The findings suggest that the relative advantage of mobile payments is different from that specified in prior studies and theories and include independence of time and place, availability, possibilities for mobile payments, and queue avoidance. Furthermore, the adoption of mobile payments was found to be dynamic, depending on certain factors such as a lack of other payment methods or urgency. Several other barriers to the mobile payment adoption were also identified, including complexity, and perceived risks. The findings provide useful information on mobile payment adoption and for the practical development to the mobile payment services.

KEY WORDS: Mobile Payment/ Mobile Banking/ Ecommerce/ Online Shopping/ Theory Acceptance Model
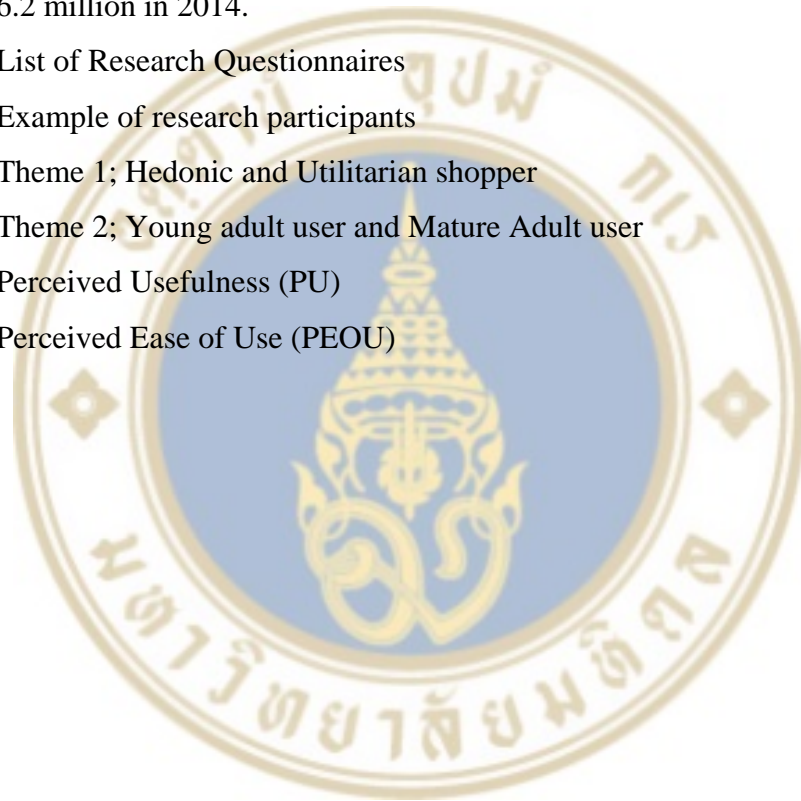
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CHAPTER I
INTRODUCTION

Mobile phones have become 37th organ of people of the modern world today. The evolution of mobile phones into smartphones, make people can connect to the world anytime and anywhere. The development of smartphones has shift the consumer from normal mobile phone to smartphones across the world, including Thailand. Smartphone has become the essential part of daily life. The smartphone diffusion levels in Thailand are provided chances for e-commerce resolutions as high speed internet help people to access the information easily. The widespread availability of high speed internet of mobile network has allowed Thais to use a broader range of features and capabilities on their smartphones, including mobile payment and e-commerce. The increased in payment options and new sales channels broaden market opportunities. Even the increasing usage of smartphones in Thailand led consumers to make a financial transactions and online shopping activities on their smartphones. Most of Thais still favored cash, according to the Nielsen survey 2013 - 68% of survey correspondence preferred mode of payment in cash. However the penetration of smartphone user can push the number of mobile payment users to increase overtime. The key drivers for mobile payment adoptions in Thailand include the smartphone technology development, development of financial institution services, and consumer interest in new innovation. Apart from the development opportunities, there are still barrier to access to Thai consumers include security concern, preference for cash, and consumer behavior.

The development of wireless and mobile technology has generated new prospects and new experiments for the business. Mobile payment in an expand application of mobile e- commerce. Mobile payments offer the opportunity to financial institutions to tailor their products and services to their customers' needs. Many financial institutions mainly focus on the development of online platform channels in order to reduce manpower cost in bank branch and eliminate the visit at bank branch. Some company may gain economic benefit through contribution mobile payments service to their customers or

flattering a service provider themselves. The ability to develop payment system in the future of e-commerce, the ability to improve right payment systems for e-commerce is critical important. The new mobile commerce channel with cohesive mobile payments could simplify the growth of new business model in the multi-channel situation.

CHAPTER II
LITERATURE REVIEW

2.1 Definition of Mobile Payment

There are many literature defined the meaning of mobile payment, Shon and Swatman (1998) well-defined the mobile payment is an exchange of funds initiated via electronic channel. The study of Wishart (2006), mentioned the mobile payment is defined by mobile service providers as the potential service that offer customers to boost their while charging for messaging and generating fees. Mobile payment also represents any kind of non-cash payment that does not include the physical cheque (Hord, 2005). Mobile payment is also defined as the use of mobile device to make a payment which money will be transfer from payer to receiver directly or via intermediary (ECB, 2003). The definition of mobile payment includes mobile payment transaction through mobile banking systems, the difference between mobile payment and mobile banking still exist (Pok & Teo, 2003). The mobile banking services are the service conduct via bank website and offered to banks' customers only. On the other hand, the mobile payments is the new service to the retail business, which is classified by 1) the services provided by either banks and mobile network operators, 2) The different groups of users; merchants and customers, 3) The compatibility of each systems. The mobile payment services can help financial institution to achieve the competitive advantage by providing mobile banking to customers (Mirusmonov, 2010).

2.2 Type of Mobile Payment

There are diverse types of mobile payment in the market, which can be categorized by technology into two types; remote mobile payment and proximity payments (Agarwal, 2007). The remote mobile payment required customer to apply for the service, and make a transaction via mobile device. The proximity payments involve customers to present credit card, or mobile phone at a payment station, within the few

centimeters to process the transaction. This type of payment is facilitated by near field communication (NFC) (Emmeline, 2016). The latest mobile payment acceptance in the market is the conversion of mobile into a point of sale system, by plug in the temporary hardware that enabled business to accept credit-card payments which called mPOS (mobile point of sales). The mPOS device can allow the business accept the cash on delivery method without the risk that the messenger will handle the physical cash and customers can use credit-card payment at the same time.

2.3 Mobile Payment Services in Thailand

The mobile payment services in Thailand have developed with the smartphone technology and efficient payment systems. According to the 2008-2009 global economic crisis leads to the increases of electronic payment systems since bank focusing on reduce cost including less processing costs than cash or cheque transactions (Bank of Thailand, 2014). The growth of smartphone users in Thailand shows that smartphone become important and popular among Thai consumers. In 2012, the number of smartphone users was 78.83 million users, or counted at 122.29% of the total population (Bank of Thailand, 2013). However, many Thai consumers still prefer card-based and internet-based payment systems more than mobile payments (Kaveevit, 2012). The security issues can strengthen consumer confidence in using mobile payments. Also marketing, education, and the support from Bank of Thailand can build customer awareness and convenience provided by mobile payments. Retailer can play an important role to boost the sales through the use of mobile payments such as special offers and loyalty rewards. There is still large room to grow for the development of mobile payments growth in Thailand as this technology has grew globally and expands to Southeast Asia Market (Elisa, 2015).

2.4 Consumer Attitudes toward Mobile Payment

The user attitudes and intentions toward use of mobile payment are of massive significance to researchers, because it helps financial institutions such as banks and mobile payment service providers to get an advantage from accepting the key factors that affect intention to use mobile payment. The statistic from the research of Bank of

Thailand shows the growing number of the volume of payment transactions via mobile channel (Bank of Thailand, 2015). Mobile payment transaction rose continuously since 2010 till now, representing 46%. In the past, the mobile payment activity was limited but then BOT revised the definition between internet and mobile payment in 2014.

Table 2.1 shows the number of bank accounts that applied for mobile banking services which increase 453% from 1.2 million in 2013 to 6.2 million in 2014.

	2010	2011	2012	2013	2014
Enrolled Bank Accounts (Thousands)	519	706	864	1,164	6,229
Transaction Volume (Millions)	1.45	1.88	3.68	5.92	12.62
Transaction Value (Billions of Baht)[15]	11	20	49	75	156

*Transaction data includes internal and external funds transfers and e- payments for good and services
Source: Bank of Thailand, July 2015

Mobile payment transaction has increased both volume and value during this period. Most leading banks in Thailand now offer mobile banking services, and also launch mobile application for Android and iOS. The 2014 Mckinsey Asia Personal Financial Services Survey found that the mobile payment usage in Thailand has risen 15% in 2014, with usage skewing towards affluent and young consumers (Barquin and Vinnayak, 2015)

2.5 Mobile Payment in the Commerce Sector

Since the early 2000s, mobile payment services have been foreseen in the commerce sector, mainly in the US, Europe and some parts of Asia (Tuunainen and Mallat, 2008). Mobile payment services have been implemented by quick-service industries such as fast food restaurant, and public transportation. The adoption of mobile payment has not been widespread as expected (Holmes, 2014). Whilst mobile commerce sale is gaining step following developed payment infrastructures in emerging markets. The worldwide mobile payments volume is expected to grow by tripled in 2017 (Statista, 2015). There is a burden for retail industries to adopt the mobile payment channels to attract customers, provide convenient, and safe for consumers. There are many literatures mentioned about the benefit of mobile payment to customers, merchants, governments, and society (Arvidsson, 2014). The overview of impact of mobile payment represents

the important opportunities; expanding the payment choices for customer and streamlining methods for sellers, but it also contains risk in the process (Emmeline, 2016). Nowadays the market is full of technology development and products, many retailers and consumers interested in mobile payment adoption but some still worried about the potential impact on loss. Many literatures have discussed about the rapid trend in mobile technology usage, I have found the big advantage for both consumers and businesses whose utilize mobile payment and will discuss below.

2.6 The Benefits of Mobile Payments Mobile Payment Benefits for Consumers

1. Convenience: The mobile payment system makes the payment process easier than before. Now customers can make payment anywhere anytime just using their mobile device and internet. They allow customers to purchase product and services without using the physical cash or go to the physical store. Consumer can enjoy the new shopping experience (Oliver and Paul, 2010).

2. Access to deals and offers: Many mobile payment service providers create special offer just only for their customers (Bakanowicz, 2015). In addition to the convenience of make a payment with their smartphone, the users can still enjoy the great deals at the moment they need them.

3. Security: Mobile payment is a secure way to pay since the payment information are not stored directly on smartphones but in the cloud system (Nenad and Boris,2014). So if your phone was stolen, no one can access to your credit card details. Also the risk of carrying physical money so it can help reduce theft risks of carrying cash on hand.

2.7 Mobile Payment Benefits for Businesses

1. Ability to accept payment anytime and anywhere: Mobile payments offer the opportunity to accept payment away from brick and mortar store. You can accept

payment for your business even you do not have the physical store. The business can received money even they hosting an exhibition or trade fair.

2. More sales opportunities: Mobile payment technology gives the ability to business to be more flexible in accepting payment which reflected to more revenue opportunities (Niina, 2015). Attach the credit-card reader to the mobile device as a mobile point of sales (mPOS) enables business to received payments outside their brick and mortar store. This can increase conversion rates and the number of returning customers.

3. Customer loyalty: The mobile payment technology can improve customer experience and driving loyalty for example Starbucks coffee loyalty card in Thailand. The mobility and loyalty program deliver faster, smarter, and more profitable customers interactions. The Starbucks card in Thailand always give more privilege and special promotion to its member.

2.8 Technology Acceptance Model (TAM)

The developed technology in the mobile payment industries is increasing overtime, there are some studies to find out the acceptance of consumer to use the mobile payment technologies.

The technology acceptance model (TAM) is the recognised theory used to measure the successful of technology usage by Davis (1985). This theory was developed from TRA or theory of reasoned action, a part of 3 classic persuasion models of psychology by Martin (1967). TRA aims to study the attitudes relationship and human behavior (Martin, 1967). David 1986, developed the TAM to explain and expect consumer behavior. The TAM is also reflected as the basic model to clarify behaviours toward new technologies (Chuttur, 2009). Many researchers used the TAM to explain how major elements influence people to accept new technology. User's motivation to try a new technology can be described by two fundamental determinants: perceived usefulness and perceived ease of use (David, 1989). According to this model, perceived usefulness is affected by the perceived ease of use, the ease of using the system increasing it usefulness. This model is a power tool for predicting consumer behavior (Wang, 2011). The advantage of TAM is that it is consisted of reliable instruments with accurate measurement attribute, conciseness, and empirical solidity (Pavlou, 2003). However, the TAM is not fully

complete in all aspects, the model does not take the social influences factor which affected the intention to use smartphones.
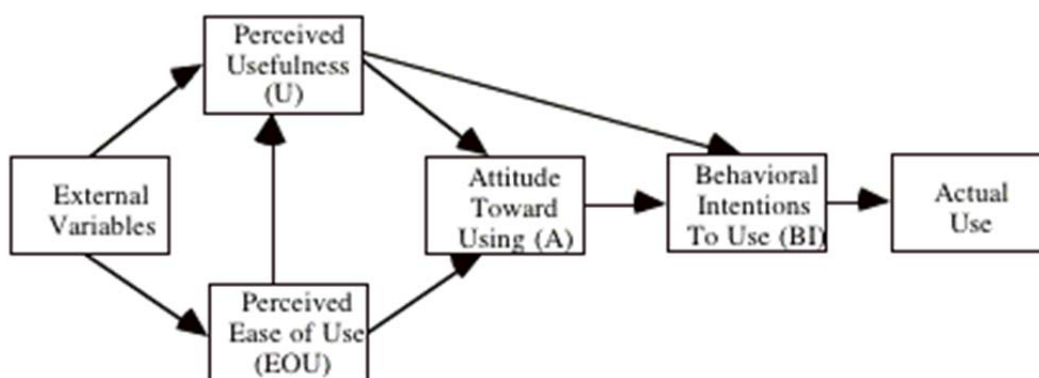
Figure 2.1 TAM: Technology Acceptance Model (Davis, 1989)

From the model, it assumed that perceived ease of use and perceived usefulness are the most concerned of users to the adoption of technology. Perceived usefulness (PU) can be defined as the "degree to which the user believes that using a system would enhance their job performance". The PU generally points out advantage and additional use in latest system compared to the old one. When there is a new technology in the market, consumer would first consider the benefits, tally with the existing one and then would consider to use the new technology (Poutsttchii, 2003). If user accepts ease of use of the new technology, so do the perceived usefulness as direct effect (Agarwal, 1999).

2.9 E-commerce in Thailand

Thailand was one of the leading mobile shopper front-runners in Southeast Asia. The e-commerce in Thailand accounts for less than 1% of total retail sales nationwide, online commerce still has a room to grow (Ysats, 2015). The revenue in e-commerce market amounts to US$2450 million in 2016. The e-commerce market in Thailand strongly projected growth to USD$6 billion between 2020 and 2025 (Statista, 2015). At the time of study, Thailand has a population approximately 67 million people with an estimated online community of 18 million. The internet diffusion is estimated to

increasing every year, the government's goal is to make the availability of high speed internet reach 95% of the population by 2020. Thailand has a great number of social media users on Facebook, Instagram and Twitter. This group of social media user has a great overlap of social and shopping activities. The number of Facebook pages is over 10,000 pages dedicated to commerce (SPcommerce, 2014). Apart from social media ecommerce, Thailand has both local and international ecommerce stores in the market such as Lazada, Weloveshopping, and Tarad as a key e-commerce players.

2.10 Research Framework

2.10.1 Technology Acceptance Model (TAM)
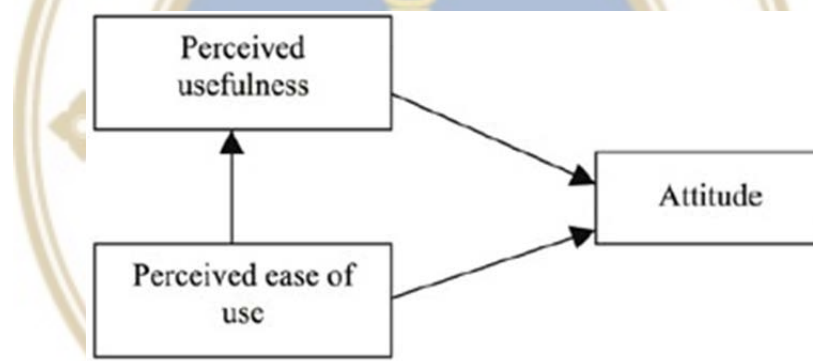
Figure 2.2 PU and PEOU toward using the new technology (adoption of technology)

In this study, the model that we will apply for the study and analyse interviews from the focus group is Technology Acceptance Model (TAM). The TAM contained of six variables till the actual use. After reviewed all the variables, the researcher decided to use only Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) that drive Attitude toward using (A). All the selected variables will influence user's intention to use and leads to the actual use of new technology.

2.10.2 Perceived usefulness (PU)

A user's intent to use new technology in based on their perception of the perceived usefulness of the technology. The mobile payments technology is useful for user such as,

1. Able to enhance their purchasing power
2. Allow them to make payment more efficient
3. Help them save time to go to the bank branch and reduce the traveling cost
4. It is compatible with their lifestyle
5. The convenience of mobile payments encourage them to shopping online more

Perceived usefulness is "the degree to which a person believes that using a particular system would improve his or her job performance" and the Perceived ease of use, a key component of the TAM, is the degree to which a person believes that using a particular system would be free of effort (David, 1989). These are two factors, which vary among each person preferences. In TAM, Davis stated that PU is a major factor than PU. He also mentioned that PU is the stronger perception and have a direct effect by PEOU.

2.10.3 Perceived ease of use (PEOU)

PEOU is the perception of the users in deciding to use the new technology that it is easy to use and easy to follow. Ease of use is the indicator to measure the success of the technology that whether it is matched with their expectations. For the new technology, user will perceive its usefulness whenever;

1. The procedure to use mobile payment services is clear and easy to use
2. Able to learn how to use mobile payment services quickly
3. Able to use mobile payment services proficiently

The PEOU defines the user acceptance to use information technology and information system. Perceived Usefulness (PU) is the degree of users which believes that the productivity will be improved by a certain technology, and Perceived Ease of Use (PEOU) is the level of users' feeling of paying less effort to a new system (Davis, 1989). Both are key factors which vary depending on each person preferences. In general

usage of TAM, the main factor is PU while PEOU is follow. In addition, Davis mentioned that PU has stronger perception, and have a positive influenced by PEOU.

The variables can be summarized as below;

Perceived Usefulness (PU)

(A1) Convenience to make a payment

(B1 Less time consuming

(C1) Faster than other methods

Attitude toward Using

(G) How (attitude) they think about mobile payment services?

Perceived Ease of Use (PEOU)

(D2) Easy to follow how to use

(E2) Take several steps to complete your payment

(F2) Able to use it proficiently
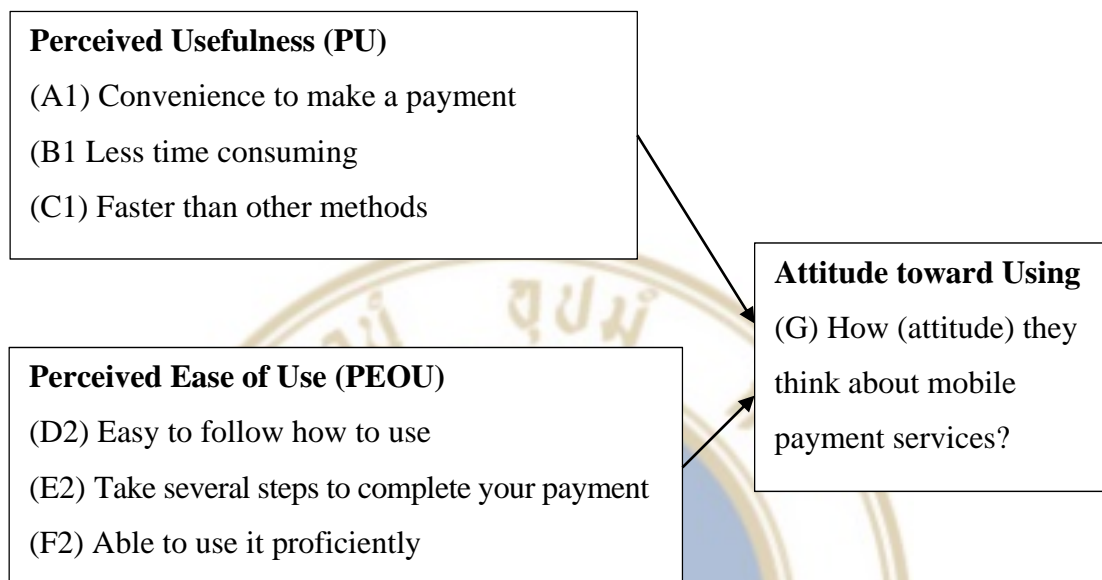
Figure 2.3   Research Framework

2.11 Research Gap

Many researchers who conduct the research about the use of new technology have used TAM as a based model since PEOU and PU are two main factors that define the use of information system. From the previous studies on the usage of new technology and information system, mostly found that the purpose to use the new system were supportive of TAM and directly influenced from Perceived Usefulness, while the study of Davis indicated that Perceived Ease of Use influences Perceived Usefulness. However, there is no assumption of Perceived Ease of Use toward the usage of new technology.

CHAPTER III
RESEARCH METHODOLOGY

From the literature reviews in chapter II, there are many discussions about the impact of mobile payments. For the statistic of smart phone users and the mobile payment transaction volume are increase every year. The mobile payment services provide benefit to the online shoppers depends on personal's perception.

The researcher assumed that the mobile payment services did change online shopper behavior due to it function and prompt response. In the past, people have to queue up at bank branch or ATMs and make the payment manually which seems common but nowadays technology can help you shop easier.

3.1 Populations and Sample

The samples of 30 online shoppers in Bangkok area who are currently frequent users of the mobile payment services. The participants must be the online shoppers that use a smartphone as a regular usage. The objective of this study is to see how mobile payment services have an impact in their shopping experiences. The background of participant is opened for everyone who frequently shop online and interest in mobile payment services. The areas that choosing will be in Bangkok and metropolitan areas. The in-depth interviews will take in a closed environment where interviewees would feel relax to answer. Some interviewees will be interviewed through Face-time or LINE video call. The participants were all informed that they were part of the thematic paper submission. Interview questions were well-organised in order to eliminate error. The interview conversation was recorded by mobile voice recorder. The duration of each interview will be 20-25 minutes depending on each participant.

3.2 Research Design

The objection of this study is to identify the impact of mobile payment services on Bangkok online shoppers. According to previous study, I found that finding customer's perception is better done by in-depth interview with the participant who has experience in the selected issue so this paper used a qualitative method. The researcher choose qualitative method because I would like to understand the real perception and the behavior of sample group. The in-depth interview may find some interesting information from participant which will be beneficial for the study. The research design is expected to collect in-depth information from participants. The questions were open-ended so it allow interviewee to tell about their own experience and information. The questions used in this study were answered by the participants without the intervene from researcher.

3.3 Interview Process

The interview was divided into three parts; introduction, questions, and summarize. The introduction part enclosed the background and objective of this study to let participant know what will take place and confirm them that their information done for the academic purpose. At the end of interview, all participants will be given the gratefulness to be a part of this study. Each participant will required to interview about 30-40 minutes with the questions listed below;

1. Introduction: First of all, introduce the purpose of this study to the participants. The researcher must ensure them that the information provided will be confidential in order to avoid ethical problems. The researcher will ask them for approval and ask the first question.

2. Research Questions: There will be eight questions to ask the participants. The keyword use in the research questions are mobile payment services, impact of the mobile payment services, and their perception.

Table 3.1 List of Research Questionnaires

No.	Interview Questions	Purpose of the Questions
1	Have you ever use mobile payment services?	To examine their attitude on mobile payment services.
2	How do you compare the usage of mobile payment and the traditional payment in term of convenient?	To lead the participants to describe their behavior and tell in which type of mobile payment that they use for.
3	Do you think mobile payment services is beneficial to you how? Please specify features.	To investigate their comparison between mobile payment services and the traditional payment method.
4	What are difficulties or obstacles using the mobile payment services?	To investigate does mobile payment services influence their buying behavior and how.
5	Does mobile payment enhance your online shopping behavior? Please explain how?	To investigate what factor leads them to use mobile payment services and what key factors that they perceive it is useful so the service provider will know what they should develop in the future.
6	Do you think the convenience of mobile payment services make you spend more on online shopping?	To examine their perception on mobile payment services ease of use and any issues.
7	From your experience, what are the benefit that you gain from mobile banking services? How it help you?	To know their aspects on mobile payment services on both pros and cons depending on their experience.
8	What do you expect next in the adoption of mobile payment services in term of beneficial?	To acknowledge the further improvement the user expect.

3. Ending Process: The appreciations will be given after the participant finished interview.

CHAPTER IV
RESEARCH FINDINGS AND ANALYSIS

In this chapter, the researcher will explain about the research findings and data analysis of the in-depth interview that conducted to the online shopping experience user which is the target group of this research. The in-depth interview questions are linked to the research framework, Perceived Ease of Use and Perceived Usefulness (Davis, 1989). The research of mobile payments services are a somewhat new area of Thai consumer with slight previous work on the subject, a qualitative method using in-depth interview was preferred to explore consumer adoption of mobile payments services. The in-depth interviews have been recommended as an appropriate way for explorative studies (Calder, 1977). The strength of in-depth interview lies in the dynamics and communication, which provide researchers with elaborated outlooks to the topic under discussion (Wilkinson, 2004).

An additional selection criterion for participants was prior experience on mobile phone use. The experienced user of smartphones was projected to be essential in order for the participants to be able to discuss about the use of mobile payment services.

4.1 Surveys Demographic

The researcher aims to interview about 30 participants. The participant demographics were well-defined according to the consumer life cycle model, where age was the most important factor because of mobile payment services is the new technology in Thailand. In this research, the researcher tends to focus on young women who frequently shop online by using mobile payment services. These participants groups were chosen to describe the impact of mobile payment services toward Bangkok online shopper perception. A description of all participants will be presented later in the paper.

The survey is conducted during November 2016 containing of 30 respondents. Respondents are distributed into 18 of female and 12 of male respondents. Upon gender information, it can classify into 5 ranges of age group, the highest respondent age is between 25 to 30 years old.

The main respondent range of age between 25-30 years old, it can be divided into10 private company employees, 3 university students, 2 business owners, and 3 are others.

The majority of respondents at this age range is mostly the employees from private company with the average income between THB 20,001-40,000 per month.

According to the survey result, it can be assumed that women with the age of 25-30 years old working in private company with income THB 20,001-40,000 per month are the popular group of mobile payment services. Therefore, women can be expected as the regular online users. The summary of collected results from qualitative method can probably analyse and classify in-depth of Thai online shoppers' behaviours.

Table 4.1 Example of research participants

Gender	Age	Occupation	Salary
Female	37	Business Development Support Manager	50,000-70,000
Female	30	Compliance officer	30,000-50,000
Male	35	Sales Manager	50,000-70,000
Female	31	Relationship Manager - Wealth Banking	30,000-50,000
Male	30	Trader	50,000-70,000
Female	29	Business Owner	50,000-70,000

4.2 Interview Guidelines

The background theory (Technology Acceptance Model; PEOU and PU) were used to design the interview procedures and the questionnaires to be used during the interviews. The interviews themselves were distributed into six topics that guided how they were directed. These were convenient to make a payment, time saving, faster use than other methods, compatibility, take less steps to complete your payment, and able to use it proficiently. Before each topic the participants being interviewed were

asked to answer a demographic question in order to compare preferences and to introduce the interviewees to the topic by making them read topic-related questions.

The first topic for discussion was 'Mobile payment usage'. The goal here was to collect information on the user-friendliness of mobile payment services.

The second topic was 'Beneficial use of mobile payment'. The goal here was to discuss about the benefit of mobile payment services and the feature on such services that is beneficial to the online shopping.

The third topic was 'Ease of use'. The goal here was to discuss about the difficulties and obstacles while using the mobile payment services.

The fourth topic was 'convenient'. The goal here was to discuss about the convenience of mobile payment services toward the online shopping behaviour.

The fifth topic for discussion was 'Wishes for the future adoption and expectation on mobile payment services'. The goal here was to identify consumers' wishes for the future and collect their attitudes towards the mobile payment services. During the interviews the participants were asked to speak about future developments that they were aware of and suggestions and expectations for mobile payment services that they found useful and would like to use.

4.3 Research Findings

The use of mobile payment services in Thailand between thirty participants, the twenty-two of them just had familiarity with application based mobile payment. Only two respondents thought mobile payment services in Thailand had not been broadly used, and the main users presently were focused on the age between 25-29 years old. Some participants perceived mobile payment to be popular within their society now because of the popularity of smartphones and e-commerce. The intention to use mobile payment services might be affected by the occupation and educational level. Participant 12 asserted: *"There are many people around me using mobile payment, because it is more convenient than going to the bank branch. Maybe people in my society. They are all the people who are the current user of mobile payment services."* Furthermore, most participants had experience with mobile payment services since it was not yet widely available. *"In the past I only use mobile payment to transfer money to her mother in*

the northern area of Thailand but now I also use mobile payment to pay for the goods and services as regular use". Almost every interviewee indicated that she/he think the mobile payment services is beneficial to them even there are always a rumours about the security.

The findings found that the intention to use mobile payment services could be 'on the go' and 'anytime, anywhere' transactions. As people become more comfortable with new technology they are likely to accepting the use of mobile payments as an alternative way to make a financial transaction.

4.4 Reasons for Using Mobile Payment

There are several reasons that impact the use of mobile payment that have been mentioned in the previous studies. We claim that by discovering the influence of these factors on mobile payment use through an interview, we found reasons for using mobile payment in an efficient way. Furthermore, there are a number of factors discovered from the empirical study which also describes the reasons to use Mobile payment services, but have not been discussed in the previous studies. Initially, users' lifestyle is one of the factors that impacts on mobile payment services usage. Secondly, system trustworthiness and the system quality are two factors that have also been known as new factors affecting the use of mobile payment services. The latest factor found from our interview that may impact mobile payment services use is the features that match users' need.

4.4.1 Users' Characteristics

The users' characteristics also have impact on the use of mobile payment services. Through the interview, we only found some mobile payment user with age over 40 years old. It can be conclude that the number of participants aged between 25-29 years old is the majority group of people using mobile payment services. The mobile payment services is more popular in the group young people than old people. Consequently, age can be one of the factors that influence on mobile payment services perception.

Moreover, users' lifestyles can influence the use of mobile payment services. For example, the participant who has a baby and have to stay at home got the main way for shopping for her is mobile shopping. To summarize from the perception of user's

characteristics and users' lifestyle also found as a potential new factor affect users' decisions to use mobile payment services.

4.4.2 Perceived Ease of use

In this study, the ease of use is the majority concern. From the interview, more than half participants pointed out that ease of use was the most important reasons to use mobile payment services. Most users found that mobile payment service was easy to use and make a financial transaction. Participant 8 said that *"even low technology users can complete the transaction by just a few clicks"*. Ease of use is the main factors that encourage most participants to use mobile payment services instead of other payment types (i.e. physical money and credit card). Participant 13 emphasized this point: *"I use mobile payment services just because it is convenient."*

Most of interviewee said that the mobile payment services is easy to use. The developer of each service try to make their service more user friendly than the past. More than 25% of interviewees said they can complete the payment on mobile payment services just a few touch on their smartphones. Just only a few mobile payment services that still require one time password, OTP, to put in to complete the payment process. About 15% of interviewees agree that put in OTP before process the transaction is good in term of security. While participant 12, 20, and 27 said that "Nowadays some of mobile payment service provider ask user to create the transaction password, so they can use their transaction password instead of OTP, this is good for user when they are in the area that has no mobile signal to receive SMS". From the interview, it looks like most of the interviewees found mobile payment services is easy to use and more friendly user that the past. Some of interviewees said that some mobile payment application cannot process transaction with WiFi. This problem can be occur when the users are abroad, she/he cannot make a transaction via WiFi connection. Even though the mobile payment services enhance the purchasing power and payment transaction opportunity, there is still little weakness that some mobile payment services cannot work on Wifi connection. 80% of the participants found that mobile payment help they conduct the transaction much easier than the traditional ways.

Furthermore, the failed transaction had an effect on the future use of mobile payment services. Some of the participants said that failed transactions certainly had

an effect on their attitudes towards using mobile payment services. Four Participants said that they would consider failed transactions in deciding the use of mobile payment services. If the reason was because of system errors of the banking system, they might not use mobile payment services anymore. Besides, one participant said that if the failed transactions occurred often, he would stop using mobile payment services for a while. Nonetheless, the successful transaction cannot used as an important reason for using mobile payment services because it is a simple feature for the mobile payment services to occur. We may conclude from the interview that system stability is an important feature that affects the use of mobile payment services and describes the reasons for the participants to use mobile payment services.

This research also mentioned the importance of ease of use and system trustworthy, while some participants do not care much about the compatibility of the mobile payment services.

4.4.3 Perceived Usefulness

The impact of perceived usefulness on the use of mobile payment services, the participants said that they expected to have a better quality of life by using mobile payment services. For example, Participant 6 said that she would complete shopping on mobile to satisfy her wants when she did not have time to go shopping. Participant 16 also found it beneficial to use Mobile payment services to purchase air tickets, "I am working in Bangkok but my hometown is in Chiang Mai. If I want to go home quickly, I can buy the air ticket immediately. By using Mobile payment, it really saves my cost and time." Most of participants mentioned that the mobile payment services help them save time to go to queue up at the bank branch, participant 7 explained that "it just require few steps to complete payment and transaction, you just have to have money in the bank". Participant 9 also said *"I am a low-tech person but I start using mobile payment service because I love online shopping. In the past, I always go transfer money at the bank branch but one day my friend offer me to use her mobile payment services and give cash to her to avoid the long line. After that, I sign up the mobile payment services because I found it myself that it is useful to me"*. Participant 11 compare the use of mobile payment services and ATM *"At first, I think the mobile payment and pay by ATM is indifferent because make a payment at ATM is also fast. Then I found*

there are always a long queue at ATM, so I give mobile payment a try and become a regular user".

However, only a few of the participants does not realised the effect of perceived usefulness of Mobile payment on their intention to use mobile payment services. Some of participants that is not find the usefulness of mobile payment is a person who does not enjoy much social media and not a regular online shopper. Consequently, the influence perceived usefulness is supported in our study.

4.5 Theme

The output of this study can be generated 2 main themes considering 'Type of Shopper' and 'Age of user' of the 30 participants as the criteria.

1. Theme 1: Hedonic and Utilitarian shopper

First, types of shopper, separated in the shopping characteristic. There are two major types of shopper reference to this study which are Hedonic Shopper and Utilitarian Shopper. Hedonic shopper is those who are enjoy shopping a lot and can shop for any occasion. Most of them are the emotional shopper which is women. On the other hand, men as a utilitarian shopper looking for trusty and safety of the mobile payment service and use it only when necessary.

Table 4.2 Theme 1; Hedonic and Utilitarian shopper

Hedonic shopper	Utilitarian Shoppe
- Women uses mobile payment more than men since they enjoy online shopping and can shop for any occasion. - Looking for fast, simple, and safety mobile payment services. - Use mobile payment service as a regular use.	- Men prefer on functional usage more than promotion offer from using mobile payment. - Use mobile payment only when necessary. - Looking for compatibility, trusty, and safety mobile payment service.

From the table of first theme, the differences between men as utilitarian shopper and women as hedonic shopper are quite dominant. Therefore, the features of mobile payment services that match the needs of two groups are different. So it is a challenge for mobile payment services provider that which provider can develop the feature to match each need.

2. Theme 2: Young adult user and Mature Adult user

Second is Young adult user and Mature Adult user. This theme can be separated with age of user. Young adult users enjoy using new technology so they do not hesitate to join the new wave of technology when it launch in the market. Moreover, they also feel that the mobile payment services provide better shopping experience and improve their life quality in terms of convenience. Mature adult user, age over 40 years old, they have some barrier to use new technology. This group of user focus on the ease of use of the services before realize the usefulness. They also concern about the risk of using the mobile payment services.

Table 4.3 Theme 2; Young adult user and Mature Adult user

"Young Adult"	"Mature Adult"
- Enjoy using new technology. - Appreciate both PEOU and PU of the mobile payment services. - Better shopping experience and life quality.	- Struggle to use new technology. - Focus on PEOU before realize the PU of mobile payment services. - Concern about the risk of using mobile payment services.

From the Table 4.3 shows that young adult will use mobile payment services for the better shopping experience and better life quality. They appreciate both ease of use and usefulness of the mobile payment services and they do not hesitate to use it instead of the traditional payment method. While mature adult need the ease of use of the mobile payment services to become a regular user. They have to be familiar with the mobile payment services before realized the usefulness of the services. So the mobile payment services provider need to put the easy to use of the mobile payment services as a first priority to develop. In order to gain more mature adult user, which may imply that they also have higher purchasing power than young adult.

CHAPTER V

CONCLUSION AND RECOMMENDATION

According to the research question "Does the implementation of mobile payment have positive impact on online shopping". The purpose of this study is to observe the Bangkok Online Shopper's perception on the mobile payment services which using Technology Acceptance Model or TAM as the based theory, PEOU and PU are two factors that tested in this study. In the section, the researcher will summarise all interesting and dominant from the research findings. Follow by the recommendation and research implication for the theory and the mobile payment services will be argued later. In the last part, the limitation and suggestion of the further research related to the research topic will be acknowledged.

5.1 Conclusion

The mobile payment services are spread used around the globe. Now is the golden era of the technology which includes smartphone. Smartphone enhances the purchasing power in the palm of the users. The smartphone users and penetration worldwide will be over 2.5 billion users by 2018 see figure below (Emarketer, 2014)
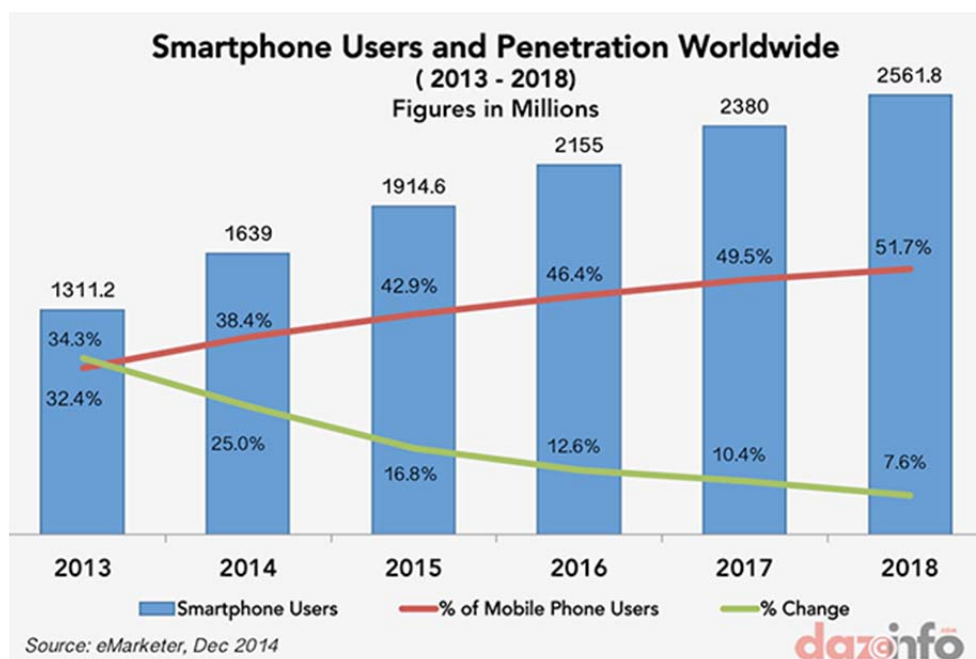
Figure 5.1 Smartphone Users and Penetration Worldwide

People can connect to the internet anytime and anywhere than the past. With the fast develop of the smartphone operation system it makes smartphone become a powerful devices for user. Many studies found that the smartphone devices have played an important role in the e-commerce and banking industry. For the mobile payment services, it is important for the service developer to understand users' needs, concern and their perceptions toward the services so they will be able to continuously improve the services system and reliability to gain more users.

In the paper, the researcher chose the Theory Acceptance Model to find the users' perception on using mobile payment services. The previous researcher who applied TAM in their paper focus on the variable such as social norm, behaviour, external factor, attitude, PU, and PEOU. While this paper only focus on PU and PEOU.

The qualitative interview of 30 participants was conduct by person and by phone, 18 are female and 12 are male. The participants were asked about their demographic then eight questions related to TAM. The PEOU and PU have been used and the result is shown below;
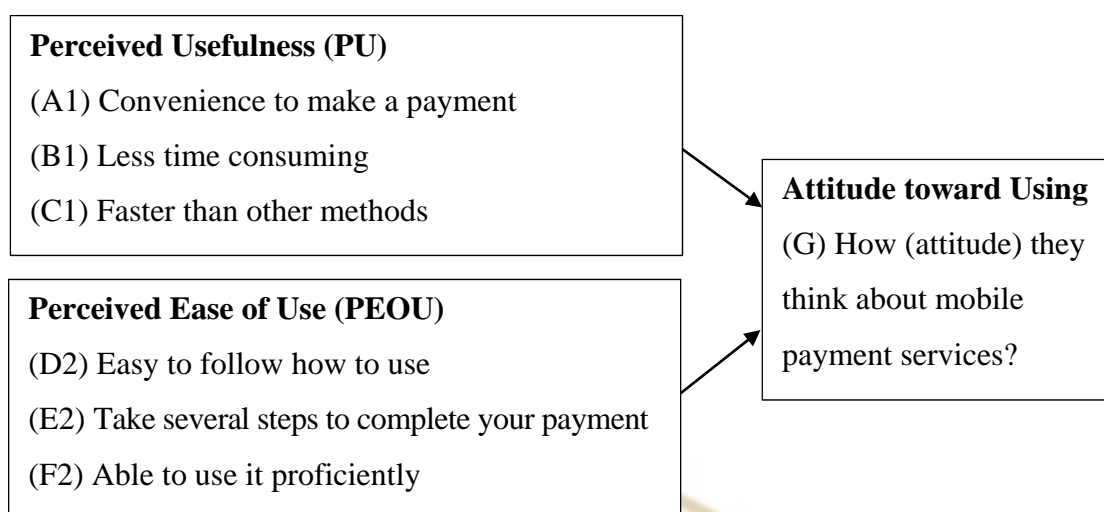
Perceived Usefulness (PU)	
(A1) Convenience to make a payment	
(B1) Less time consuming	
(C1) Faster than other methods	

Attitude toward Using

(G) How (attitude) they think about mobile payment services?

Perceived Ease of Use (PEOU)
(D2) Easy to follow how to use
(E2) Take several steps to complete your payment
(F2) Able to use it proficiently

Figure 5.2 TAM, Technology Acceptance Model

5.1.1 Perceived Usefulness (PU)

Table 5.1 Perceived Usefulness (PU)

Hypothesis	Result	Ranking
(A1) Convenience to make a payment	Accepted	2nd
(B1)Less time consuming	Accepted	1st
(C1) Faster than other methods	Accepted	3rd

In this study, there are 3 hypothesis to test the question asking about Perceived Usefulness. Most of participant mentioned to these 3 hypothesis so the Perceived Usefulness is accepted to have influence the usage of mobile payment services. The participant found it is useful for them in save time and convenience. Nevertheless, the different age group and gender perceived differently. Women are more concerned about the ease of use while men whose prefer the usefulness and the trustworthy of the service. While older user also concern the ease of use.

So, the three hypothesis it is ranged (B1), (A1), and (C1). Then, the new Perceived Usefulness will be rank as below;

Perceived Usefulness (PU)

(A1) Less time consuming

(B1) Convenience to make a payment

Figure 5.3 Perceived Usefulness (PU)

5.2.2 Perceived Ease of Use (PEOU)

Table 5.2 Perceived Ease of Use (PEOU)

Hypothesis	Result	Ranking
(D2) Easy to follow how to use	Accepted	1st
(E2) Take several steps to complete your payment	Accepted	2nd
(F2) Able to use it proficiently	Rejected	

Perceived ease of use also having 3 hypothesis at the beginning. Perceived Ease of Use was used to test their attitude of using the mobile payment services whether it is easy to use. From the interview of 30 participants, they focus just (D2), and (E2). Most of them said that the mobile payment services are easy to use and easy to complete their financial transaction in just few steps but there are not much features on the mobile payment services to realised its proficiently. Moreover, the researcher found that participant aged over 40 years still concerned about the ease of use of the mobile payment services more than other age group even they realised that the mobile payment services help them save cost and time but they still need to use it at ease.

So, the three hypothesis it is ranged (D2), and (E2) Then, the new Perceived Ease of Use will be rank as below;

Perceived Ease of Use (PEOU)

(D2) Easy to follow how to use

(E2) Take several steps to complete your

Figure 5.4 Perceived Ease of Use (PEOU)

After all the new model of Technology Acceptance for this study will be as below;
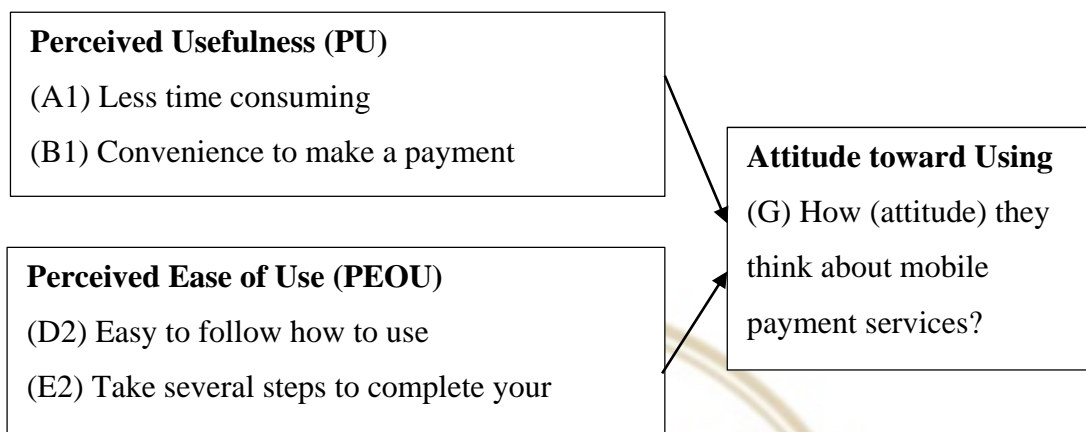

Figure 5.5   New TAM of this research

5.2 Implication

This study provides a better understanding of the mobile payment users for example their perception and attitude towards the services. The results of the study can be the direction for the mobile payment services developers, financial institutions, and mobile banking services marketers, and any tech start-up who are interesting about the alternative way to conduct the payment in the market. They should develop its feature to meet the user's want and need to let them be a regular user and gain more future user especially older people. So, it is essential to know what are they looking for from the mobile payment services then develop the feature to match their needs.

The mobile payment service user from this study are considering the ease of use more than its usefulness because the mobile payment services now are broadly available from many service provider. Some group of users still have some problems to use a mobile payment services for instance step to log in to the service, unstable internet connection, the update of smartphone operating system, and the change of mobile payment services interface.

5.2.1 Implication to the mobile payment service developer

As a result Perceived ease of use is preferred to develop more than Perceived Usefulness so it should be the first priority to develop. There are two interesting issues discovered from the participant that the mobile payment service need to think about. First is the "Wifi mode". Most of the mobile payment services cannot use via Wifi connection. This is a common problem when the users go abroad and they did not subscribe the data roaming services so they cannot use mobile payment to do a financial transaction abroad. Now there are just some mobile payment services that enable to use transaction password instead of 4G/3G connection to perform the financial transaction.

Second is the 'mobile payment service interface'. The user with age over 40 years old mentioned that it takes time for them to get used to the interface of the mobile payment services, and now the mobile payment services provider keep update the feature and interface of the services. So, they have problem in using the mobile payment services every time the services got new update.

Lastly is the 'One time password'. This problem occurs when the user change mobile number so they have to register the new number and wait for the approval to use the service. Nowadays people change mobile number very often because their belief in fortune teller and matheology. So it is another problem that the mobile payment service provider should concern about.

5.2.2 Implication to the Theory Acceptance Model

Most of the studies that use TAM as a research framework and they found that PEOU has directly influence on PU that affects on user's intention to use. While in this study, it found that PEOU did not have direct influence on PU. So it did not go to the same direction as other studies. However, the influence on the intention to use can be different depends on the focus group and research topic. Other researchers use other factors more than this research. They used both external and internal factors and also PU and PEOU to discuss about their research topics. For this research, the participant's demographic plays an important role in this study. Men prefer usefulness and security. While women and old users prefer ease of use and the convenience of the service. Anyway, the research result could be different if the researcher use more factor to discuss.

5.3 Limitation

This research was limited by the number of participant and similar characteristic. The number of participant is just only 30 people who currently living and working in Bangkok area. So the result cannot represent the big picture mobile payment user because in this study only select people in Bangkok area who is frequent online shopper.

The research question did not ask deeply question about the use of mobile payment services, so it is not much detail for the mobile payment service developers to understand true needs and features from the users.

Lastly, it is a time constraint in interview each participant only 30-40 minutes each which is not enough to get an in-depth information in some specific area so the result cannot be perfectly complete.

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