Factors Influencing Thai People to Use Internet Banking Application: The Case Study Of Thai People In Bangkok

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Abstract

Nowadays most customers need convenient service for themselves. Many businesses expand through online channel and there are a lot of money transfers between consumer to business, and business to business. The bank gives the most important service to customers to transfer and deposit and withdraw the money. Internet banking is the very successful channel for the customer to save the time to do bank activities. Customers can check the transfer of the money in their mobile banking application instead of going to the bank and uploading the real time money in the bank book. Internet banking can give customers benefit to pay all their bills through the application instead of going to each of other service center. Therefore, this research has been conducted to investigate factors influencing the customers use of internet banking in Bangkok, Thailand. It proposes to validate the integrated model among perceived usefulness, perceived ease of use, trust, and intention to use. The data was collected by questionnaire. This research applied 300 respondents who live in Bangkok and have been experienced using internet banking by using a convenience sampling technique. Confirmatory Factor Analysis (CFA(and Structural Equation Model (SEM) was used to verify the validity and reliability of the model and examine the influence among variables. The research results show that perceived usefulness, perceived ease of use, and trust have directly significant influence on intention to use. Consequently, Internet banking was efficient and easy to use and gives customers good feedback on the application.

***Keywords*:** internet banking, perceived usefulness, perceived ease of use, trust, intention to use

Introduction

The growth of population in Thailand who use internet banking has increased significantly. It has become a part of everyday life in nowadays. Many people have changed to use interbanking on their daily activities such as bill payment, transfer money , etc. Before customers need to go to the bank or atm, but nowadays customers can do these activities anywhere on their mobile application. There are highly competitive in the banking industry, to survive in this banking market need to provide they a high customer service (Mefford, 1993). In Thailand many banks provide internet banking and they are highly competitive in their application as well. The best bank which provides the best application must have many features in their application and make a easiest way for customers to use. Internet banking to give a bank service to people by the internet platform (chi et al., 2007). Internet banking gives flexibility to their customers to do their banking service via their mobile phone and give more advantage to customers. Most internet banking will have many other partners with them which will give the bank's customer more benefit. Most of the benefit and discount will create awareness to their customer by the application , so the customer doesn't need to check in the mail to find what benefit their get.

Literature Review

Perceived usefulness

The perception of the usefulness of internet banking can influence user's satisfaction which can lead to customer intention to use (Ackerman and Halverson, 1998). Perception of usefulness is the main factor that lead customer attitude toward action to use internet banking (Chen 2002). In Thailand internet banking is very useful because there are many features on their application. Customer also can make their easily instead of going to the bank.

Perceived ease of use

Perception of ease of use is a very important factor to the system of internet banking since there are more individuals using the technology and interact with IT (Agarwal, 2000). PEOU are the natural human's beliefs that are influential in determining their intention to adopt a particular technology (Moore and Benbasat, 1991; Venkatesh and Davis, 1996; Yousafzai et al., 2007).For internet banking, Perceived ease of use is acknowledged as how easy that customers can access the application (Cheema, Rizwan, Jalal, Durrani, & Sohail, 2013).

Trust

Moorman and Miner (1997) define trust is wishing to believe another who are reliable. When individuals have a trust towards another, they expect to behave in a responsible manner

with not taking advantage in return (Gefen 2003). Internet banking must create trust toward customers, to keep their loyalty. Consumer will gain trust and using the internet banking when they feel safe and feel comfortable. Customers believe that they can gain advantage by using internet banking and its feature , which create trust toward customers.

Intention to use

Intention to use refer to the continued intention to use internet banking and its application (Ajzen & Fishbein, 1975). The TAM posits that two beliefs, the perceived usefulness and perceived ease of use are major determinants of the user's intention to use IT (Davis, 1989). Intention to use to predict with customer engagement on internet banking.

Research Framework and Methodology

Research Framework

The conceptual framework is constructed using theoretical frameworks related to this research. It is adopted from the theoretical framework of the study of Malay, Chinese and Internet banking (Khalil, Md Nor, Janejira Sutanonpaiboon, Nor Hamimah Mastor, 2010) which aims to study factors perceived usefulness, perceived ease of use , trust influencing to intention to use internet banking in Malay and China. This research composed of perceived usefulness (PU) , perceived ease of use (PEOU), Trust (T) , influence on intention to use (IU). Then, we aim to study about internet banking using in Thailand.

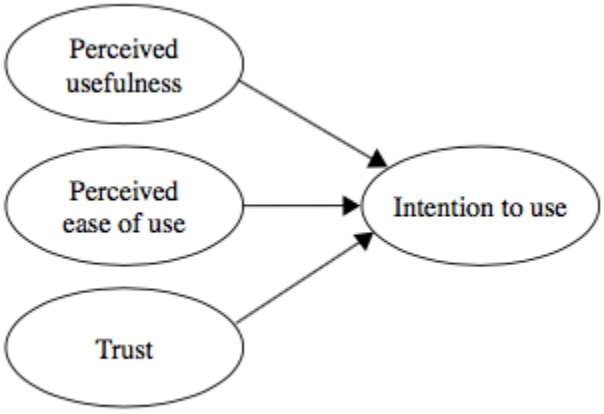

Figure 1: Conceptual Framework

The hypotheses are constructed to align with the conceptual framework as follows:

Table 1:
Defined Hypotheses

H	Hypotheses
H1	Perceived Usefulness (PU) has significant direct influence on Intention to use (IU)
H2	Perceived ease of use (PEOU) has significant direct influence on Intention to use (IU)
H3	Trust (T) has significant direct influence on Intention to use (IU)

Research Methodology

This research was carried out by conducting a quantitative analysis for Thai people and internet banking for people living in Bangkok through a survey method. A sample size of 40 respondents were used for pilot test and 300 for actual study. The survey was conducted in the form of online questionnaire (Google Forms) to collect data. Sampling method for data collection used are the convenience and snowball sampling techniques. The survey was mainly distributed on social media platforms via Facebook and Line. The survey has three parts which is screening questions, a five- points Likert scale questions and demographic questions. The screening questions were used to group respondents who are Thai people that live in Bangkok and have used internet banking before. The second part was to measure a difference of four variables on a five- points Likert scale. A five-point Likert scale was used to check over all assumption by differentiated ranging from strongly disagree (1) to strongly agree (5). The third part was the statistic factors were appointed to gather the respondent's private information such as gender, age, and occupation.

The question form was first given to the 40 respondents to be the pilot group checking the reliability of the variable via online channels. Cronbach's alpha analysis is being used for the reliability test. After analysis reliability test, implement and modify version of the questionnaire was distributed to gather the valid 388 respondents of target group via online channels. The collected information was audited by using SPSS 24 and AMOS 18.0. The Confirmatory Factor Analysis (CFA) was used for the checking results to confirm the data fit with the conceptual framework in this research. The measurement model fit was evaluated to test the overall fit with the data and guarantee the believability and reliability of the model. Finally, the Structural Equation Model (SEM) was applied to test the influences between the variables.

Population and Sample Size

The target population of this research is Thai people who live in Bangkok and have used internet banking. The researcher focuses on this target group because the age of 20-40 is generation Y who mostly used internet banking in their daily life activity.

The sample size is calculated by structural equation model (SEM). The sample size and number of factors should be considered before analysis the results. More number of variables, more sample size will increase. The appropriate sample size is minimum 300 respondents with 4 variables and lower communalities; below 0.45 (Hair, Black, Babin, & Anderson, 2010). The total number of respondents who participated in the survey were 388 from various demographic background profile. After screening all the survey, there are a total of 300 respondents that qualified for continue using in this study.

Sampling Technique

The online survey was given on non-probability sampling method using convenience sampling to collect data from the target respondents who is Thai people that live in Bangkok that using the internet banking. This is the target population as a basis of questionnaire distribution using online channels to collect data from respondents. The questionnaires were delivered to the people basically through the online channels to people in Bangkok area randomly by the researcher's contact on each platform such as Facebook, Email and Line. After that, those target respondents will forward the questionnaires to their friends, family, or colleagues who also have the required characteristics to be target respondents.

Pilot Test

Cronbach's Alpha Coefficient is used to check over the reliability level of each data in pilot test included in the questionnaire. The reliability test was executed at the pilot test when number of respondents reached 40 people. The researcher used SPSS program to find the reliability test and found that all the variables got the higher value than 0.70 that is considered as acceptable and determined the high reliability of the data (Tavakol & Dennish, 2011) Reference to Table 2, the Cronbach's Alpha Coefficient falls in range between 0.808 to 0.942 which is greater than 0.7. Therefore, this implies that the questionnaires developed for this study is achieved the standard required for reliability test.

Table 2
Cronbach's Alpha results

Variables	Number of Items	Cronbach's Alpha
Perceived Usefulness (PE)	5	0.926
Perceived Ease of Use (PEOU)	5	0.923
TRUST (T)	5	0.906
Intention to USE (IU)	5	0.928

Result and Discussion

Demographic Profile

This is the demographic of 300 respondents who live in Thailand and are using internet banking. There are 63.7% or 191 male and 36.3% or 109 females in the demographic screening question. There are 34.7% of the respondents ages between 20-30 years old , 21% are 31-40 years old , 21.7% are 41-50 years old, 14.6% are 51-60 years old and lastly 8% are 60 years old and above.

Table 3
Demographic Data

Demographics and Behavior Data (N=300)		Frequency	Percentage
Gender	Male Female	191 109	63.7% 36.3%
Age	20-30 years old 31-40 years old 41-50 years old 51-60 years old 60years old and above	104 63 65 44 24	34.7% 21% 21.7% 14.6% 8%
Experienced using internet banking	Yes No	300 0	100% 0%

Confirmatory Factor Analysis (CFA)

CFA has provided a certification test how the data fits with the conceptual model in this research. CFA can audit the result of the factor loading, composite reliability (CR), and average variance extracted (AVE). The composite reliability (CR) should be above 0.7 and the average variance extracted (AVE) that used for convergent validity should be above 0.5 (Hair et al, 2010). The results of composite reliability (CR) and the average variance extracted (AVE) were above 0.7 and 0.5 as shown in Table 4

The discriminant validity is used to test between variables by calculating the square root of the average variance extracted (AVE). An individual's variables normally should be greater than the covariant relation between the variables in the model. This can be confirmed that Table 5 indicated the correlation coefficients between two variables are smaller than the AVE square roots of the measurement variables of the constructs.

The confirmatory factor analysis demonstrated a reasonable fit of data to the six-variables measurement model as illustrated in Table 6. All indices were greater than the suggesting of criteria that indicated a good acceptable model fit between the data and theoretical model of this study.

Table 4
Confirmatory factor analysis result, Composite Reliability (CR) and Average Variance Extracted (AVE)

Variable	Factor Loading	S.E.	T-value	CR	AVE
Perceived Usefulness (PU)				0.879	0.593
PU1	.820				
PU2	.881	.060	17.049***		
PU3	.906	.054	19.202***		
PU4	.777	.057	19.971***		
PU5	.828	.060	17.241***		
Perceived Ease of Use (PEOU)				0.923	0.706
PEOU1	.826	.061			
PEOU2	.857	.060	16.669		

PEOU3	.847	.060	17.533***		
PEOU4	.861	.057	17.243***		
PEOU5	.810	-	17.707***		
TRUST(T)				0.899	0.642
T1	.679	0.57	13.273***		
T2	.829	0.51	18.479***		
T3	.754	0.55	15.749***		
T4	.846	0.52	19.095***		
T5	.882	-			
Intention to Use (IU)				0.920	0.698
IU1	.837	-			
IU2	.833	0.49	20.892***		
IU3	.828	.056	17.108***		
IU4	.863	0.55	18.023***		
IU5	.815	0.58	16.514***		

*Remark : CR = Composite Reliability, AVE = Average Variance Extracted*** = Significant at the 0.05 significant levels (p<0.05)*

Table 5
Discriminant validity

	PU	PEOU	TRUST	IU
PU	**0.844**			
PEOU	.727	**0.840**		
TRUST	0.529	0.595	**0.801**	
IU	0.733	0.665	0.595	**0.835**

Remark : The diagonally listed values are the AVE square roots of the variables

Table 6
Goodness of Fit

INDEX	Criteria	Result of this study
CMIN/DF	<3.00	1.524
GFI	>0.90	0.930
AGFI	>0.90	0.902
NFI	>0.90	0.957
CFI	>0.90	0.985
TLI	>0.90	0.981
RMSEA	<0.08	0.042
RMR	<0.05	0.017

Remark : CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = goodness-of-fit index, AGFI = adjusted goodness-of-fit index, NFI = normalized fit index, TLI = Tucker-Lewis index, CFI =comparative fit index, RMSEA = root mean square error of approximation, and RMR = root mean square residual

Structural Equation Model (SEM)

Structural Equation Model (SEM) is used to test the measurement and the structural regression model. After running SEMs and revising the model, the overall model fit index is CMIN/DF = 2.001, GFI = 0.948, AGFI = 0.901, NFI = 0.939, CFI = 0.968, TLI = 0.963, RMSEA = 0.058, RMR = 0.020 as measurable criteria refer to Table 6.

Research hypothesis testing

The results of hypothesized test are represented in Table 7. The result applied that H1, H2 and H3 are supported .

Table 7

Hypothesis Result of the Structural Model

Hypothesis	Standardized path coefficients (β)	T-value	Test result
H1: Perceived usefulness => Intention to use	0.524	6.885***	Supported
H2: Perceived ease of use => Intention to use	0.160	2.026***	Supported
H3: Trust => Intention to use	0.253	4.432***	Supported

*Remark: ***p<0.05*

The results from Table 7 can be summarized that **:**

H1 : The standardized path coefficient between perceived usefulness and intention to use was 0.524 (t-value = 6.885***). Perceived usefulness has significantly influence on intention to use. Thus, H1 was supported.

H2 : The standardized path coefficient between perceived ease of use and intention to use was 0.160 (t-value = 2.026***). Perceived ease of use has significantly influence on intention to use. Thus, H2 was supported.

H3 : The standardized path coefficient between trust and intention to use was 0.253 (t-value = 4.432***). Trust has significantly influence on intention to use. Thus, H3 was supported.

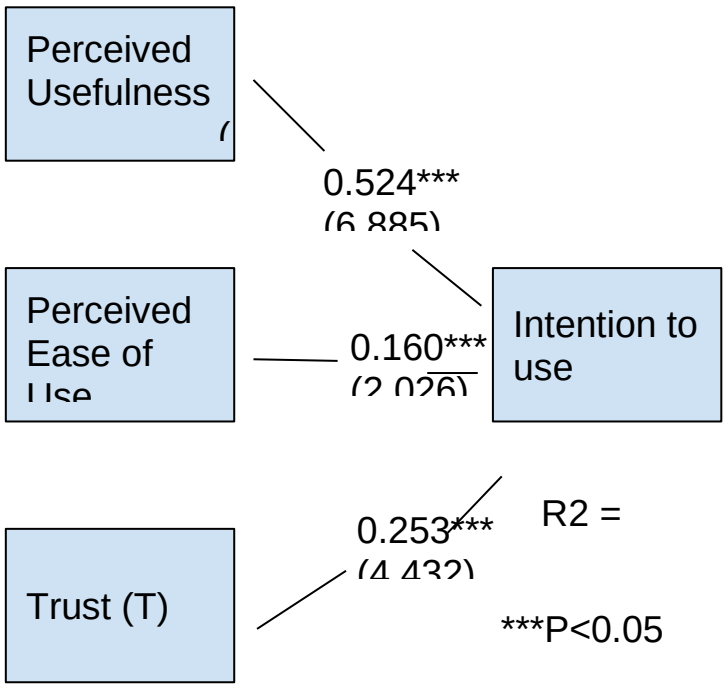

Figure 2 : The Results of Structural Model

The results from table 8 can be explained that:

Intention to use: The significant direct effect of perceived usefulness on intention to use was 0.524. The significant direct effect of Trust on intention to use was 0.253. The significant direct effect of perceived ease of use on intention to use was 0.160.

To summarize, perceived usefulness has the most significantly on intention to use of internet banking (0.524). There were followed by the influence of Trust (0.253) , and the influence of perceived ease of use (0.160)

Conclusion, Recommendation and Limitation

Conclusion

The purpose of the research is to investigate factors influencing Thai people to use internet banking in Bangkok. The conceptual framework is composed of perceived usefulness, perceived ease of use, trust, and intention to use. The questionnaire was administered to people who live in Bangkok and have experienced using Internet banking. The results were analyzed by Confirmatory Factor Analysis (CFA) verifying the validity and reliability of the model. Moreover, the influence among variables were examined by Structural Equation Model (SEM).

Perceived usefulness has the most direct influence on intention to use internet banking. Because internet banking gives their customer to have convenient time using the application, customers tend to use internet banking not only transfer the money, but also paying other bills in their daily life. Those customers have a positive feeling and interesting to use internet banking. Further analysis has shown that perceived ease of use and trust also has a direct influence on intention to use. Trust have a greater influence than perceived ease of use. Since internet banking can be useful and easy to use, internet banking also gives much more privilege to customer to gain their loyalty and their trust.

Recommendation

The results of this research represented that intention to use Internet banking depends on perceived usefulness, perceived ease of use and trust. Each dependent variable, perceived usefulness perceived ease of use, and trust has strongly influence on Intention to use. Therefore, this research provides recommendations to those for developing Internet banking application. These recommendations include developing more application feature to enhance online payment and gain more privilege from using the application. This feature will support customers to pay for their product and their bills inside the application of internet banking and gain more discount in the future. Therefore, bank will gain more customer loyalty on their internet banking application.

Limitation and further study

While this research contributes important insights about factor influencing the customer to use internet banking in Bangkok. There are some limitations that should be apply in further research. First, the data were collected only from Bangkok so further study should apply more respondent in diverse geographical areas. Second, the results may be generalizable only to Thai Internet Banking. Further studies could consider other lifestyle of the people of other countries and the influence on intention to use for internet banking. Finally, there are a small number in factors and may not have covered all the measurable that influence to use internet banking. Consequently, future studies may increase some factors such as customer loyalty, customer awareness.

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