The Perceived Benefits, Ease of Use, Attitudes, and Reference Group Conformity Influencing the Intention to Use Mobile Banking Services Among Elderly Customers in Ubon Ratchathani Province: A Study of Government Savings Bank

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Abstract

This research aims to 1) to study the factors related to perceived benefits, perceived ease of use, and reference groups that influence the intention to use mobile banking services of the Government Savings Bank among elderly customers in Ubon Ratchathani Province; 2) to examine the influence of perceived benefits and perceived ease of use on the intention to use mobile banking services through attitudes; 3) explore the impact of perceived benefits and perceived ease of use on attitudes. The sample population consists of 500 elderly individuals using mobile banking services in Ubon Ratchathani Province, selected through probability sampling using a stratified sampling method. The questionnaire was the research tool used. The findings reveal that 1) perceived benefits and reference groups significantly influence the intention to use mobile banking services among the elderly in Ubon Ratchathani Province at a 0.01 significance level, whereas perceived ease of use does not have a significant effect; 2) perceived benefits and perceived ease of use significance level; 3) perceived benefits and perceived ease of use significance level; 3) perceived benefits and perceived ease of use significance level.

Keywords: Perceived Benefits, Perceived Ease of Use, Attitudes, Reference Group Conformity, Intention to Use

Introduction

Thailand entered the phase of becoming an aged society since 2005 and has continued up to the present year of 2022. The country has a population of more than 12 million elderly people, or those aged 60 and above, accounting for approximately one-sixth of the Thai population, ranking it second in the ASEAN region, following Singapore. Moreover, Thailand is predicted to be the first developing country in the world to enter a complete aged society due to the continuous decline in birth rates, with only about 600,000 births per year. If this

trend persists, not only will the total population of Thailand begin to decrease, but Thailand will also transition into a hyper-aged society, where the population aged over 65 years reaches 20% or more than 30% of the population aged over 60 years by 2041, moving faster than Japan. Thailand entered a full-aged society in 2022 with the elderly population being 20-30%, and importantly, Thailand will become a super-aged society similar to Japan, with 28% of its population aged 60 and above by 2031. (Post Today, 2021).

The wave of technology has significantly changed daily life behaviors, including banking. Currently, there are new forms of banks, such as mobile banking applications, which offer various financial transaction services from commercial banks or through electronic devices like mobile phones, PCs, or tablets. Hence, this form of service has continuously grown in popularity. In 2022, the number of customers using mobile banking services reached 96.70 million accounts, compared to 2021, which saw a growth of 12.41 million accounts or 14.72%. The volume of transactions in 2022 amounted to 22,840,921 thousand transactions, an increase from 2021 by 6,799,543 thousand transactions. (Bank of Thailand, 2023).

At present, the Government Savings Bank continues to operate under the Government Savings Bank Act (No. 4) B.E. 2017 in accordance with the stated mission framework and state enterprise strategic plan. Financial institution branches assigned a role It is a financial institution for development. and create opportunities for people to access financial resources thoroughly along with giving financial knowledge Including supporting the strengthening of the grassroots economy Develop the country's competitiveness and reduce inequality in society. As of September 2022, the Bank has a branch network covering all areas, totaling 1,052 locations, with service units (on districts, cars, and mobile boats) totaling 156 locations, automatic machines. Self service (Self-Service) totaling 7,681 devices to spread access to financial services. To all customer groups of the bank Number of Mobile Banking users: 12.85 million people. (Government Savings Bank, 2023).

However, some customers still feel uncertain about conducting transactions, which can arise from various reasons, such as the inconvenience of making transactions, concerns over the security of the system and personal data, and the environment or mindset that fosters such behaviors. Understanding and learning can help communicate directly with the targeted demographic as per generation, like the Baby Boomers, who are mostly entering old age. They have lived a life dedicated to work, and their acceptance and use of technology are relatively low. They tend to be conservative and lack experience in using it (Nimngen, 2020).

Given the significance and issues mentioned, it's evident that Thailand is transitioning into an aged society. However, financial technology has also evolved and developed, including banking. Nowadays, there are new forms of banking, such as electronic banks and mobile applications, requiring everyone to adapt. With Thailand moving towards an aged society, the elderly must adjust as well. The researcher is interested in studying the factors influencing the intention to use mobile banking services at the Government Savings Bank among elderly customers in Ubon Ratchathani Province. This study will examine the relationship between technology acceptance factors, including perceived benefits, perceived ease of use through attitudes, and reference group conformity, and their influence on the intention to use the service. The aim is to gather information affecting the intention to use the service to plan, improve quality, and develop applications suitable for the elderly, enabling them to use technology that will change in the future to meet their service needs as much as possible.

Objective

- 1. To study the factors related to perceived benefits, perceived ease of use, reference group conformity, and attitudes that influence the intention to use Government Savings Bank's mobile banking services among elderly customers in Ubon Ratchathani Province.
- 2. To examine the influence of perceived benefits and perceived ease of use on the intention to use mobile banking services at the Government Savings Bank among elderly customers in Ubon Ratchathani Province through attitudes.
 - 3. To explore the impact of perceived benefits and perceived ease of use on attitudes.

Literature Review

The theory related to technology acceptance can be explained by the Technology Acceptance Model (TAM), which consists of two parts: 1) Perceived Ease of Use (PEOU) and 2) Perceived Usefulness (PU). The Technology Acceptance Model (TAM), referencing the Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975), was proposed by Davis et al. (1989) to study various factors related and affecting the decision-making behavior in adopting new technologies. The main factors directly influencing technology acceptance include: 1) Perceived Ease of Use (PEOU), interpreted as the belief that using the technology will be easy, convenient, and effort-minimal; 2) Perceived Usefulness (PU), interpreted as the belief that using the technology or information system will enhance job performance.

The theory about mediating variables states that a mediator variable is one that mediates the causal relationship between an independent variable and a dependent variable. It can be seen as a third variable that changes the relationship between the independent and dependent variables by explaining the relationship between them. According to Baron and Kenny (1986), a mediating variable (mediator) is defined as a variable that transmits influence from the independent variable to the dependent variable. The transmission of influence by a variable can be of two types: 1) Complete Mediation (Full Mediation) and 2) Partial Mediation.

The theory on intention to use is based on the Theory of Reasoned Action (TRA) or TRA model, focusing on attitudes, reference group compliance, intention, and behavior. The expectancy-value model provides a framework for understanding the relationship between an individual's attitudes and their underlying beliefs. The expected outcome is the belief that it will or will not lead to specific behavior. Ajzen and Fishbein (1980) stated that when no one believes that an action can lead to a specific outcome, there will be less motivation to exhibit the behavior. Due to the specific characteristics of the model, it proposes a way to predict behavioral intentions influenced by two factors: attitudes and reference group compliance. The Theory of Planned Behavior (TPB) extends from the Theory of Reasoned Action by Ajzen and Fishbein (1980), addressing the limitations regarding behaviors not under complete volitional control. Ajzen and Fishbien (1991) developed TPB to include Perceived Behavioral Control, discussing the perceived ease or difficulty of performing the behavior. TPB allows using perceived behavioral control to predict intentions.

From the literature review, the researcher can hypothesize as follows:

- H1: Perceived Usefulness influences the intention to use.
- H2: Perceived Ease of Use influences the intention to use.
- H3: Reference Group Conformity influences the intention to use.
- H4: Attitudes influence the intention to use.
- H5: Perceived Usefulness influences attitudes.
- H6: Perceived Ease of Use influences attitudes.
- H7: Perceived Usefulness influences the intention to use through attitudes.
- H8: Perceived Ease of Use influences the intention to use through attitudes.

Research Methodology

The population for this study consists of elderly individuals (aged 60 years and above) living in Ubon Ratchathani Province. According to 2023 statistics, the total elderly population in Ubon Ratchathani Province is 314,828, with 145,093 males and 169,735 females, distributed across all 25 districts. (The Bureau of Registration Administration (BORA), (2023).

The sample group consists of elderly customers who have previously used the mobile banking services of the Government Savings Bank in Ubon Ratchathani Province. The exact number of this group is not known. Therefore, the researcher uses hypothesis testing and analysis of research results, where the sample size for analysis can be calculated based on the ratio of sample units to the number of parameters, or variables, according to the formula by Hair et al. (2010). For multivariate statistical analysis, the sample size should be at least 10 times the number of indicators. With a questionnaire of 50 items, the minimum sample size should therefore be around 500 samples.

Sample selection from the population, knowing the total population number that has an equal chance of being sampled, was conducted using the Proportional Stratified Random Sampling method.

The tool used in this study to collect data from those who have previously used technology for various activities is a questionnaire developed by the researcher. This primary data collection instrument is divided into six sections, including personal information, perceived benefits, perceived ease of use, attitudes, reference group conformity, and intention to use.

The process of developing the research instrument involved studying concepts, theories, documents, and related research to form a basis for selecting variables covering the objectives to guide the creation of the questionnaire. The information gathered was used to develop a questionnaire aligned with the research conceptual framework and to define its scope. The questionnaire structure was adjusted to match the research concept, and the draft questionnaire was presented to the advisor for correctness verification and adjustments based on feedback. Then, the questionnaire was reviewed for accuracy and content validity by five experts, analyzed for item-objective congruence with the Index of Item Objective Congruence (IOC), yielding a congruence index of 1, indicating that the questions were aligned and could measure the intended objectives. A trial questionnaire (Try out) was distributed to a non-sample population in Amnat Charoen Province, with 50 sets to determine the instrument's reliability, analyzing the reliability of each question and the overall reliability score of 0.82.

Data collection involved creating a complete questionnaire with numbered sets from 1 to 500, conducted according to human research standards by soliciting cooperation from the customer group matching the sample criteria of the research framework to complete the questionnaire, with a total of 500 sets collected. Data was also gathered from academic documents and other materials, and the questionnaires were checked for accuracy and completeness for further analysis.

The researcher analyzed the data from the collected questionnaires for accuracy and completeness, coding the data, and recording it into a computer for processing with statistical software IBM SPSS Statistics 26 and jamovi-2.3.28.0-win64. The analysis included descriptive statistics, mean and standard deviation analyses, factor grouping analysis of the measures, correlation coefficient analysis for checking the discriminant validity between variables, direct effect, indirect effect, and total effect using GLM Mediation Analysis. Finally, the research hypotheses testing results were summarized.

Research Findings

The analysis of general information of the questionnaire respondents, including gender, age, marital status, level of education, monthly income, district of residence in Ubon Ratchathani Province, and duration of using Government Savings Bank mobile banking, involved 500 individuals. The data were analyzed using frequency and percentage statistics. It was found that the majority of respondents were female, totaling 257 individuals or 51.40%. The age group between 62-65 years old had 298 individuals, accounting for 59.60%. Those who were married registered 270 individuals or 54.00%. The majority held a bachelor's degree, with 201 individuals or 40.20%. The monthly income range of 10,000-20,000 THB had 139 individuals, representing 27.80%. Residents in Mueang Ubon Ratchathani District totaled 68 individuals or 13.55%. Additionally, 224 individuals or 44.80% had been using the Government Savings Bank mobile banking for more than 1 year.

Table 1: Factor Analysis Results

Latent Variable	Observed	Factor	Eigenvalue/	KMO/	
	Variable		Cumulative	(P-Value)	
Perceived usefulness: PU	PU1-PU10	0.70-0.93	2.65/26.60	0.81/(0.00)	
Perceived ease of use: PEOU	PEOU1- PEOU10	0.78-0.91	3.93/39.32	0.85/(0.00)	
Subjective Norm: SN	SN1-SN10	0.77-0.85	4.29/42.96	0.85/(0.00)	
Attitude: ATT	ATT1-ATT10	0.74-0.87	4.55/45.52	0.89/(0.00)	
Intention to use: ITT	ITT1-ITT10	0.77-0.98	1.99/19.90	0.74/(0.00)	

From Table 1, the factor analysis of indicators in the questionnaire, tested with a total of 500 sets, was conducted using the Varimax rotation method and an Eigenvalue criterion greater than 1.00. It was found that all indicators could be grouped into a single cluster, with each indicator of every measure weighing within one component as follows:

- 1. The Perceived Usefulness (PU) group had Factor Loadings ranging from 0.70 to 0.93, an Eigenvalue of 2.65, and a KMO value of 0.81.
- 2. Perceived Ease of Use (PEOU) had Factor Loadings ranging from 0.78 to 0.91, an Eigenvalue of 3.93, and a KMO value of 0.85.
- 3. Social Norms (SN) had Factor Loadings ranging from 0.77 to 0.84, an Eigenvalue of 4.29, and a KMO value of 0.85.
- 4. Attitude (ATT) had Factor Loadings ranging from 0.74 to 0.78, an Eigenvalue of 4.55, and a KMO value of 0.89.
- 5. Intention to Use (ITT) had Factor Loadings ranging from 0.73 to 0.98, an Eigenvalue of 1.99, and a KMO value of 0.74.

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Variables	PU	PEOU	SN	ATT	ITT
PU	-				
PEOU	0.38**	-			
SN	0.40**	0.53**	-		
ATT	0.41**	0.50**	0.41**	-	
ITT	0.20**	0.19**	0.17**	0.24**	-

^{**}Level of Significance 0.01

From Table 2, it was found that all independent variables, namely Perceived Usefulness, Perceived Ease of Use, and Reference Group, which influence the intention to use mobile banking through attitudes, have statistically significant correlations at the 0.01 level. Upon examining the relationships between variables, it was discovered that the correlation coefficients (r) ranged from 0.17 to 0.53 (when $r \le 0.80$), indicating no Multicollinearity issues. All observed variables are on a common component. Therefore, the data obtained are suitable for further multiple regression analysis.

Table 3: Results of the Analysis for Direct Effect, Indirect Effect, and Total Effect

Type Effect	Path	Estimate	SE	β	Z	р
Direct	$PU \Rightarrow ITT$	0.11	0.04	0.13	2.73**	0.00
	PEOU⇒ ITT	0.06	0.04	0.07	1.42	0.15
	$SN \Rightarrow ITT$	0.12	0.04	0.13	2.98**	0.00
	$ATT \Rightarrow ITT$	0.17	0.04	0.22	4.32**	0.00
Component	$PU \Rightarrow ATT$	0.25	0.04	0.22	5.55**	0.00
_	PEOU⇒ATT	0.34	0.04	0.34	7.82**	0.00
Indirect	$PU \Rightarrow ATT \Rightarrow ITT$	0.04	0.01	0.05	3.41**	0.00
	$PEOU \Rightarrow ATT \Rightarrow ITT$	0.06	0.01	0.07	3.78**	0.00
Total	PU ⇒ ITT	0.07	0.04	0.17	1.71**	0.00
	$PEOU \Rightarrow ITT$	0.12	0.04	0.14	2.96**	0.00
$F = 80.10 \text{ Sig.} = 0.00 \text{ R} = 0.57 \text{ R}^2 = 0.32 \text{ R}^2_{\text{adj}} = 0.32$						

^{**}Level of Significance 0.01

From Table 3, it was found that direct influences show that Perceived Usefulness, Reference Group, and Attitude have a statistically significant direct impact on the intention to use the service at the 0.01 level. Perceived Ease of Use does not have a direct influence on the intention to use. Thus, the equation can be formulated for Perceived Usefulness, Perceived Ease of Use, Attitude, and Reference Group that influence the intention to use Government Savings Bank's mobile banking services among elderly customers in Ubon Ratchathani Province. For indirect influences, it was found that Perceived Usefulness and Perceived Ease of Use have a statistically significant indirect influence on the intention to use through Attitude at the 0.01 level. Therefore, the equation can be formulated for Perceived Usefulness, Perceived Ease of Use, and Reference Group influencing the intention to use the service through Attitude, which impacts the intention to use Government Savings Bank's mobile banking services among elderly customers in Ubon Ratchathani Province.

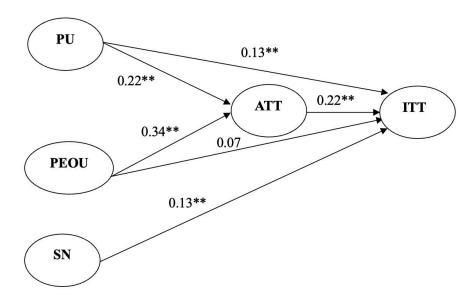


Figure 2: The Path Relationship of Perceived Usefulness, Perceived Ease of Use, Attitude, and Reference Group Influencing the Intention to Use

Discussions

The analysis of Perceived Usefulness found that, overall, it had a high average level, indicating that users perceive that using Government Savings Bank's mobile banking facilitates faster access to information and news, with accuracy and completeness, enhancing the efficiency of accessing financial information-related services and improving the performance of financial transactions. It makes financial transactions easier, and also helps save on transaction costs, such as being able to conduct transactions anytime, anywhere, with information updated 24 hours a day. This results in the intention to use the mobile banking services of the Government Savings Bank among elderly customers in Ubon Ratchathani Province, which has a direct influence on the intention to use these services. This is consistent with the research by Yamkleepbua (2022), which studied the influence of technology acceptance on consumers' intentions to purchase products through the E-commerce platform Lazada and found that perceived benefits of online shopping influence the intention to buy products online through E-commerce. Similarly, the research by Amornrattanakij (2017) on

factors affecting the intention to use QR Code Payment through Mobile Banking in Bangkok and its vicinity found that perceived benefits influence the intention to use QR code payment through Mobile banking indirectly, leading to the intention to use mobile banking services of the Government Savings Bank among elderly customers in Ubon Ratchathani Province. This is in line with the research by Bothma and Mostert (2023), which applied the Technology Acceptance Model from the perspective of Namibia, finding that high perceived benefits of online banking systems result in a positive attitude towards online banking, leading to the intention and actual use of the service. Perceived usefulness is a key factor influencing the intention to use mobile banking services.

The analysis on Perceived Ease of Use found that, overall, it had a high average level, indicating that users perceive using Government Savings Bank's mobile banking as modern and up-to-date, providing significant convenience in conducting financial transactions. The promotion of the application plays an essential role in the decision to use the service, capable of creating confidence and satisfaction among users, such as receiving SMS notifications for every transaction. This leads to the intention to use the mobile banking services of the Government Savings Bank among elderly customers in Ubon Ratchathani Province, which has no direct influence on the intention to use these services. However, the perception of ease of use has a statistically significant indirect influence on the intention to use the mobile banking services of the Government Savings Bank among elderly customers in Ubon Ratchathani Province through attitudes at the statistical significance level of 0.01. This is consistent with the research by Tanurak (2017), which studied the influence of attitude on usage and related factors towards the technology usage intention behavior of industrial employees. It was found that the latent variable of perceived ease of use has an indirect positive influence on attitude towards usage and an indirect positive influence on positive intention behavior towards attitude and technology usage intention behavior of Thai wholesale and retail industry employees. This aligns with the research by Bothma and Mostert (2023), which studied the application of the Technology Acceptance Model: A perspective from Namibia, finding that high perceived ease of use of online banking systems results in a positive attitude towards the online banking system, leading to the intention to use the system and ease of use of the system as key factors influencing the intention to use mobile banking services.

The analysis on Reference Group found that, overall, it had a high average level, indicating that service users would recommend the use of Government Savings Bank's mobile banking to people they know. Influential people or those of interest have an impact on the decision or interest to use the mobile banking services. Additionally, bank staff recommendations contribute to the intention to use the mobile banking services of the Government Savings Bank among elderly customers in Ubon Ratchathani Province, which has a direct influence on the intention to use these services. This aligns with the research by Boonyathawornchai (2020), which studied attitudes and service impacts on the consumer behavior of dietary supplement products among the elderly in Bangkok and its vicinity, finding that influencers on the intention to consume dietary supplements among the elderly are family, friends, and acquaintances. It also found it easy for the elderly to access and consume dietary supplements, with convenient communication steps, sales staff able to explain product details attentively, and coordination between sales and delivery staff. This is consistent with the research by De Leon (2019), which examined factors influencing the intention to use mobile banking services among retail customers, finding that the social influence of reference groups significantly positively impacts the behavioral intention to use mobile banking. This also aligns with the study by Tian, Nguyen, and Tang (2023) on the influence of subjective norms on teachers' intention to use social media for work, finding that reference groups affect teachers' intentions to use apps for work. This study highlights various issues in Vietnam related to social media use at the institutional level, presenting irreversible solutions in the new educational context of modern society.

The analysis on Attitude found that, overall, it had a high average level, indicating that service users perceive that using the Government Savings Bank's mobile banking helps in receiving information and news more quickly, with accuracy and completeness, enhancing the efficiency of accessing services related to financial information, and improving the performance of financial transactions, making financial transactions easier. Additionally, it helps save on the costs associated with financial transactions, such as being able to conduct transactions anywhere, anytime, with information updated 24 hours a day. This leads to the intention to use the mobile banking services of the Government Savings Bank among elderly customers in Ubon Ratchathani Province, which has a direct influence on the intention to use these services. This is consistent with the research by Panichkul (2020), which studied the acceptance of technology and the intention to use mobile banking applications by the elderly in Bangkok. It was found that the acceptance of mobile banking technology, particularly attitude, influences the intention to use mobile banking applications among the elderly in Bangkok. This aligns with the research by Weng et al. (2018), which studied the Technology Acceptance Model (TAM) regarding attitudes towards usage and the intention to use mixed media by teachers in schools. It was discovered that attitudes towards usage still have an influence on the intention to use.

Conclusion

From the study on direct influence, it was found that Perceived Usefulness (PU), Reference Group (SN), and Attitude (ATT) significantly influence the intention to use at the statistical significance level of 0.01 (accepting hypotheses H1, H3, H4). In contrast, Perceived Ease of Use (PEOU) does not influence the intention to use (rejecting hypothesis H2). In terms of indirect influence, Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) significantly influence the intention to use the Government Savings Bank's mobile banking services among elderly customers in Ubon Ratchathani Province through Attitude (ATT) at the statistical significance level of 0.01 (accepting hypotheses H7, H8). The study also found that Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) significantly influence Attitude (ATT) at the statistical significance level of 0.01 (accepting hypotheses H5, H6).

The factors can be categorized as follows:

Regarding attitude, attitude factors are direct variables and also Mediator variables that influence the service users' intention to use. The attitude issues that will make service users intend to use include the application being interesting, worth trying, reliable, and secure in protecting personal data. Service providers should prioritize these issues, as attitude variables significantly affect the intention to use in all aspects. Therefore, we should focus on the attitudes of service users to encourage continued use and increase future usage.

Regarding perceived benefits, it is important to emphasize issues related to the rapid receipt of information and news, accuracy, and completeness, which help enhance the efficiency of accessing services related to financial information and improve the performance of financial transactions. Prioritizing these issues can lead to increased service usage and retention of the existing customer base. Therefore, banks should focus on these issues to develop their mobile banking services further. Additionally, perceived benefits also have an

indirect effect on the intention to use through attitudes. Hence, service providers should pay attention to the attitudes of users, which affect the intention to use, to ensure users continue to intend to use the services in the future.

Regarding perceived ease of use, it has no direct influence on the intention to use, but it does have an indirect influence on the intention to use through attitudes. This indicates that perceived ease of use does not directly impact the users' intention to use the service. However, when mediated by attitudes, it leads to an intention to use the service. Therefore, service providers should not overlook the factor of attitude as a Mediator variables that influences users' intention to use. The attitude issues that will make service users intend to use the service include the application being interesting, worth trying, reliable, and secure in protecting personal data. Service providers should prioritize these issues to increase the use of Government Savings Bank's banking services.

Regarding the reference group, it is important to focus on key factors such as celebrities or individuals of interest who influence thoughts or the interest in using the service. Banks should engage in promotions using well-known personalities who are trending at the time to influence more users to utilize the services and for users to recommend the Government Savings Bank's mobile banking services to people they know. This shows that banks should prioritize these main influencing factors, as they have a significant impact on service usage.

Suggestions

From the study on perceived benefits, perceived ease of use, attitude, and reference group influencing the intention to use Government Savings Bank's mobile banking services by elderly customers in Ubon Ratchathani Province, the variables that have a direct influence on the intention to use are perceived benefits and reference group. Meanwhile, the variables that have an indirect influence on the intention to use through attitude are perceived benefits and perceived ease of use.

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