FACTORS AFFECTING UASGE INTENTION TOWARDS MOBILE BANKING SERVICE

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ABSTRACT

The research presents the finding of factors affecting usage intention towards mobile banking service in Bangkok, Thailand. The main purpose is to understand underlying motivations and barriers regarding the adoption by consumers of mobile banking. The research methods used are quantitative research in the form of a self-administered online survey (N=80), and qualitative research in the form of 20 in-depth consumer interviews. All 100 respondents are aware of mobile banking service. The main motivations for users are Perceived Cheapness, Perceived Trust, Perceived Convenience and Perceived Ease of Use. Meanwhile, Perceived Cheapness and Tradition are the significant factors for non-users. Even non-users have a positive attitude towards the service, but they still hesitate to adopt because of distrust and the difficulty of applying for the service. Suggestions for banks and other related business sectors are discussed in the conclusion.

KEY WORDS: Mobile banking/ Bangkok/ usage intention

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CHAPTER I

INTRODUCTION

1.1 Mobile Banking – Origins

Mobile phones are used for a variety of purposes, including keeping in touch with family members, conducting business, and having access to a telephone in the event of an emergency. Some people carry more than one cell phone for different purposes, such as for business and personal use. As technology moving very fast especially mobile phone markets, people now expect real-time information and access 24 hours a day, seven days a week, whenever they are able to use, and they want very high level of service. These services can be accessed at anytime and anywhere. The first hand-held cell phone was demonstrated by John F. Mitchell and Dr. Martin Cooper of Motorola in 1973, using a handset weighing around 4.4 pounds (2 kg) (Heeks, Richard, 2008). In 1983, the DynaTAC 8000x was the first to be commercially available. From 1983 to 2014, worldwide mobile phone subscriptions grew from zero to over 7 billion, penetrating 100% of the global population and reaching the bottom of the economic pyramid. In 2014, the top cell phone manufacturers were Samsung, Nokia, Apple, and LG. (Source: www. www.topteny.com)

Technology is a channel that help to make the business runs more efficiency and increases the quality and performance service provided by banks. In the meantime, technology can reduce banks' operation costs. Nowadays, customers can do almost every money transaction such as withdrawing, transfer, balance checking, etc. via ATM (Automated Teller Machine), and they also be able to deposit their money at CDM (Cash Deposit Machine). Lastly, they can update the book bank at Passbook Update machine which called as Self-service Technology. We can see that customers can do money transactions by themselves without contacting with tellers or banks. Mobile banking is a money transaction service provided by banks via communication devices like mobile phones. Recently,

mobile phone is the fifth basic human needs aside from apparel, food, shelter, and medicine.

Mobile banking is a new channel that banks offer to their customers. The good point of this new service is about the transaction costs which are cheaper than traditional way to travel to the bank branch, and more convenience for customers to access 24/7 like they always carry an on-the-go bank with them.

Mobile banking service firstly appeared in year 1996 in Germany whose strongly support mobile banking usage, and it became very successful in the market. From the success in Germany, this new service spread out to other countries such as England, etc. In year 1997-1998, mobile banking service got more acceptance from many banks in Europe zone, for example, Spain, France. In addition, countries in Scandinavia zone also brought this new technology to their countries, such as Norway, Finland. Then, it spread to other continents like North and South America, Asia, but at that time not many customers were interested in this service. In year 1999, many banks in United States started to conscientiously adopt mobile banking service in the country. They also added more features to their mobile banking service such as bought food and beverages from vendor machines as before they had to use coins. In year 2000 at Asia continent, Japan has a system which similarly working to mobile banking. NTT Company saw an opportunity about mobile banking service in Japan, but it did not have the standard for this type of service yet so the company decided to create a new system called "I-Mode". This system became popular among mobile phone users in Japan when compared to mobile banking service from banks.

1.2 Mobile Banking Situation in Thai Context

In Thailand, Siam Commercial Bank Co., Ltd. or SCB is the first bank that launched mobile banking service. In year 2001, Asia Bank PCL. is the second bank who has launched this service. At the beginning of the following year, Kasikorn Bank PCL. (K-bank), Krungsri PCL. launched the mobile banking service. In the middle of the same year, Bangkok Bank PCL. followed other banks to launch this service also.

In the following graphs below, it shows mobile banking situation from year 2010 to year 2014 in Thailand which divided into three parts; Number of Agreements; Volume of Transactions (in thousands); Value of Transactions (Billion of Baht). We could see that the number of each graph keep increasing month by month which refers to the interested in mobile banking service of potential customers in our country.
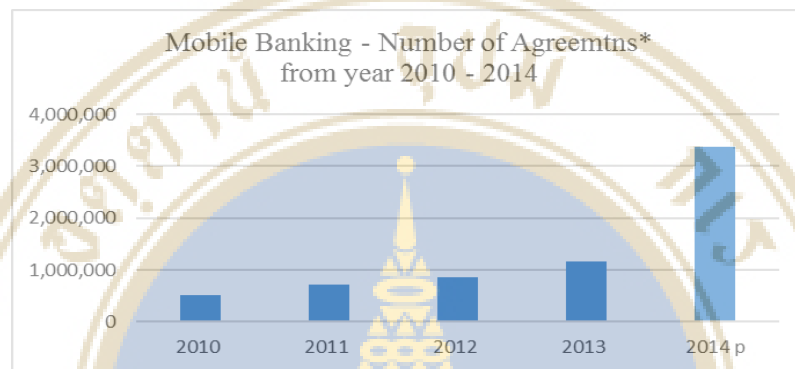
Figure 1.1 Mobile banking – Number of Agreements from year 2010 - 2014
Source: The 2013 Information and Communication Technology Survey in Household, National Statistical Office, Ministry of Information and Communication Technology
   * The number of agreements that customers have been applied for the service
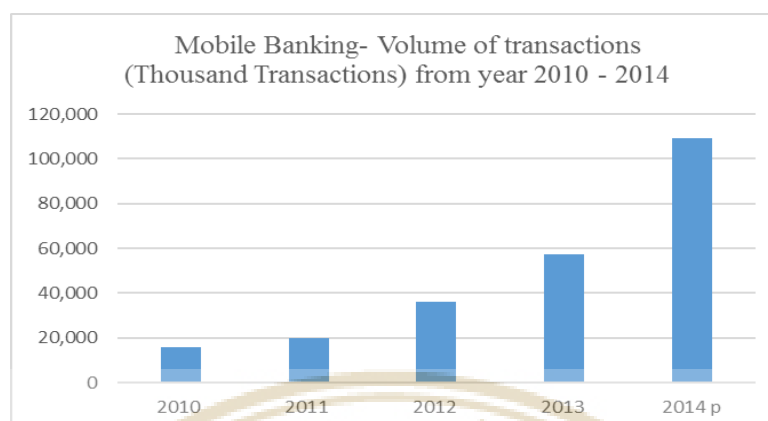
Figure 1.2 Mobile banking – Volume of Transactions (in thousands) from year 2010 - 2014

Source: The 2013 Information and Communication Technology Survey in Household, National Statistical Office, Ministry of Information and Communication Technology
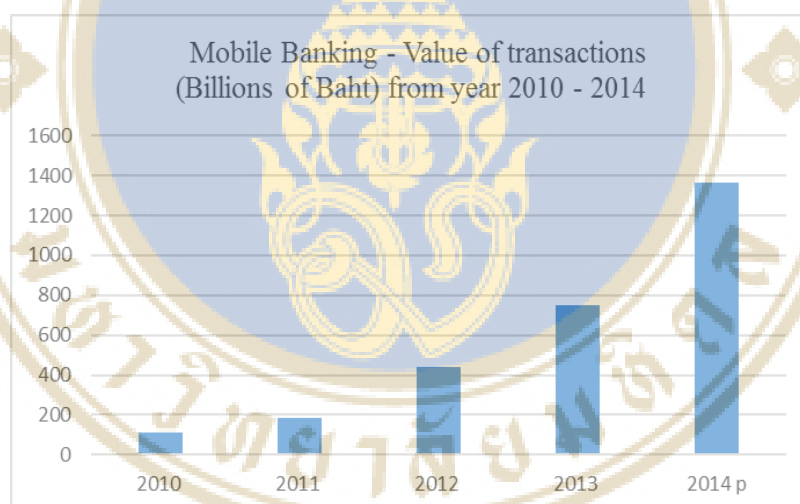
Figure 1.3 Mobile banking – Volume of Transactions (Billions of Baht) from year 2010 - 2014

Source: The 2013 Information and Communication Technology Survey in Household, National Statistical Office, Ministry of Information and Communication Technology

In year 2010 to year 2014, there are 38,243,149, 41,432,901, 44,095,238, 46,401,040, 48,065,641Thai people who own mobile phones respectively. In addition, it can be classified the number of smartphone users in Thailand divide by year since 2010 to year 2014 as following: 7,648.000, 10,000,000, 16,000,000, 22,000,000, and 29,200,200 people respectively. These numbers tend to increase in the future.

Because mobile phones are the communication devices that right now can be easily find in the market unlike before. With easy usability, customers can learn how to use the new mobile phone from the manual that is why it leads to the increasing in demand for mobile phone. From this point, commercial banks cooperate with mobile phone operators to launch money transaction service via mobile phones where banks can use this new channel to reach more customers.
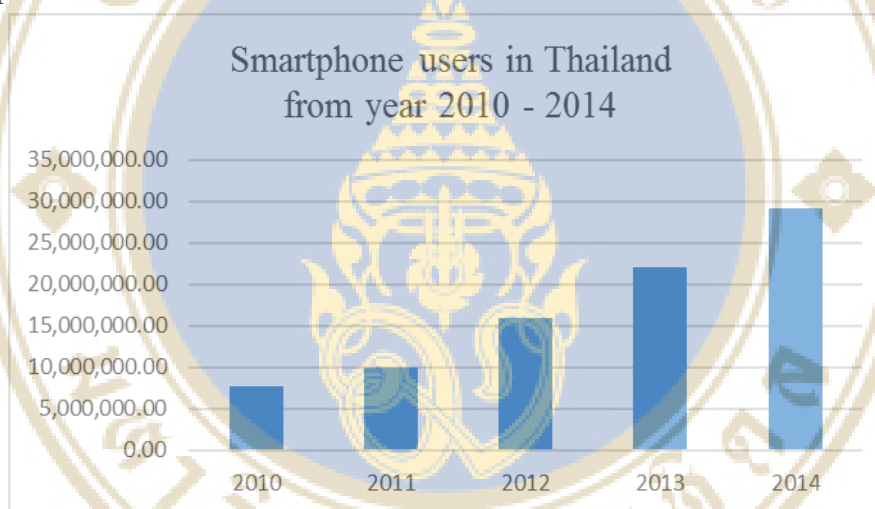
Figure 1.4 Smartphone Users in Thailand (Billions of Baht) from year 2010 – 2014
Source: The 2013 Information and Communication Technology Survey in Household, National Statistical Office, Ministry of Information and Communication Technology

Banks and mobile phone operators both emphasize on safety of service usage in order to call customers' confidence. In the meantime, this service offers convenience, easy to use, time and money saving to users. Nevertheless, safety is the wall in considering to use the service. Information from Kasikorn Research

Center revealed that a factor which is a barrier to mobile banking usage is safety. Even though, number of mobile banking users tend to increase, but customers' trustworthiness on electronic payments still be the necessity factor. In Thailand, contacting banks' tellers when making money transactions are familiarity way because they can communicate face-to-face with the banks' tellers, and here the customers' trustworthiness occurs. In addition, making money transactions at a bank branch has evidences which make customers trust on more than online transaction via mobile phone.

This research will study on the motivation towards mobile banking usage in order to get more deep understanding which factors that banks and mobile phone operators should focus on so they can use this information to set appropriate marketing strategy.

1.3 Research Objectives

The three main objectives this research will accomplish are:

- To understand underlying motivations and barriers that can stimulate decision making of customers towards mobile banking usage.
- To interpret and provide suggestions for the banks and mobile phone operators in Thailand who offering mobile banking service
- To enhance competitive advantage together with find new market opportunity in order to match with customers' attitudes and behaviors.

1.4 Scope of the Study

The scopes of research are mentioned as following:

- The survey is conducted in Bangkok area, Thailand during January 2015.
- The pre-test is conducted before the actual survey. The author did pre-test during December 2014 in Bangkok, Thailand.

- The respondents are chosen 80 of mobile banking users and non-users – via questionnaire questions set.
- The respondents are split into two groups; mobile banking users (50 percent), and mobile banking non-users (50 percent).

1.5 Research Framework
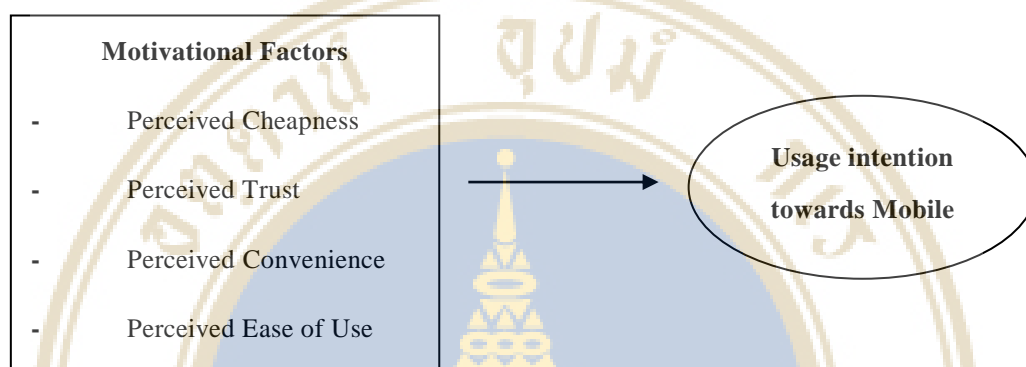
Figure 1.5 Research Framework

1.6 Methodology

This research will use two types of research methods: quantitative research method and qualitative method. Quantitative method is used in order to get more understanding of factors which affect the usage motivation of both mobile banking users and non-users. In addition, qualitative method is used to dig into more details about how mobile banking users and non-users' attitude towards this service because only quantitative results might not give strong support. Furthermore, the pilot study is conducted before perform an actual survey.

1.7 Research Hypotheses

In this research, the author sets totally five hypotheses as following;

H1: Non-users have higher cost perceptions towards mobile banking service than users.

H2: Non-users have lower trust towards mobile banking service than users.

H3: Non-users have lower convenience perceptions towards mobile banking service than users.

H4: Non-users have lower ease of use perceptions towards mobile banking service than users.

H5: Non-users have higher tradition perceptions in making financial transaction than users.

1.8 Organization of the Study

This independent study consists of five chapters; each chapter reveals the research process. The content of each chapter is briefly outlined as following:

Chapter 1 - Introduces the study topic, including the overview, background in Global and Thai context, objectives, and scope of the study.

Chapter 2 - A review of related literatures, including history of mobile banking in global context, the communication methods of mobile channel, adopter categories, the characteristics of innovation, and mobile banking - factors to consider success.

Chapter 3 - Describes the research sample, design, and methodology.

Chapter 4 - Reveals the results from the data collection and data analysis.

Chapter 5 - Summarizes the major findings of the study and discuss the results. Also, conclusions, limitations and recommendations for further research.

1.9 Definitions and Terms

"Mobile banking": A service provided via apps designed for the device's operating system that allows customers to be able to make money transactions by themselves via mobile phone without contacting with teller or banks.

"Apps": A shortening of the term "application software". Apps typically have a robust user interface and can be combined with text messaging or browser technology, for example, receiving a text alert with a link to the app to be downloaded.

"Self-service Technology": A service that banks allow customers to do almost every money transactions such as withdraw, transfer, balance checking, etc. by themselves via bank's machines.

CHAPTER II

LITERATURE REVIEW

In Chapter 2, the author describes the theories and the related research on mobile banking. The review of this literature is divided into five parts:

      (1)   History of Mobile Banking in Global Context,

      (2)   The Communication Methods of Mobile Channel,

      (3)   Adopter Categories

      (4)   The Characteristics of Innovation

      (5)   Mobile Banking - Factors to Consider Success.

The continuous development of second (2G), third (3G) and fourth (4G) generation of mobile devices in the communications sector is enabling the emergence of a plenty of new products and services. Mobile Banking (M-banking) is fast catching up as an alternative channel for banking services. Mobile phone as a channel provides great potential in banking. Today, a mobile phone is an important part of customers' lives and a growing number of these devices are also installed with internet connection. Technological development has reshaped the financial services delivery and consumption. Customers are the ones driving mobile banking product development, while banks are akin to the passengers, hanging on the edge of the door, flying down the highway. The customer owns the experiences, and it is their phone and they will choose to put a [bank] application on their phones (Wisniewski 2013).

2.1 History of Mobile Banking in Global Context

The first mobile banking and payment initiatives was announced during 1999 (the same year that Fundamo deployed their first prototype). The first major deployment was made by a company called *Paybox* (largely supported financially

by Deutsche Bank). It founded by two young German's (Mathias Entemann and Eckart Ortwein) and successfully deployed the solution in Germany, Austria, Sweden, Spain, and The UK. Unfortunately, about year 2003, Deutsche Bank withdraw their financial support and the company had to reorganize quickly. All but the operations in Austria closed down.

Another early starter and also identified as a leader in the field was a Spanish initiative (backed by BBVA and Telephonica), called *Mobi Pay*, and all banks and mobile operators in Spain were invited to join. Because of the complex shareholding and the constant political challenges of the different owners, the product never fulfilled the promise that it had. With no marketing support and no compelling reason for adoption, this initiative is floundering at that moment. Since 2004, mobile banking, and payment industry has come of age. Successful deployments with positive business cases and big strategic impact have been seen recently.

From the study of Amin, Hamid, Tanakinjal and Lada (2006) analyzed the willingness of the undergraduate students of a Malaysian University towards adoption of mobile banking technology. This study tried to find out whether demographic variables such as age, gender and race had any effect towards the adoption process. By using 615 respondents, the result appeared that differences exist in expectations regarding mobile banking between different age groups of respondents, and also between different religion groups particularly between Muslim and non-Muslim students. Muslim students preferred a reliable and right information disclosed by the banks and no interest elements in banking transactions. Meanwhile, non-Muslim students preferred that there is no Arabic language in the brochure and they were not discriminated against by the banks. In addition, gender differences between the respondents towards adoption of mobile banking were not significant.

Another study by Laukkanen, Sinkkonen, Kivijarvi and Laukkanen, (2007) takes a bit different view. They investigated the resistance to innovation of mature customers and how they differ from younger customers in the context of mobile banking. Their different approach is due to the fact that innovations imply a change from the routine and according to them it is more important to study the

reasons for resistance to change then to focus on the reasons for adopting the innovation. They divide the barriers into functional and psychological barriers. The functional barriers are divided into usage (fast, convenient, and easy to use), value (economical) and risk barriers (loss of pin codes, battery life, wrong information, unauthorized access to information). The psychological barriers are divided into image (image of mobile banking, perception of ease or difficulty in usage) and tradition barriers (preference towards traditional channel such as a physical visit to the branch). By investigating 1,525 usable respondents from a large Scandinavian bank, Mobile banking is extremely easy and inexpensive to implement. It reduces the cost of operation for bankers in comparison to the use of ATMs. Various players like banks, financial institutions, service providers, operators, etc. who are involved in providing mobile banking services. In addition, from the perspective of banks that develop mobile banking, as a large number of users should use the service in order to produce a return on investment (Lee and Chung, 2009).

Mobile banking customers at the top 12 global banks

Forbes rank	Bank	HQ location	Mobile banking customers	annual mobile growth	Online banking customers	Total customers	Mobile percentage of customers
1	Industrial and Commercial Bank of China	China	100 million +	49.5%	390 million	432 million	23.2%
2	China Construction Bank	China	117 million	38.9%	150 million	291 million	40.2%
3	Agricultural Bank of China	China	83.0 million	N/A	110.9 million	320 million	25.9%
4	JPMorgan Chase	USA	16.4 million	24%	35.0 million	N/A	N/A
8	Wells Fargo & Company	USA	12.5 million	23%	23.8 million	70 million	17.9%
9	Bank of China	China	52.1 million	24.6%	101.1 million	N/A	N/A
13	Bank of America	USA	14.4 million	19.8%	30.0 million	50 million	28.8%
14	HSBC Holdings	UK	2.5 million	N/A	N/A	60 million	4.2%
16	Citigroup	USA	N/A	N/A	N/A	100 million	N/A
24	BNP Paribas	France	1 million	N/A	N/A	N/A	N/A
37	Mitsubishi UFJ Financial	Japan	N/A	N/A	N/A	N/A	N/A
43	Banco Santander	Spain	2.6 million	N/A	11.6 million	106.6 million	2.4%

Source: Banks 2013 annual reports
Except JPM and WFC: Q1 2014 report.

Via © mobiThinking

Figure 2.1 Mobile banking customers at the top 12 global banks
Source: MobiForge2014

2.2 The Communication Methods of Mobile Channel

Communication is the activity of conveying information through the exchange of ideas, feelings, intentions, attitudes, expectations, perceptions or

commands. The next generation of smartphones is going to be context-aware, taking advantage of the growing availability of embedded physical sensors and data exchange abilities. One of the main features applying to this is that the phones will start keeping track of your personal data but adapt to anticipate the information you will need based on your intentions. Darsow, M., Listwan, L. (2012) give the mobile channels that available in the current market as followings;

2.2.1 Text Messaging

Text messaging is most often used between private mobile phone users, as a substitute for voice calls in situations where voice communication is impossible or undesirable. The short message service (SMS) is ideal for pushing brief, immediate bytes of bank information out to corporate users, such as requests for outgoing wire approvals and notifications of incoming wire receipts. Mobile users can quickly and easily text back their responses.

2.2.2 Mobile Browser

Offering more flexibility and functionality with text message, this platform uses the mobile device's own browser. This approach tends to have a less robust user interface than apps, but it offers greater compatibility as it allows banks to offer essentially a device agnostic service. It is also important to note that this does not mean taking the online experience and moving it to a smaller screen format. Rather, the service needs to be "mobilized" to simplify a presentation of data, minimize screen refreshes and improve other features for the users. Mobile browser software must be small and efficient to accommodate the low memory capacity and low-bandwidth of wireless handheld devices.

2.2.3 Apps

The term "app" is a shortening of the term "application software". It has become very popular and in 2010 was listed as "Word of the Year" by the American Dialect Society. Mobile banking services are provided via apps designed for the device's operating system. This mean a service that is compatible with a

specific device or devices, such as an iPhones or other models. These apps typically have a robust user interface and can be combined with text messaging or browser technology, for example, receiving a text alert with a link to the app to be downloaded.

2.3 Adopter Categories

There are five established adopter categories, and while the majority of the general population tends to fall in the middle categories. It is still necessary for us to understand the characteristics of the target population.
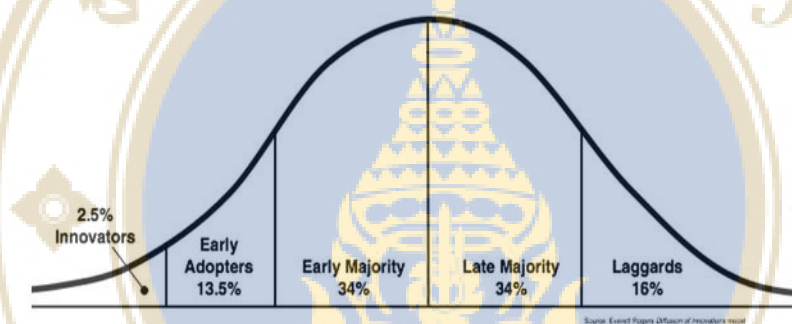
Figure 2.2 Adoption Categories
Source: Everett M. Rogers

2.3.1 Innovators

These are people who want to be the first to try the innovation. They are venturesome and interested in new ideas. These people are very willing to take risks, and are often the first to develop new ideas.

2.3.2 Early Adopters

These are people who represent opinion leaders. They enjoy leadership roles and embrace change opportunities. They are already aware of the need to change and so are very comfortable adopting new ideas.

2.3.3 Early Majority

These people are rarely leaders, but they do adopt new ideas but they do adopt new ideas before the average person. That said, they typically need to see evidences that the innovation works before they are willing to adopt it.

2.3.4 Late Majority

These people are skeptical of change and will only adopt an innovation after it has been tried by the majority.

2.3.5 Laggards

These people are bound by tradition and very conservative. They are very skeptical of change and are the hardest group to bring on board.

2.4 The Characteristics of Innovation

Innovation is a new idea, device or process. Innovation can be viewed as the application of better solutions that meet new requirements, inarticulate needs, or existing market needs (Maranville, 1992). This is accomplished through more effective products, processes, services, technologies, or ideas that are readily available to markets, governments, and society. Innovation differs from invention as innovation refers to the use of a better and, as a result, novel idea or method, whereas invention refers more directly to the creation of the idea or method itself. In addition, Innovation differs from improvement in that innovation refers to the notion of doing something different rather than doing the same thing better. Rogers (1995) has classified the characteristics of innovation into five categories as following;

2.4.1 Relative Advantage

Relative advantage is the perceived efficiencies gained by the innovation relative to current tools or procedures. Karayanni (2003) stated that relative advantage refers to "the degree to which innovation is perceived to be better than the idea it supersedes". Rogers (1995) points out that the potential

adopter must first calculate its relative strengths then if they find an advantage in the new technology, they will be more likely to adapt it. The degree of relative advantage is often expressed in economic profitability, in status giving, or in other ways. The nature of the innovation largely determines what specific type of relative advantage (such as economic, social, and the like) is important to adopters. From the study of McCloskey (2006) revealed that when users perceive that a new technology has a distinct advantage over the old technology, the likelihood of users adopting the technology increases. The advantages of mobile banking indicate that customers perceived mobile banking service are excellent services that can be accessed without time and location constraints, improving service performance and service efficiency accordingly.

2.4.2 Compatibility

Compatibility refers to how well the innovation fit into a person's needs, usage patterns and current value system. An innovation that is more compatible with a person's lifestyle and cognitive characteristics is more likely to be assimilated into an individual's life (Rogers, 2003). Related research of Ndubisi and Sinti, 2006 stated that compatibility is a significant prior factor to determine customer attitudes towards adopting internet banking, and mobile payment and mobile banking practices (Chen, 2008; Koenig-Lewis et al., 2010). An innovation may be compatible not only with deeply embedded cultural values but also with previously adopted ideas. Compatibility of an innovation with a preceding idea can either speed up or delay its rate of adoption. People cannot deal with an innovation except on the basis of the familiar and the old fashioned (Rogers, 1983).

One indication of the compatibility of an innovation is the degree to which it meets a need felt by the potential customers or not. Potential customers may not recognize that they have needs for an innovation until they are aware of the new idea or of its consequences. Therefore, one dimension of compatibility is the degree to which an innovation is perceived as meeting the needs of the client system. When felt needs are met, a rate of adoption usually occurs (Rogers, 1983). Schierz et al. (2007) noted that compatibility, perceived usefulness subjective norms and mobility affect user attitude which further affects the intention to use

mobile payment. Another study is from Wessels and Drennan (2010) found out that compatibility has a strong direct effect on the intention to use mobile banking.

2.4.3 Complexity

Complexity refers to the level of difficulty that the potential adopters encounter with the innovation. Cheung et at. (2000) defined the complexity adversely impacts the internet usage. It is likely that the more complex or the more difficult an innovation is to understand, the less likely it will be adopted. Potential customers are unwilling to use mobile banking service if the service requires more effort, or might be time-consuming than traditional banking. Therefore, if the users find it too complex to learn how to use mobile banking services, the attitudes towards mobile banking services and intention to use decreases.

2.4.4 Trialability, and

Trialability is the degree to which an innovation may be experimented with on a limited basis. Potential users who are allowed to experience with the innovation are more comfortable with it and it has more chance to adopt it (Agarwal and Prasad, 1998; Rogers, 2003). An innovation that is trialable is less uncertain for the adopter. From the study of Tan and Teo (2000) revealed that if potential customers have chance to evaluate the innovation, users minimize certain unknown fears leading to acceptance. In addition, Atkinson (2007) supported that innovation that can be tried previously is adopted more quickly than another that cannot. Park and Chen (2007) pointed out that it has a positive relationship between trialability and user adoption.

2.4.5 Observability

Observability is the degree to which the results of an innovation are visible to others. The observability of an innovation, as perceived by members of a social system, is positively related to its rate of adoption (Rogers, 1995). From study of Meuter et al. (2005) showed that it has a positive relationship between ability to communicate with others and the chance that it will be tried out. Another

study of Moore and Benbasat (1991) divided observability into two constructs; visibility and result demonstrability.

2.5 Mobile Banking - Factors To Consider Success

When we are doing business or other things else, one thing that we expect it to happen is success. Most people will place their expectation to sales, but actually there are still some necessary factors that bounded together before becoming success. We can say that mobile banking can become populist channel worldwide, but from customers' perspective there are some barriers that still have to overcome.

2.5.1 Cost

Mobile banking adoption is highly encouraged by economic factors, for example, advantageous transaction, service fees (Yang, 2009) or discouraged by economic considerations such as concerns about basic fees for connecting mobile banking (Yang, 2009), cost burden for using mobile banking (Cruz et al., 2010), and high payment for using mobile banking (Huili and Chengfang, 2011).

The survey of Sripalawat et al. (2011) appeared that 195 surveys from bank's customers in Bangkok area, Thailand, they have perceived that financial cost was a notable factor influencing them (customers) to adopt mobile banking. Another study of Sadi et al. (2010) took 196 respondents in the Sultanate of Oman showed that a high cost was crucial for unwilling to use mobile banking. In addition, Luarn and Lin (2005) that took the personal interview of customers revealed that they perceived financial cost as a negative effect on behavioral intention to use mobile banking.

Yang (2009) used the Rasch measurement model and item response theory by surveying 178 students from one of the largest university in South Taiwan. The survey found out that speed of transaction and special reductions in transaction fees encouraged mobile banking adoption. According to Brown et, al. (2003) shows that the more the users perceive advantages of using mobile banking than other banking channels, the more opportunities for mobile banking service

adoption. On the other hand, if innovation does not offer better performance when comparing to the alternatives, it is not worthwhile for customers to change their behavior (Ram and Sheth, 1989).

2.5.2 Trust

Trust is a central construct in the study of commercial transactions, both in IS and such reference disciplines as marketing, sociology, and organizational behavior (Dwyer et al. 1987, Morgan and Hunt 1994, Smith and Barclay 1997).

From the study of Jarvenpaa et al. (2004) regarded trust as a direct or moderating effect. As a trust was a moderator, trust does not directly elicit any particular behavioral outcomes, but it influences how people interpret or evaluate information that related to their attitude and behavior. Trust plays an important part in both offline and online commercial transactions (Yoon, 2002). There are various ways to define trust, it is often depending on the context in which the trust appears, such as calculative trust, institutional trust and relational trust (Rousseau et al, 1998). Because mobile banking services includes no face-to-face contact between users and providers that is why building trust in mobile banking can be quite difficult to install. Some researchers said that trust is difficult to define and measure (Corritore et al., 2003, Grabner-Krauter and Kaluscha, 2003), and this exists only in the uncertain and risky environment. Gu et al. (2009) said that trusting a bank would lead customers to see the value of mobile banking and then encourage them to use it.

Trusting intentions imply that the thruster feels secure and they are willing to depend on, or intends to depend on the trustees. In mobile banking, especially trust in the financial institutions such as bank is very important. The reason is mobile banking involves some weak points, for example, a narrow screen, slow processing, and a limited amount of information provided to users. It must become more objective and trustworthy than general internet banking in order to overcome those kinds of cons. When service providers have users' trust, in general, users will satisfy with the service. On the contrary, when trust level is low, users tend to show low satisfaction too. The high satisfaction levels that

generate by users about mobile banking can also lead to repeated use of mobile banking services and creating profits for banks. Meanwhile, low satisfaction levels can cause the customers lose.

2.5.3 Convenience

Nowadays, visiting the branch of bank is something time-consuming as users now are able to use automated teller machines (ATM) and online banking that is why a new banking channel was launched out to meet the users' demand. Mobile banking is considered to be one of the most value-added and important mobile commerce application currently available (Lee et al., 2003; Varshney and Veter, 2002). Mobile banking services allows customers to check account balances, transfer funds between accounts and order for electronic bill payments without laptop or table required. The mobile phone especially supports the provision of time-critical information, for example, for trading in stocks or money transfer or request of account balance. The customer considered banks as outstanding trustful service providers compare to other financial institutions (Mallat and Tuunainen, 2008).

The use of mobile devices and especially tablets is increasingly gaining momentum in the world of banking. Increasing number of users' mobility is now touching almost every aspect of business and will also stimulate demand for mobile banking services. Mobile banking provides beneficial and convenient options for creating a mobile payment transactions via the apps. A study in Finland by Laukkanen (2007) focused on how the customer preference differs from the different characteristics of internet and mobile banking channels. The study based on two groups of users; internet users and mobile banking users. The result showed that in case of internet users the screen size, location and response time are the most important factors. Meanwhile, for mobile phone users, location is a priority following by size of the screen and the service response time. As mobile banking offers the immediate location-free access to the banking services empowering time savings, enhances feeling of control over, and also real-time information as required (Laukkanen and Lauronen, 2005).

2.5.4 Information Quality

Information is an importance factor in any kind of innovation diffusion process. Information such as products details or services, benefits, usage guidelines, etc. should be provided. This also related how information about innovation is spread through certain channels of communication for those social system members (Rogers, 2003).

Information quality reflects the accuracy, timeliness, and relevance of the information offered to users who use mobile payments. If they obtain insufficient, irrelevant, and inaccurate information, users may feel that mobile payments are useless to their life. It also might lead to performance expectancy. Amin et al. (2008) pointed that customers have to realize benefits of new products or services before accepting them. The study of Chen et al. (2012) revealed that information quality necessarily affects perceived usefulness of mobile applications and might affect user trust in mobile payments. In addition, poor information quality may subvert users' experience towards mobile banking usage. Another research showed that the quality of information transmitted can influence customers' satisfaction (Bharati and Chaudhury, 2004). Besides, the more trust customers have, the more information quality and good interface design affect customers' satisfactions (Fung and Lee, 1999).

2.5.5 Age

Since using mobile banking services requires some knowledge of technology and information processing ability, age might be a critical factor that affects customers' mobile banking service adoption behavior. Wellner (2000) revealed that people in the same age range share early and influential experiences. Gen Xers and baby boomers are different in terms of how technology impacted their lives. As gen Xers are described as having affinity for technology and being computer and internet proficient. In addition, gen-Xers are more comfortable with information and technology than baby boomers (Cox, 2006).

From the research of Schadler (2006) showed that younger customers tend to adopt internet-enabled phones more than senior customers. Also, Chung and Holdsworth (2012) showed that a young generation is more likely to adopt

mobile commerce if they have an opportunity to try out those new innovations. However, baby boomers are open-minded to try new brands and products available in the market (Bernstein, 2001). Another research revealed that typical users of electronic banking were relatively young (Joshua and Koshy, 2011), while the elderly had more resistances to change and also the negative attitude toward using mobile banking services (Laukkanen et al., 2007). Puschel et al. (2010) revealed that typical users of mobile banking were less than 30 years old. Additional research showed that from 3585 respondents in Brazil, and the research claimed that older people perceived mobile banking was more difficult to use than younger people did (Cruz et al., 2010).

2.5.6 System Quality

System quality refers to the access speed, ease of use and visual appeal of a mobile payment systems. System quality was first introduced by Delone and McLean (1992). Delone and McLene (2003) defined system quality as visible in the system's overall performance which can be measured by individual perceptions of this quality. Prior studies identified that system quality affected users; trust in infomediaries (Song and Zahedi, 2007) and mobile commerce technologies (Vance et al., 2008). Zhou (2011) research showed the relationship between system quality and initial trust, which it is the beginning step of trust development and it related to previous experience. Supported by his quote as following; "poor system quality may lead users to feel the service providers have not spent enough effort and investment on mobile banking". McKnight et al. (2002a, b) revealed that when customers discover the high quality of a system of a particular provider, they are more likely to trust in and would be ready to deal with and spend money on it. It shows that system quality also one critical factor for mobile banking providers to consider and make the prompt services.

2.5.7 Image

Brand image can be defined as a unique bundle of associations within the minds of target customers. It is a set of beliefs held about a specific brand. We can shortly say that brand image is nothing, but it is *the consumers' perception*

about the product. The idea stuck behind brand image is that the customers are not purchasing just the product or service, but also the image associated with that product or service.

Ruyter et al. (2001) suggested that company reputation and brand image definitely affect customers purchasing decisions towards electronic services since brand image becomes the symbol of customers buying intention with information asymmetry. Unfavorable associations, product category that its belong to can rise the image barrier (Ram and Sheth, 1989). Another supporting research is from Meuter et al. (2003), it revealed that negative state of mind about technology tools can rise the image barrier up. The brand image includes products' appeal, ease of use, functionality, fame, and overall value. Positive brand image is exceeding the customers' expectations. By using brand communications as advertising, packaging, word of mouth publicity, other promotional tools, etc. can help to strengthen the brand image. Positive brand image enhances the goodwill and brand value of a company.

2.5.8 Ease of Use

According to Davis et al. (1989) stated the meaning of perceived ease-of-use as that "the degree to which a person believes that using a particular system would be free from effort". The usage barrier mainly implies the role of functional usability of an innovation. Ease of use is the functional barriers when it is incompatible with the existing habits or users' practices which comparable to a complexity (Teo and Pok, 2003).

According to Rogers (2003) complexity refers to the degree to which an individual considers an innovation to be understood and use. Workman (2007) classified the dependent variable into information use and technology use. Laukkanen et al. (2007) uncovered that the value and usage barriers were the most intense barriers to mobile banking adoption, while tradition barriers (such as preferring to chat with the teller and patronizing the banking office) were not an obstacle to mobile banking adoption. Ease of use is contain another two factors to consider; *ease of set up* – how easily the service can be installed for new users, and whether it works universally on all mobile phones or adaptation needed*; ease of*

upgrading – the ease that service provider can upgrade the service or add new service features.

2.5.9 Tradition

A *tradition* is a belief or behavior passed down within a group or society with symbolic meaning or special significance with origins in the past. It has been noted that some satisfaction or dissatisfaction with electronic financial services is not tied to the technology itself, but personality type tied (Srijumpa et al., 2002). Tradition and image barriers are more often created through conflicts with customers' prior beliefs and value than actual usage of the innovation (Ram and Sheth, 1989). In addition, Ram and Sheth (1989) supported that the tradition barrier would arise if an innovation is incompatible with an individual's existing values, norms, and past experience, and it may block the adoption of the innovation (Rogers, 2003). From the study of Gerrard et al. (2006) revealed that if a customer need social interaction and enjoy talking to bank personnel, and complain that internet banking lacks a social dimension in terms of human interaction.

2.5.10 Device

Unsuitable devices are the customers' perceptions towards their own devices that are not suitable for accessing banking services. Vlachos and Vrechopoulos (2008) research showed that device quality has a strong influence on service quality perceptions which directly affect mobile internet adoption and their usage.

Sarenko and Bontis (2004) also supported that to increase user satisfaction with mobile services such as mobile portals, the contents of mobile services has to be optimized to support the device limitation which are communication bandwidth, screen size, memory, and CPU. Lee et al. (2003) revealed that 3G (UMTS) or above-advanced technologies offer customers greater value-added services at a higher speed, which could lead to higher adoption. Cruz et al. (2009) research showed that those respondents with a basic mobile phones have a higher level of overall resistance while compared to those who have more

advanced mobile phones or smartphones. The higher the perception of the device's unsuitability, the higher chance of unadoption of the service will be.

2.5.11 Perceived Fun

Technology adoption does not contain only technology itself, but a hedonic motivation is adapted such as fun, enjoyment, and perceived enjoyment (Chtourou and Souiden, 2010). Sun and Zhang (2006) found that the acceptance of technology by customers is facilitated by the feeling of enjoyment they have. It has more intention to adapt the technologies for those who enjoy using information systems (Davis et al., 1992, cited by Sun and Zhang, 2006, p.629). When customers perceive that using the technology is fun, they would have more favorable attitude toward using that technology (Sheppard et al, 1988).

In addition, "fun" was found out to be the important attitudes driver for both non-utilitarian services and utilitarian services (Dabholkar and Bagozzi, 2002). Another supported study was from Hanudin et al. (2012, p.10) found out that perceived enjoyment is strongly related to mobile banking use. As they explained that "mobile phone is viewed as an entertainment gadget to some individuals" so enjoyment can play an important role in mobile banking usage.

There are totally 11 factors that would affect to usage intention of mobile banking users and non-users, but in this study the author chose to study on five main factors which are cost, convenience, trust, ease of use, and tradition. The reason is the author choose these factors because they have highly possibility to measure when compared among the rest six factors.

CHAPTER III

RESEARCH METHODOLOGY

This research will be conducted by using a quantitative method as questionnaire questions with 80 people in Bangkok area.

3.1 Scope of Study

The study focuses on both mobile banking users and non-users in Bangkok area during January 5 – 19th 2015. The respondents of both groups age above 18 years old, and live in Thailand.

3.2 Sample Size

3.2.1 Profile of Respondents

The sample for the quantitative research method is 80 respondents for mobile banking users and non-users. For qualitative research method as in-depth interview, there are 20 respondents which divided into 10 mobile banking users and 10 non-users. The author split both group of respondents for two kind of research methods into two groups: mobile banking users 50%, and the rest 50% belongs to non-users. To avoid information bias, both user and non-user are chosen by the author.

3.2.2 Pre-test

Pre-test was conducted before taking the real survey in order to check the readiness of questionnaire questions. The author did pre-test during December 2014 in Bangkok, Thailand.

3.3 Research Questionnaire

A questionnaire approach is used to analyze the relationship between potential factors, and intention to use and not to use mobile banking service. Data was collected by self-administered online surveys and paper-based questionnaires.

3.3.1 Questionnaires Parts

The questionnaire for this study consisted of eight parts

Part A: Mobile Banking Service's Awareness checking

Part B: General information on Mobile Banking Service – Users

Part C: Perceived Cheapness towards Mobile Banking Usage

Part D: Perceived Trust towards Mobile Banking Usage

Part E: Perceived Convenience towards Mobile Banking Usage

Part F: Perceived Ease of Use towards Mobile Banking Usage

Part G: Tradition towards Mobile Banking Usage

Part H: Demographic Profile

3.4 Data Collection

3.4.1 Primary Data

Data got from respondents who completed questionnaire questions. Most of the questions were typical questions of respondents, for example, age, income, education level, as well as motivation factors which led to an intention to use the mobile banking service.

3.4.2 Secondary Data

Data about theories and research results in this study was taken from several related sources such as research, journal, website, etc.

3.5 Data Analysis

After collecting the data, Excel program was used to analyze data in order to answer hypotheses based on the author's research objectives of the study. The total sample size of the study was 80 respondents.

PART A: Checking the awareness of all respondents towards Mobile Banking Service. In addition, to classify respondents into mobile banking users, and non-users.

PART B: Describes general information on Mobile Banking Service of users. Also, checking the bank provider, usage frequency, how users get to know the service.

PART C: Checking perceived cheapness towards Mobile Banking usage of users to see how they perceive on cost spend on the service.

PART D: Describes how users perceived trust towards Mobile Banking usage. In addition, to check a trust level on the bank provides a service to them.

PART E: To measure how users perceived convenience towards Mobile Banking usage.

PART F: Describes perceived ease of use towards Mobile Banking of users.

PART G: To measure tradition towards Mobile Banking usage whether users prefer to deal with self-service machines or face-to-face contact with banks' teller.

PART H: To capture demographic profile of respondents including gender, age, income, educational level, and current employment status.

CHAPTER IV

DATA ANALYSIS AND RESULTS

This Chapter provides the results of data analysis based on total sample of 80 respondents. In order to have clear picture of how result of the study revealed, the author would like to divide this chapter into ten parts; demographic profile of respondents, Mobile Banking Service's Awareness checking Results, General information on Mobile Banking Service on Users Results, Mean Scores Comparison on the Study's Factors. Hypotheses of the study were tested by several methods; Analysis of the measurement model, Correlation Analysis, and T-Test.

4.1 Demographic Profile Results

The author uses self-administered via online questionnaire distribution and paper-based questionnaire in order to collect the data for this study. In the table 4.1, you would found the demographic profile of all respondents: gender, age, educational level, income, and current employment status.

Table 4.1 Demographic profile of the sample

Demographic Factors		Number of Respondents	Percentage (%)
Gender	Male	35	43.75
	Female	45	56.25
Age	15 – 17 years	0	0
	18 – 21 years	7	8.80
	22 – 25 years	14	18.00
	26 – 29 years	21	26.30
	30 – 33 years	12	15
	34 – 37 years	7	8.80

Table 4.1 Demographic profile of the sample (cont.)

Demographic Factors		Number of Respondents	Percentage (%)
Educational Level	38 – 41 years	4	5
	42 – 45 years	5	5
	Above 45 years	10	13.00
	Primary School	0	0
	Secondary School	0	0
	High School	4	5
	Bachelor's degree	43	53.75
	Master's degree	33	41.25
	Doctor's degree	0	0
Employment Status	Full-time student	13	16.25
	Business owner	17	21.25
	Government employee	15	18.75
	Private organization employee	24	30
	Retired	6	7.50
	Unemployed	5	6.25
	Others	0	0
Monthly Income	Below 15,000 THB	12	15
	15,001 – 25,000 THB	8	10
	25,001 – 35,000 THB	16	20
	35,001 – 45,000 THB	21	26.25
	45,001 – 55,000 THB	7	8.75
	55,001 – 65,000 THB	7	8.75
	Above 65,000 THB	9	11.25

From the data collection, you would see that the author chose to study on both gender which were 35 male respondents and 45 female respondents. The highest percentage of respondents' age belonged to respondents' age between 26 to 29 years (26.30%), 22 to 25 years (18%), and 30 to 33 years (15%). With 53.75% Bachelor's

degree, and 41.25% of Master's degree. The rest 5% belonged to high school respondents.

For current employment status, the highest belonged to private organization employee (30%), business owner (21.25%), and Government employee (18.75%). Income range of the respondents fail mostly to 35,001 – 45,000 THB (26.25%), 25,001 – 35,000 THB (20%), and 15,001 – 25,000 THB (15%).

Table 4.2 The quantity and percentage of mobile banking service respondents (both users and non-users) classified by Gender

Gender	Mobile Banking Users		Mobile Banking Non-Users	
	Quantity	Percentage (%)	Quantity	Percentage (%)
Male	18	45	17	42.50
Female	22	55	23	57.50
Total	40	100	40	100

From table 4.2, we could see that 43.75% of total male respondents (from table 4.1), 45%.were mobile banking users. For 56.25% in total for female respondents, 55% of them were mobile banking users. For non-users' sides, males respondents were 42.50%, and 57.50% of female.

Table 4.3 The quantity and percentage of mobile banking service respondents (both users and non-users) classified by Age

Age	Mobile Banking Users		Mobile Banking Non-Users	
	Quantity	Percentage (%)	Quantity	Percentage (%)
15-17 years	0	0	0	0
18-21 years	2	5	5	12.50
22-25 years	13	32.50	1	2.50
26-29 years	16	40	5	12.50
30-33 years	5	12.50	7	17.50
34-37 years	1	2.50	6	15
38-41 years	2	5	2	5
42-45 years	0	0	5	12.50
Above 45 years	1	2.50	9	22.50
Total	40	100	40	100

The table 4.3 showed that mobile banking users were respondents aged between 26 to 29 years old (40%), and 22 to 25 years old (32.5%). While mobile

banking non-users were respondents aged more than 30 years old which could be accumulated to be 72.50% of total non-users.

Table 4.4 The quantity and percentage of mobile banking service respondents (both users and non-users) classified by Education Level

Education Level	Mobile Banking Users		Mobile Banking Non-Users	
	Quantity	Percentage (%)	Quantity	Percentage (%)
Primary School	0	0	0	0
Secondary School	0	0	0	0
High School	0	0	4	10
Bachelor's degree	19	47.50	24	60
Master's degree	21	52.50	12	30
Doctor's degree	0	0	0	0
Total	40	100	40	100

Table 4.4 indicated the educational level of respondents of the study. Most mobile banking users had high education: master's degree (52.50%), bachelor's degree (47.50%). Meanwhile, non-users were respondents who got high education also as seen from the percentage that 60% got bachelor's degree, and 30% of them got master's degree of their study background.

Table 4.5 The quantity and percentage of mobile banking service respondents (both users and non-users) classified by Current Employment Status

Current Employment Status	Mobile Banking Users		Mobile Banking Non-Users	
	Quantity	Percentage (%)	Quantity	Percentage (%)
Full-time student	9	22.50	4	10
Business owner	8	20	9	22.50
Government employee	5	12.50	10	25
Private organization employee	14	35	10	25

Table 4.5 The quantity and percentage of mobile banking service respondents (both users and non-users) classified by Current Employment Status (cont.)

Current Employment Status	Mobile Banking Users		Mobile Banking Non-Users	
	Quantity	Percentage (%)	Quantity	Percentage (%)
Retired	0	0	6	15
Unemployed	4	10	1	2.50
Total	40	100	40	100

From table 4.5, 35% of mobile banking users were private organization employees, and 22.50% were full-time students. On the contrary, non-users fail a lot on both Government employee, and Private organization employee with the same percentage (25%).

Table 4.6 The quantity and percentage of mobile banking service respondents (both users and non-users) classified by Monthly Income

Monthly Income	Mobile Banking Users		Mobile Banking Non-Users	
	Quantity	Percentage (%)	Quantity	Percentage (%)
Below 15,000 THB	7	17.50	5	12.50
15,001 – 25,000 THB	8	20	0	0
25,001 – 35,000 THB	10	25	6	15
35,001 – 45,000 THB	9	22.5	12	30
45,001 – 55,000 THB	0	0	7	17.50
55,001 – 65,000 THB	1	2.5	6	15
Above 65,000 THB	5	12.5	4	10
Total	40	100	40	100

Table 4.6 revealed that users had medium to high monthly income around 25,001 to 35,000 THB (25%), and 35,001 to 45,000 THB (22.50%). While, mobile banking non-users had average income around 35,001 to 45,000 THB (30%), and 45,001 – 55,000 THB (17.50%).

4.2 Mobile Banking Service's Awareness checking Results

In this part, the author took data from Part A of the questionnaire. The data collection reveled that all 80 respondents knew mobile banking service which calculated as 100% awareness of the service. In addition, the author used this part to classify respondents into two group: users and non-users. It showed that 40 respondents (50%) was mobile banking users while 40 respondents (50%) was non-users.

4.3 General information on Mobile Banking Service on Users Results

The data was from Part B in the questionnaire which contained of four questions. The results revealed that 47% knew Mobile banking service from banks itself. Another channels were mass media such as television, radio, newspaper got 20%, and 15% was belong to friends or family recommended them about mobile banking service while 10% got the information from SMS that delivered by bank. In addition, 8% of respondents got information about mobile banking service from bank's website and social network.

The popular banks among mobile banking users showed accordingly: Kasikorn Bank or K-Bank (41.5%), Siam Commercial Bank (28.30%), Bank of Ayudhya (13.20%), Thai Military Bank (9.43%), and Bangkok Bank (7.55%). Most respondents have frequency of usage one time per week (52.50%). They used mobile banking for domestic money transferred (38.70%), bill payment (21.50%), balance inquiry / bank statement (20.43%), top-up (8.60%), exchange rate checking (5.37%), others purposes such as stock checking, purchase and checking balance of fund got 3.22%, and international Remittance (2.15%).

4.4 Mean Scores Comparison on the Study's Factors

For this part, the author used statistics function in order to find mean scores of all scaled questions as you can find detail in table 4.7: Mean Scores Comparison on the Study's Factors because it would be easier to analyze by using

mean scores as it contained quite a lot of questions in the rest parts that author did not yet mention on the results.

So, table 4.7 was conducted for this reason as the author used scaled method to find out on how mobile banking users and non-users respondents perceived towards mobile banking service.

Table 4.7 Mean Scores Comparison on the Study's Factors

Factors	Question	Mean Scores	Average
Perceived Cheapness	*Mobile Banking Users*		
	I think Mobile Banking Service is cheaper to use when compares to other banking channels.	3.45	3.375
	I think the transaction fees are cheaper when comparing to other banking channels.	3.30	
	Mobile Banking Non-Users		
	I think Mobile Banking Service is cheaper to use when compares to other banking channels.	1.60	1.60
	I think the transaction fees are cheaper when comparing to other banking channels.	1.60	
Perceived Trust	*Mobile Banking Users*		
	When using Mobile Banking Service, I believe my information is confidentially kept.	3.325	
	When using Mobile Banking Service, I believe my transactions are secured from unauthorized third party.	3.45	
	When using Mobile Banking Service, I believe my privacy would not be revealed.	3.475	3.6
	When using Mobile Banking Service, I believe the Mobile Banking Service is safe.	3.45	
	Mobile Banking Service provides me a physical security. (No need to carry out cash to bank)	4.3	

Table 4.7 Mean Scores Comparison on the Study's Factors (cont.)

Factors	Question	Mean Scores	Average
	Mobile Banking Non-Users		
	If I used a mobile banking service, I believe my information is confidentially kept.	1.775	
	When using Mobile Banking Service, I believe my transactions are secured from unauthorized third party.	3.45	
	When using Mobile Banking Service, I believe my privacy would not be revealed.	3.475	1.715
	When using Mobile Banking Service, I believe the Mobile Banking Service is safe.	3.45	
	Mobile Banking Service provides me a physical security. (No need to carry out cash to bank)	4.3	
	Mobile Banking Users		
	Using Mobile Banking Service would save my time. (No need to go to ATM/Bank branch)	4.675	
	I can access Mobile Banking Service anyplace.	4.425	4.48
	Mobile Banking Service offers faster speed delivery when compares to other banking channels.	4.325	
Perceived Convenience			
	Mobile Banking Non-Users		
	Using Mobile Banking Service would save my time. (No need to go to ATM/Bank branch)	1.6	
	Mobile Banking Service offers 24 hours accessibility.	1.95	1.75
	Mobile Banking Service offers faster speed delivery when compares to other banking channels.	1.575	
	Mobile Banking Users		
Perceived Ease of Use	I find Mobile Banking is easy to use.	4.15	
	I think learning how to use Mobile Banking Service is easy for me.	4.05	3.71

Table 4.7 Mean Scores Comparison on the Study's Factors (cont.)

Factors	Question	Mean Scores	Average
	Mobile Banking Users (cont.)		
	I think interaction with Mobile Banking is easy for me.	3.975	
	I think it is time consuming to set up mobile banking.	2.65	
	Mobile Banking Non-Users		
	In my opinion, Mobile Banking is easy to use.	1.6	
	In my opinion, learning how to use Mobile Banking Service is easy for me.	1.375	1.54
	In my opinion, it is time consuming to set up mobile banking.	1.925	
Tradition	*Mobile Banking Users*		
	I prefer to visit bank branch when I need to do money transaction.	2.175	2.15
	I prefer to interact face-to-face with banks' teller more than doing money transaction via self-service machines (ATM machine, Passbook Update machines, Cash Deposit Machine)	2.125	
	Mobile Banking Non-Users		
	I prefer to visit bank branch when I need to do money transaction.	4.575	4.625
	I prefer to interact face-to-face with banks' teller more than doing money transaction via self-service machines (ATM machine, Passbook Update machines, Cash Deposit Machine)	4.675	

From the table above, it revealed that mobile banking users and non-users had difference attitude towards five factors which were Perceived Cheapness, Perceived Trust, Perceived Convenience, Perceived Ease of Use and Tradition. The mean of Perceived cheapness from users' side (3.375) showed more value than non-users did (1.60). It referred that cost was an important factor why people chose to use

the service. Second, mobile banking non-users tended to distrust on this service as they gave only 1.715 on mean score while users' side gave 3.60 of mean score. Third, users believed that mobile banking service offered them convenience (4.48) while non-users' attitude were not as it got 1.75 on mean score. Fourth, for ease of use from users' perspective, they gave 3.71 of how easy the service was, while 1.54 was the mean score from non-users' side about the difficulty feeling of the service. Last factor was the tradition which referred to how people felt about interact face-to-face with banks' tellers when they need to do money transaction. When compared the mean score from both side, it showed that non-users preferred to interact with banks' teller (4.625) than mobile banking users were (2.15).

To sum it up, the important factors for mobile banking users why they used the service were Perceived Convenience, Perceived Ease of use, Perceived Trust, and Perceived Cheapness respectively. They had lower "Tradition" which referred to less intention to interact with banks' tellers. Meanwhile, non-users had higher "Tradition" on interacted and communicated with banks' tellers rather than using banking application, and lower "Perceived Convenience, Trust, Perceived Cheapness, and Perceived Ease of use" respectively.

4.5 Hypotheses

The hypotheses are tested by using Cronbach Alpha (α), and T-Test. The hypotheses of this study are as following;

H1: Non-users have higher cost perceptions towards mobile banking service than users.

H2: Non-users have lower trust towards mobile banking service than users.

H3: Non-users have lower convenience perceptions towards mobile banking service than users.

H4: Non-users have lower ease of use perceptions towards mobile banking service than users.

H5: Non-users have higher tradition perceptions in making financial transaction than users.

4.6 Analysis of the Measurement Model

In table 4.8, it showed the constructs' items for the study which consists of perceived Cheapness, trust, perceived convenience, perceived ease of use, and Tradition. Further down we will report on the Cronbach alpha of the scales for these 5 items.

Table 4.8 The Constructs' items

Constructs	Items
Perceived Cheapness	I think Mobile Banking Service is cheaper to use when compares to other banking channels.
	I think the transaction fees are cheaper when comparing to other bank channels.
Perceived Trust	When using Mobile Banking Service, I believe my information is confidentially kept.
	When using Mobile Banking Service, I believe my transactions are secured from unauthorized third party.
	When using Mobile Banking Service, I believe my privacy would not be revealed.
	When using Mobile Banking Service, I believe the Mobile Banking Service is safe.
	Mobile Banking Service provides me a physical security. (No need to carry out cash to bank
Perceived Convenience	Using Mobile Banking Service would save my time. (No need to go to ATM/Bank branch)
	I can access Mobile Banking Service anyplace.
	Mobile Banking Service offers 24 hours accessibility.
	Mobile Banking Service offers faster speed delivery when compares to other banking channels.
Perceived Ease of Use	I find Mobile Banking is easy to use.
	I think learning how to use Mobile Banking Service is easy for me.
	I think interaction with Mobile Banking is easy for me.
	I think it is time consuming to set up mobile banking.
Tradition	I prefer to visit bank branch when I need to do money transaction.

Table 4.8 The Constructs' items (cont.)

Constructs	Items
Tradition (cont.)	I prefer to interact face-to-face with banks' teller more than doing money transaction via self-service machines. (ATM machine, Passbook Update machines, Cash Deposit Machine)

In order to measure the acceptable level of survey questions in the above table, the author use the Cronbach's alpha (α) and Internal Consistency as a standard.

Table 4.9 The Cronbach's alpha (α) and Internal Consistency

Cronbach's alpha	Internal Consistency
$\alpha \geq 0.9$	Excellent (High-Stakes testing)
$0.8 \leq \alpha < 0.9$	Good (Low-Stakes testing)
$0.7 \leq \alpha < 0.8$	Acceptable
$0.6 \leq \alpha < 0.7$	Questionable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

Table 4.10 Construct Results

Compound Constructs	Cronbach's Alpha (α)	Number of items	Questions
Perceived Cheapness	0.882	2	I think Mobile Banking Service is cheaper to use when compares to other banking channels.
			I think the transaction fees are cheaper when comparing to other banking channels.
Perceived Trust	0.934	5	When using Mobile Banking Service, I believe my information is confidentially kept.
			When using Mobile Banking Service, I believe my transactions are secured from unauthorized third party.
			When using Mobile Banking Service, I believe my privacy would not be revealed.

Table 4.10 Construct Results (cont.)

Compound Constructs	Cronbach's Alpha (α)	Number of items	Questions
			When using Mobile Banking Service, I believe the Mobile Banking Service is safe.
			Mobile Banking Service provides me a physical security. (No need to carry out cash to bank)
Perceived Convenience	0.967	4	Using Mobile Banking Service would save my time. (No need to go to ATM/Bank branch)
			I can access Mobile Banking Service anyplace.
			Mobile Banking Service offers 24 hours accessibility.
			Mobile Banking Service offers faster speed delivery when compares to other banking channels.
Perceived Ease of Use	0.867	4	I find Mobile Banking is easy to use.
			I think learning how to use Mobile Banking Service is easy for me.
			I think interaction with Mobile Banking is easy for me.
			I think it is time consuming to set up mobile banking.
Tradition	0.925	2	I prefer to visit bank branch when I need to do money transaction.
			I prefer to interact face-to-face with banks' teller more than doing money transaction via self-service machines. (ATM machine, Passbook Update machines, Cash Deposit Machine)

According to table 4.10, a construct item which has a Cronbach's alpha value more than 0.7 is considered to be accepted. The values of Cronbach's alpha were between 0.882 - 0.967. After measurement, the result came out as following: perceived Cheapness (0.882), Perceived Trust (0.934), Perceived Convenience (0.967), Perceived Ease of Use (0.867), and Tradition (0.925).

4.7 T-test between the means of the 2 samples for all 5 hypotheses

A t-test asks whether a difference between two groups' averages is unlikely to have occurred because of random chance in sample selection. In addition, it assesses whether the means of two groups are statistically different from each other. After took a look at table 4.11, the value of variance of each variable from F-Test revealed that there were statistically significant different between mobile banking users and non-users.

Table 4.11 T-Test Results

		Levene's Test for Equity of Variance		T-Test for Equity of Means					95% Confidence interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Cheapness	Equal Variance assumed	4.822	.031	10.340	78	.000	1.77500	.17167	1.43323	2.11677
	Equal variance not assumed			10.340	62.631	.000	1.77500	.17167	1.43190	2.11810
Trust	Equal Variance assumed	19.950	.000	13.331	78	.000	1.88500	.14140	1.60349	2.16652
	Equal variance not assumed			13.331	57.849	.000	1.88500	.14140	1.60194	2.16806
Convenience	Equal Variance assumed	.559	.457	22.155	78	.000	2.72500	.12300	2.48013	2.96987
	Equal variance not assumed			22.155	74.839	.000	2.72500	.12300	2.47997	2.97003
EaseOfUse	Equal Variance assumed	10.849	.001	18.820	78	.000	2.16250	.11490	1.93374	2.39126
	Equal variance not assumed			18.820	62.214	.000	2.16250	.11490	1.93262	2.39218
Tradition	Equal Variance assumed	4.286	.042	-14.054	78	.000	-2.27500	.16187	-2.59726	-1.95274
	Equal variance not assumed			-14.054	68.387	.000	-2.27500	.16187	-2.59797	-1.95203

4.8 In-depth interview Findings

In the first part of this chapter revealed the results of quantitative findings from 80 respondents who were mobile banking users and non-users through self-administered online surveys. In this part, the author would like to show the results from interviewing 20 respondents which divided into 10 mobile banking users and 10 mobile banking non-users.

4.8.1 Demographic profile of the respondents

The author chose to interview 20 respondents which 7 were male and 13 female which 3 male and 7 female belonged to mobile banking users group, while 4 male and 6 female belonged to mobile banking non-users group. The age range of mobile banking users were between 22 to 29 years old (7 respondents), and users age above 30 years old (3 respondents). In addition, mobile banking non-users were respondents age between 18 to 29 years old (1 respondents), and non-users age above 30 years old (9 respondents). For education level, 1 respondent graduated from high school. 10 respondents graduated in bachelor degree, and 9 respondents graduated in master degree. For monthly income of respondents of two groups was around 15,001 to 45,000 THB.

4.8.2 Findings on five research factors

Before the in-depth interview started, the author have checked the respondents' awareness towards mobile banking service, and it revealed that all 20 respondents knew what mobile banking was which accounted to be 100% awareness on mobile banking.

For mobile banking users' attitude towards mobile banking in Thailand, 70% of them mentioned about the convenience, time efficient, and its easiness of use. Moreover, one respondent said that this service was still in early stage and did not popular like in foreign countries, but she believed that this service will become popular in the near future. In addition, the most concerned factors that lead mobile banking users decided to use the service were the convenience and time efficient. Most of them knew the service from bank branch where bank's teller recommend them to use, and ads placed on internet. Some were recommended to use mobile

banking by friends. The popular banks among mobile banking users were Kasikorn Bank, Thai Military Bank, and Krungthai Bank. The money transactions that they often used were domestic money transfer followed by balance inquiry and bill payments.

On the contrary, mobile banking non-users think that mobile banking offered convenience to users, but they did not trust on this service even they knew how this service would make them more convenience on making money transactions. Some senior respondents said that this service suited the new generation more than senior people. The most concerned factors why they did not use mobile banking service were risk and untrustworthy service. The second concerned factor were they did not know how to use the service, and also no one recommend them about mobile banking. Two respondents said that it was not necessary for them to use mobile banking at the moment that's why they did not interested in this technology. About the willingness to try the service of non-users, haft of them said that they were willing to try the service. The reasons were it would offer convenience to their lives, but they were hesitate to use it now because of low trust level. Another haft of respondents said they did not want to try the service because they used to read the hacked news, and also afraid of losing cellphones so their banking data would be leaked.

4.8.2.1 Perceived Cheapness

In the perspective of users, more than half of respondents said that transaction fees of mobile banking service was cheaper than the fee that applied at bank branch.

"I think transaction fees of mobile banking is cheaper than bank branch."

"I think the fee applied to mobile banking is cheaper than the bank because I do not need to pay for additional transportation cost."

While few respondents did not care about the different of transaction fees because they said if it will be different, it would be just small amount different so they did not care much. In addition, one respondent mentioned on perceived cheapness that:

"It would be ok if mobile banking will charge the fee a bit higher. It is still acceptable because its convenience when compared to travel to the bank branch or finding ATM."

For non-users, most of the respondents' opinion towards perceived cheapness were mobile banking offered cheaper transaction fees than going to the bank branch. One respondent said that it would be good, if we can save some money like transportation cost when we need to go to bank, but those small amount of cost savings were insufficient for them in order to overcome the much more important lack of trust that would be clarify in the below point 4.8.2.2 Perceived Trust. While two respondents did not know whether the transaction fee was more expensive or inexpensive compared to the fee applied to the bank branch.

These results revealed that perceived cheapness has a positive effects on both groups of respondents so H1 is not supported. Both of them believe that using mobile banking was cheaper, but there was another factor involved in their decision making to consider adopt or not adopt mobile banking service which was Perceived trust. In addition, non-users lacked of trust in mobile banking service even though they could be able to save some money from using the service, but it was not overcome their distrust on the service.

4.8.2.2 Perceived Trust

For the mobile banking users' opinion, most of respondents trust in mobile banking service. This is one main factor that led them to continue using the service.

"I trust in mobile banking otherwise I will not continue using it [mobile banking]."

"I trust in the bank that offered me the service [mobile banking]."

"I am not afraid of hacking because mobile banking has dual security before making any money transaction."

In contrast, non-users have different point of view on this factor. They showed opposite side from users did. Trust seemed to be one of the

major factors that led them not to adopt mobile banking service. For instance, one participant mentioned on trust:

"I have to think hard before making the decision whether to use mobile banking or not."

"I think I will not use mobile banking service because my cousins were hacked through mobile banking."

"What I am going to do if I lose my cellphone, my banking data is there [cellphone]."

"I afraid that my banking details will be leaked"

The above results from both sides of perspective supported H2 that mobile banking non-users have lower trust towards mobile banking service than users. The reason was they were not trust on the service and afraid of losing their own cellphones so their banking data will be revealed to unauthorized third-party.

4.8.2.3 Perceived Convenience

From mobile banking users' attitude towards perceived convenience, all of them said that this service offered them convenience way of making money transactions unlike before.

"Since I use this service [mobile banking], my life becomes easier."

"Nowadays, I do not need to go to ATM or bank when I need to make money transfer."

"Absolutely yes! This service [mobile banking] offers me a lot more convenience to me."

"It is easier than go to the bank."

"I can do it [money transaction] anywhere and anytime I want."

On the contrary, most of mobile banking non-users knew that mobile banking offered convenience to users, but the problem was they still hesitated to adopt this service for making their money transactions.

"It [mobile banking] offers convenience to users, but if I really have to use it, let me think about it."

"It [mobile banking] is good because we no need to travel to the bank branch, but I think I do not need it now."

From above findings, it supported H3 that mobile banking non-users have lower convenience perceptions towards mobile banking service than users. Even non-users knew that this service offered convenience to them, but they denied to adopt it.

4.8.2.4 Perceived Ease of Use

Another factors that led users to make decision on using mobile banking service was Perceived ease of use. Form mobile banking users' perspective, most of them felt that mobile banking was easy for them to use because mobile banking itself was similar to an application on smartphones that was the reason why they felt it was not difficult to use.

"It [mobile banking] does not provide much functions so I feel it is easy to interact with."

"It [mobile banking] is clear and simple."

"For the first time, it [mobile banking] will be a bit confused, but after several usages, I feel it is very easy to use."

"If you use smartphone, mobile banking is not a problem to use. You will find it very easy to use."

On the contrary, all of mobile banking non-users who have no experienced about this service before felt that this service was very difficult to use. Because of the familiarity to the mobile banking service, and also application setting and its working process were major problems to them.

"I think it [mobile banking] is difficult to use."

"It [mobile banking] is difficult for unexperienced user like me"

"I think it [mobile banking] is complicated in setting before we can start using it."

"In my opinion, it [mobile banking] is difficult for people who are not get used to the technology."

From above findings, it supported H4 that mobile banking non-users have lower ease of use perceptions towards mobile banking service than

users did. The main barriers were the complicated application setting, and their difficulty feeling towards mobile banking service.

4.8.2.5 Tradition

The last factors was tradition to see whether respondents preferred to interact with banks' teller or not when they have to make money transactions. From mobile banking users' side, all of them preferred not to interact with banks' teller if not necessary since they have mobile banking except only for big issue, for example, open a new account, buying mutual fund, and edit the bank account.

"I do not like to go to the bank branch. I feel boring to wait in the long queue."

"Going to the bank branch is consuming my time a lot."

"I have to pay for additional transportation fee every time I go to the bank because it is far from my home."

"Mobile banking is enough for me to make money transaction."

On the other hand, mobile banking non-users had positive attitude towards interacting with banks' teller when they need to make any money transactions. Most of them preferred to go to the bank branch or used self-service machine provided by banks.

"Going to the bank branch is very accurate and no mistake."

"If I have to make big amount transfer, bank is the first thing I can think of"

"I afraid of data leaking. I am not dare to do it [money transaction] online so I prefer to go to the bank branch"

From those findings, it revealed that non-users have higher tradition perception in making financial transaction than users. As they preferred to interact with banks' teller than interfaced with mobile banking application. It supported H5 to be true.

4.8.3 Main problems perspective of mobile banking users and non-users towards Mobile banking service

Most of mobile banking users have not faced any big problems from using the service. There was only minor problem as one respondent mentioned as mobile banking allowed to use only 3G internet signal while Wi-Fi was limited to favorite account numbers. Another respondent said he faced the problem of mobile banking when the application was under construction so he could not use the service.

For mobile banking non-users, they mentioned lots of problem that would occur if they use mobile banking. The major problem was about security and trust on the service. In addition, less knowledge and not understand about the service was the second place. Third, bad internet signal while using mobile banking service. They afraid that all processing function would be cancelled because of bad internet signal of their cellphones. Fourth, it was hacked problem and unauthorized third party involved. Last, it was from the application interface. They mentioned that mobile banking application for them seem to be difficult to use.

4.9 Result of Hypotheses Testing

After running several analysis methods: the mean scores, Cronbach's Alpha (α), and T-Test, the author would like to conclude the all of five hypotheses testing of the study into table so it would give a clear picture of which variable was significant and which were not significant to adopt mobile banking service for 100 respondents.

Table 4.12 Result of Hypotheses Testing

Hypotheses	Statement	Research Methodology	
		Self-administered online survey	In-depth Interview
H1	Non-users have higher cost perceptions towards mobile banking service than users.	Yes	*Not Supported* - Both groups had positive attitude towards Perceived Cheapness - For non-users, small money savings did not overcome the distrustful service of non-users
H2	Non-users have lower trust towards mobile banking service than users.	Yes	*Supported* - One major factors of service hesitation - Distrust in the service - Afraid of cellphone losing - Afraid banking data leaked to unauthorized third-party.
H3	Non-users have lower convenience perceptions towards mobile banking service than users.	Yes	*Supported* - One main reasons not to adopt ….. - knew that mobile banking offered convenience, but still hesitated to adopt - Not necessary to use it now
H4	Non-users have lower ease of use perceptions towards mobile banking service than users.	Yes	*Supported* - Very difficult to use - the familiarity to the mobile banking service - Complicated application setting - its working process - Not suit people who are not get used to technology
H5	Non-users have higher tradition perceptions in making financial transaction than users.	Yes	*Supported* - Positive attitude towards MBS - Prefers to interacting with banks' teller - Bank branch is more accurate and no mistake

After running quantitative and qualitative research methods, in table 4.12, we could see that only four factors were significant to mobile banking usage intention: Perceived Trust, Perceived Convenience, Perceived Ease of Use, and Tradition. For Perceived Cheapness, both groups were believed that the transaction fees of mobile banking service was cheaper than going to the bank branch, but the small amount of savings could not overcome the distrust that's why this factor was not significant for them in order to adopt the service.

CHAPTER V

DISCUSSION AND CONCLUSION

This chapter discusses the findings after passed several research methodologies. It composes of seven parts; Demographic Profile Summary, General information on Mobile Banking Service on Users Summary, Area of Development on Scales, Hypotheses Summary, Discussion and Conclusion, Limitation, Recommendations and Practical Implications.

5.1 Demographic Profile Summary

The data of the study was collected by using online questionnaire and paper-based questionnaire. The total sample size of this study was 80 respondents which consisted of 35 male respondents and 45 female respondents. The author divided respondents into two groups: mobile banking users (50%) and non-users 50%). 55% of users group were female while 45% were male. For non-users group had 42.50% of male, and 57.50% of female. The author found out that 32.50% of users aged between 22 – 25 years old, and above 45 years old (22.50%) for non-users. For the educational level of users, the results revealed that 52.50% held Master's Degree. Meanwhile, 60% of non-users held bachelor's degree. In addition, the monthly income of users' respondents were between 25,001 – 35,000 THB (25%). Around 35% of them were employed by private organization. For non-users, they have monthly income around 35,001 – 45,000 THB (30%), and 25% of them were employed by the government sector and the private organization.

5.2 General information on Mobile Banking Service on Users Summary

47% of mobile banking users answered that banks were the channel where they knew this service from, while the popular banks among mobile banking users was Kasikorn Bank (41.50%). Users mostly spent one time per week on the service usage (52.50%). Almost 40% of service usage was for domestic money transferred.

5.3 Area of Development on Scales

5.3.1 Analysis of the Measurement Model

After the author conducted Analysis of the measurement model, there has no items in the study were deleted as they all relevant to measure on each compound construct as below;

Perceived financial cost	-	No item deleted
Perceived Trust	-	No item deleted
Perceived Convenience	-	No item deleted
Perceived Ease of Use	-	No item deleted
Tradition	-	No item deleted

5.3.2 Reliability Analysis Discussion

According to a Cronbach's alpha value of the construct, from the measurement, all constructs have Cronbach's alpha, $\alpha \geq 0.9$ which showed excellent results and acceptable to measure in this study.

5.4 Hypotheses Summary

In this study, Cronbach Alpha (α), and T-Test method was used to test the hypotheses to describe the relationship among variable.

Table 5.1 Summary of Hypotheses Testing

Hypotheses	Test Result
H1: Non-users have higher cost perceptions towards mobile banking service than users.	Supported
H2: Non-users have lower trust towards mobile banking service than users.	Supported
H3: Non-users have lower convenience perceptions towards mobile banking service than users.	Supported
H4: Non-users have lower ease of use perceptions towards mobile banking service than users.	Supported
H5: Non-users have higher tradition perceptions in making financial transaction than users.	Supported

5.5 Discussion and Conclusion

The results of the analysis indicated the five factors which had effects on usage intention towards mobile banking usage: Perceived Trust, Perceived Convenience, Perceived Ease of Use, and Tradition.

Perceived Cheapness was a factor that significant to the respondents. Both group of respondents perceived that using mobile banking is cheaper than going to the bank branch. Users perceived that the transaction fee of mobile banking was cheaper than the fee applied at bank branch. While some did not care much because it would be just small amount different. For non-user respondents, they emphasized that mobile banking might offered cheaper transaction fees than going to the bank branch. In addition, mobile banking would help to save additional transportation cost when they need to go to the bank branch, but anyway the distrust on mobile banking service was not overcome those small savings.

Perceived Trust played a strong role in their intention to use the service For mobile banking users, respondents emphasized on trust level of mobile banking service that they used. Because of trustworthy that they have towards the service, it kept them continue using the service. Meanwhile, non-users have

different point of view on this factor, and this factor seem to be one major barriers that led them hesitate to adopt the service.

Perceived Convenience also another major factor that has a significant influence on mobile banking usage intention. Respondents emphasized that this service offered them convenience when they need to make money transactions unlike in the old day that we have to go to bank only. On the contrary, non-user respondents have lower convenience perceptions towards mobile banking than users did. Even though they knew that mobile banking service offered convenience, but they were hesitate to adopt this service.

In addition, Perceived ease of use has a significant effect on mobile banking's usage intention. For user respondents, they mentioned that mobile banking was easy to use and interact with. In their opinion, mobile banking was similar to an application on smartphones, and it was clear and simple to use. Meanwhile, for non-user respondents felt that mobile banking was difficult to use because of the familiarity to the application, and unexperienced with the service.

Lastly, tradition has significant effect on usage intention towards mobile banking. For user respondents, they preferred to interact with banking application than banks' teller at the bank branch. As they mentioned that going to the bank branch consuming their time, and felt bored when waiting for long queue. Meanwhile, non-users respondents preferred to go to the bank branch because they emphasized that making money transaction at the bank branch was more accurate and they did not need to face the mistake. Moreover, non-users respondents afraid of banking data leaking to unauthorized-third party so they would like to play safe by avoiding to use the service.

After the findings of both research methods came out, the author found out that there were not only five factors; Perceived Cheapness, Perceived Trust, Perceived Convenience, Perceived Ease of Use, and Tradition that were potential reasons to adopt mobile banking for mobile banking users and non-users. They might be another potential reasons for the adaptation, for example, Information Quality, Age, Image, etc. would be involved to consider adopt or hesitate the service. Because, sometimes customers did not even know or experienced the service, but they heard from someone or read from somewhere then they created

the barriers to prevent themselves from those uncertain things. In addition, this kind of negative attitude was difficult to change to be positive if we did not know the exact ways of how to dig up those negative attitude and clarify it.

5.6 Limitation

This study was conducted in the capital city of Thailand, Bangkok so that the result did not come from people's attitudes towards mobile banking usage throughout Thailand.

Second limitation was the small quantity of sample size of the study's respondents. They were Thais who either was mobile banking users or non-users.

Last limitation was the respondents' age range because majority of this study were mature respondents age between 22-33 years old so results were not diversified

5.7 Recommendations and Practical Implications

The pros of studying on the factors which affect Thai's people attitude towards mobile banking usage is to acknowledge both mobile banking users and non-users' behavior because nowadays technology keeps developing every second.

5.7.1 Recommendations for Banks and related business sectors

As Perc eived trust and ease of use is the big barriers that lead people hesitate to try mobile banking service. Therefore, this study contributes to provide the useful information to banks and other related business sectors as a guideline to build the trust to make people feel safe to use.

First, the research suggests that the banks should target on well-educated customers age between 22 – 33 years old because they are likely to familiar and easy to adopt new technology.

Second, banks can cooperate with other related business sectors like tutor schools, mobile phone operators, etc. to set up promotional discount for

clients who use mobile banking to pay bills or course fees so it can motivate them to have positive attitude towards mobile banking usage.

Last, banks can set up a helpdesk inside the bank in order to give potential clients or even current clients to have more real knowledge and understanding about mobile banking service. Also, helpdesk can show evidence of how the service trustable and easy to use. So, it will erases their negative attitudes towards mobile banking little by little until it becomes positive one.

5.8 Recommendations for Further Research

This research explored about five factors: Perceived cheapness, Perceived trust, Perceived convenience, Perceived ease of use, and Tradition that affect Thai people's attitude towards mobile banking usage. So, further research can add more potential factors that may affect their behavior and attitudes. The research has a limitation in terms of age range as the majority of respondents were mature people age between 22 – 29 years old. Therefore, future research may pay more attention to the age distribution, and might compare between young teenagers, and working people.

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APPENDICES

APPENDIX A: Questionnaire (Thai Version)

เรียน ผู้ตอบแบบสอบถาม

แบบสอบถามนี้เป็นส่วนหนึ่งของการศึกษาวิจัยในระดับปริญญาโท สาขาการการจัดการความเป็นผู้ประกอบการ วิทยาลัยการจัดการ มหาวิทยาลัยมหิดล เพื่อศึกษาเกี่ยวกับปัจจัยที่มีผลต่อการใช้งานบริการธนาคารทางมือถือ หรือ บริการโมบายแบงกิ้งค์ ดังนั้นจึงขอใคร่ขอความร่วมมือของท่านในการตอบคำถาม โดยพิจารณาเลือกคำตอบ ที่ตรงกับท่านมากที่สุด ซึ่งข้อมูลที่ได้รับจากท่านจะถูกเก็บเป็นความลับและใช้เพื่อการศึกษาวิจัยเท่านั้น

แบบสอบถาม

PART A: การตรวจสอบการรับรู้บริการธนาคารทางมือถือ หรือ บริการโมบายแบงกิ้งค์

1. **คุณเคยได้ยินเกี่ยวกับ "บริการธนาคารทางมือถือ หรือ บริการโมบายแบงกิ้งค์" บ้างหรือไม่**

( )   เคยได้ยิน

( )   ไม่เคยได้ยิน   (กรุณาคืนแบบสอบถาม)

2. **คุณเคยใช้บริการธนาคารทางมือถือ หรือ บริการโมบายแบงกิ้งค์" หรือไม่**

( )   เคยใช้บริการ   (กรุณาทำแบบสอบถามทั้งหมด

( )   ไม่เคยใช้บริการ   (กรุณาทำแบบสอบถาม *ตั้งแต่* **PART C:** การรับรู้ด้านค่าบริการต่อการใช้

บริการธนาคารทางมือถือ *จนถึง* **PART H:** ข้อมูลทั่วไปของผู้ใช้งานบริการ

ธนาคารทางมือถือ

แบบสอบถามสำหรับผู้ใช้งานบริการธนาคารทางมือถือ

PART B: ข้อมูลทั่วไปของผู้ใช้งานบริการธนาคารทางมือถือ

3. **คุณรู้จักบริการธนาคารทางมือถือจากที่ใด**

( )   สื่อต่างๆ   (ทีวี, วิทยุ, หนังสือพิมพ์)

( )   ธนาคาร

( )   ข้อความ SMS จากธนาคาร

( )   เพื่อน หรือ ครอบครัว

( )   อื่นๆ (โปรดระบุ)…………………………………..

4. **คุณใช้บริการธนาคารทางมือถือ ของธนาคารใดบ้าง (เลือกได้มากกว่า 1 ข้อ)**

( )   ธนาคารกรุงเทพ

( )   ธนาคารกรุงศรีอยุธยา

( )   ธนาคารกสิกรไทย

( )   ธนาคารทหารไทย

( )   ธนาคารไทยพาณิชย์

( )   อื่นๆ (โปรดระบุ) …………………………………………..

5.   **คุณใช้บริการธนาคารทางมือถือ บ่อยแค่ไหน**

( )   1 ครั้ง ต่อ สัปดาห์

( )   2 ครั้ง ต่อ สัปดาห์

( )   3 ครั้ง ต่อ สัปดาห์

( )   มากกว่า 4 ครั้ง ต่อ สัปดาห์   *(โปรดระบุ .... ครั้ง ต่อ สัปดาห์)*

6.   คุณใช้บริการธนาคารทางมือถือครั้งล่าสุด เพื่อธุรกรรมทางการเงินด้านอะไร

( )   เช็คยอดเงินในบัญชี

( )   โอนเงิน   (ภายในประเทศ)

( )   โอนเงิน   (ต่างประเทศ)

( )   จ่ายบิล

( )   เติมเงิน   (โทรศัพท์, เกมส์, อื่นๆ)

( )   เช็คอัตราแลกเปลี่ยน

( )   อื่นๆ (โปรดระบุ) ……………………………………………………

กรุณาทำเครื่องหมาย √ ลงในช่องตามระดับที่ตรงกับความเห็นของท่าน เมื่อนึกถึงปัจจัยที่มีผลต่อ

การใช้บริการธนาคารทางมือถือ   1– *ไม่เห็นด้วยอย่างยิ่ง*   5 – *เห็นด้วยอย่างยิ่ง*

ข้อ	ปัจจัยต่อการตัดสินใจ	ไม่เห็นด้วยอย่างยิ่ง				เห็นด้วยอย่างยิ่ง
		1	2	3	4	5
7.	ฉันคิดว่าการใช้บริการธนาคารทางมือถือ *ถูกกว่า* เมื่อเปรียบเทียบกับช่องทางอื่นๆของธนาคาร					
8.	ฉันคิดว่าค่าธรรมเนียมของการใช้บริการธนาคารทางมือถือ *ถูกกว่า* เมื่อเปรียบเทียบกับช่องทางอื่นๆของธนาคาร					

PART C: การรับรู้ด้านค่าบริการต่อการใช้บริการธนาคารทางมือถือ (spanning the above table header)

PART D:
การรับรู้ด้านความน่าเชื่อถือต่อการใช้บริการธนาคารทางมือถือ

ข้อ						
9.	เมื่อใช้บริการธนาคารทางมือถือ ฉันเชื่อว่าข้อมูลของฉันจะถูกเก็บเป็นความลับ					
					กรุณาพลิกหน้าถัดไป	

ข้อ	ปัจจัยต่อการตัดสินใจ	ไม่เห็นด้วย อย่างยิ่ง				เห็นด้วย อย่างยิ่ง
		1	2	3	4	5
PART D: การรับรู้ด้านความน่าเชื่อถือต่อการใช้บริการธนาคารทางมือถือ (ต่อ)						
10.	เมื่อใช้บริการธนาคารทางมือถือ ฉันเชื่อว่าธุรกรรมทางการเงินที่ฉันทำปลอดภัยจากบุคคลที่ 3					
11.	เมื่อใช้บริการธนาคารทางมือถือ ฉันเชื่อว่าความเป็นส่วนตัวของฉันจะไม่ถูกเปิดเผย					
12.	เมื่อใช้บริการธนาคารทางมือถือ ฉันเชื่อว่าบริการธนาคารทางมือถือปลอดภัย					
13.	บริการธนาคารทางมือถือ ให้ความปลอดภัยทางด้านกายภาพ แก่ฉัน (ไม่จำเป็นต้องถือเงินไปที่ธนาคาร)					
PART E: การรับรู้ด้านความสะดวกสบายต่อการใช้บริการธนาคารทางมือถือ						
14.	การใช้บริการธนาคารทางมือถือ ช่วยฉันประหยัดเวลา (ไม่จำเป็นต้องไปที่ธนาคาร หรือ ตู้ ATM เพื่อทำธุรกรรม)					
15.	ฉันสามารถเข้าถึงบริการธนาคารทางมือถือ ได้ทุกที่ที่ฉันต้องการ					
16.	บริการธนาคารทางมือถือ สามารถเข้าถึงได้ตลอด 24 ชั่วโมง					
17.	บริการธนาคารทางมือถือ เร็วกว่า เมื่อเปรียบเทียบกับช่องทางอื่นๆของธนาคาร					
PART F: การรับรู้ด้านการใช้งานต่อการใช้บริการธนาคารทางมือถือ						
18.	ฉันคิดว่าบริการธนาคารทางมือถือ ใช้งานง่าย					
19.	ฉันคิดว่า การเรียนรู้การใช้งานธนาคารทางมือถือ ง่ายสำหรับฉัน					
20.	ฉันคิดว่า การปฏิสัมพันธ์กับแอพพลิเคชั่นธนาคารทางมือถือ ง่ายสำหรับฉัน					

ข้อ	ปัจจัยต่อการตัดสินใจ	ไม่เห็นด้วยอย่างยิ่ง				เห็นด้วยอย่างยิ่ง
		1	2	3	4	5
PART F: การรับรู้ด้านการใช้งานต่อการใช้บริการธนาคารทางมือถือ (ต่อ)						
21.	ฉันคิดว่า การติดตั้งแอพพลิเคชั่นธนาคารทางมือถือ ใช้เวลานาน					
PART G: การใช้บริการทางธนาคารแบบดั้งเดิมและทัศนคติต่อการใช้บริการธนาคารทางมือถือ						
22.	เมื่อฉันต้องการทำธุรกรรมทางการเงินใดๆก็ตาม ฉันชอบที่จะไปที่สาขาของธนาคาร					
23.	ฉันชอบการปฏิสัมพันธ์กับเจ้าหน้าที่ธนาคาร *มากกว่า* การทำธุรกรรมทางการเงินผ่านเครื่องอัตโนมัติ เช่น ATM, เครื่องปรับสมุด, เครื่องฝากเงิน					

PART H: ข้อมูลทั่วไปของผู้ใช้งานบริการธนาคารทางมือถือ

เพศ

( ) ชาย   ( ) หญิง

อายุ

( ) 15 – 17 ปี   ( ) 18 – 21 ปี   ( ) 22 – 25 ปี

( ) 26 – 29 ปี   ( ) 30 – 33 ปี   ( ) 34 – 37 ปี

( ) 38 – 41 ปี   ( ) 42 – 45 ปี   ( ) มากกว่า 45 ปี

ระดับการศึกษาสูงสุด

( ) ประถมศึกษา   ( ) มัธยมศึกษาตอนต้น   ( ) มัธยมศึกษาตอนปลาย

( ) ปริญญาตรี   ( ) ปริญญาโท   ( ) ปริญญาเอก

สถานะภาพการทำงาน

( ) นักเรียน นักศึกษา   ( ) เจ้าของกิจการ

( ) ข้าราชการ   ( ) พนักงานรัฐวิสาหกิจ

( ) เกษียณอายุ   ( ) ว่างงาน

( ) อื่นๆ (โปรดระบุ) ……………………………………………………..

รายได้เฉลี่ยต่อเดือน

( ) ต่ำกว่า 15,000 บาท   ( ) 15,001 – 25,000 บาท

( ) 25,001 – 35,000 บาท   ( ) 35,001 – 45,000 บาท

( ) 45,001 – 55,000 บาท   ( ) 55,001 – 65,000 บาท

( ) มากกว่า 65,000 บาท

ขอบพระคุณที่ให้ความร่วมมือในการตอบแบบสอบถาม

APPENDIX B: Questionnaire (English Version)

Mahidol University
College of Management

Mahidol University
College of Management

Dear Sir/Madam,

My name is Kesara Supornsinchai, a Master's student majoring in Entrepreneurship Management (EN) at College of Management, Mahidol University, Thailand. As a part of my research project, I am conducting a survey about motivation towards mobile banking usage. Please completely answer the following questions relevant to you. The information sought within this questionnaire will be treated as extremely confidential, and will be used only for the purpose of academic research. Your kind assistance and cooperation is very important. Thank you very much for your time. I really appreciate it.

QUESTIONAIRE

PART A: Mobile Banking Service's Awareness checking

1.   Have you ever *heard* about "*Mobile Banking Service*"?

(   )   Yes.

(   )   No.   (Kindly return the questionnaire. Thank you.)

2.   Have you ever *used* Mobile Banking Service?

(   )   Yes.   (Kindly continue with **Question number 3 and the rest**)

(   )   No.   (Kindly continue on **Part C: Perceived Cheapness towards Mobile Banking Usage, and the rest**)

QUESTIONAIRE PARTS FOR MOBILE BANKING *USERS*

PART B: General information on Mobile Banking Service – Users

3.   Where did you hear about Mobile Banking services?

(   )   Mass media (television, radio, newspaper)

(   )   Banks

(   )   SMS from bank

(   )   Friends or Family

(   )   Others (Please specify) ……………………………

4.   Which bank(s) do you use for your mobile banking service?

(   )   Bangkok Bank

(   )   Bank of Ayudhya (Krungsri Bank)

(   )   Kasikorn Bank (K-Bank

(   )   Thai Military Bank (TMB)

(   )   Siam Commercial Bank (SCB)

(   )   Others (Please specify) ……………………………

5.   How often do you use Mobile Banking Service?

(   )   1 time per week

(   )   2 times per week

(   )   3 times per week

(   )   More than 4 times per week *(please specify the time)* ………. *Times per week.*

6.   What type of Mobile Banking transaction do you currently make?

(You can answer more than one answer)

(   )   Balance inquiry / Bank statement

(   )   Money Transfer (Domestic)

(   )   International Remittance (transfer)

(   )   Bill payment

(   )   Top-up

(   )   Exchange Rate Checking

( )   Others (Please specify) …………………………………………

Please tick (√) to what extent you agree or disagree that the following items are important when thinking about motivation factors toward Mobile Banking Usage.

Please be informed that   *1* – **Strongly Disagree**
                                5 – **Strongly Agree**

No.	Factors to Consider	Strongly Disagree				Strongly Agree
		1	**2**	**3**	**4**	**5**
PART C: Perceived Cheapness towards Mobile Banking Usage						
7.	I think Mobile Banking Service is cheaper to use when compares to other banking channels.					
8.	I think the transaction fees are cheaper when comparing to other banking channels.					
PART D: Perceived Trust towards Mobile Banking Usage						
9.	When using Mobile Banking Service, I believe my information is confidentially kept.					
10.	When using Mobile Banking Service, I believe my transactions are secured from unauthorized third party.					
11.	When using Mobile Banking Service, I believe my privacy would not be revealed.					
12.	When using Mobile Banking Service, I believe the Mobile Banking Service is safe.					
13.	Mobile Banking Service provides me a physical security. (No need to carry out cash to bank)					
PART E: Perceived Convenience towards Mobile Banking Usage						
14.	Using Mobile Banking Service would save my time. (No need to go to ATM/Bank branch)					

No.	Factors to Consider	Strongly Disagree				Strongly Agree
		1	2	3	4	5
PART E: Perceived Convenience towards Mobile Banking Usage (cont.)						
15.	I can access Mobile Banking Service anyplace.					
16.	Mobile Banking Service offers 24 hours accessibility.					
17.	Mobile Banking Service offers faster speed delivery when compares to other banking channels.					
PART F: Perceived Ease of Use towards Mobile Banking Usage						
18.	I find Mobile Banking is easy to use.					
19.	I think learning how to use Mobile Banking Service is easy for me.					
20.	I think interaction with Mobile Banking is easy for me.					
21.	I think it is time consuming to set up mobile banking.					
PART G: Tradition towards Mobile Banking Usage						
22.	I prefer to visit bank branch when I need to do money transaction.					
23.	I prefer to interact face-to-face with banks' teller more than doing money transaction via self-service machines. (ATM machine, Passbook Update machines, Cash Deposit Machine)					

PART H: Demographic Profile

Gender

( )   Male   ( )   Female

Age

( )   15 – 17 years   ( )   18 – 21 years   ( )   22 – 25 years

( )   26 – 29 years   ( )   30 – 33 years   ( )   34 – 37 years

( )   38 – 41 years   ( )   42 – 45 years   ( )   Above 45 years

Educational Level

( )   Primary School   ( )   Secondary School   ( )   High School

( )   Bachelor's degree   ( )   Master's degree   ( )   Doctor's degree

Current Employment Status

( )   Full-time student   ( )   Business owner

( )   Government employee   ( )   Private organization employee

( )   Retired   ( )   Unemployed

( )   Others (Please specify) ………………………………………………….

Monthly Income

( )   Below 15,000 THB   ( )   15,001 – 25,000 THB

( )   25,001 – 35,000 THB   ( )   35,001 – 45,000 THB

( )   45,001 – 55,000 THB   ( )   55,001 – 65,000 THB

( )   Above 65,000 THB

Thank you for your participation in our survey.

We really appreciate it.