International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (4): July-August 2023, pages 131-140. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2023.3077

Technology Acceptance Model to Intention of Use the Mobile Banking Services in Chiang Mai Province, Thailand

Guo Hui[1], Ling Qian[2], Nan Xiang[3], Wei Yu-Chen[4] and Praphaphan Wunsuk[5]
[1-4] Innovation Collage, North-Chiang Mai University, Thailand
[5]Independent Researcher, Thailand
[1] Coordinator Email: guohui14301@gmail.com, ORCID: https://orcid.org/0009-0000-2083-0675
[2]Email: qianl5731@gmail.com, ORCID: https://orcid.org/0009-0004-2017-737X
[3]Email: nanx717@gmail.com, ORCID: https://orcid.org/0009-0000-4916-5621
[4]Email: yw42907@gmail.com, ORCID: https://orcid.org/0009-0001-7914-7683
[5]Email: praphaphanwunsuk9@gmail.com, ORCID: https://orcid.org/0009-0003-3685-0752

Received 30/06/2023 Revised 01/07/2023 Accepted 15/07/2023

Abstract

Background and Aim: Technological intelligence is revolutionizing industries like electronics, e-commerce, and mobile banking, with banks launching new channels and fostering trust for successful adoption. This paper aims to examine the influence of technology acceptance on the intention to use mobile banking services in Chiang Mai Province, Thailand.

Materials and Methods: This study used a quantitative research method to gather data from mobile banking users in Chiang Mai Province, Thailand. A structured questionnaire with 20 items was used to measure perceived usefulness, ease of use, trust, and intent of use. The questionnaire's reliability was high, with Cronbach's alpha coefficient estimates ranging from 0.759 to 0.916. Multiple regression was used to examine the research hypothesis.

Results: The study uses the TAM Model to analyze the impact of perceived usefulness, ease of use, and trust on mobile banking intent in Chiang Mai Province, Thailand. Results show that these factors are essential determinants of intent.

Conclusion: The study analyzes TAM Model's impact on mobile banking intent in Chiang Mai Province, Thailand, revealing usefulness, ease of use, and trust as essential determinants. Thai banks should introduce mobile banking services to improve customer satisfaction and productivity in Chiang Mai Province, considering factors like business environment, technological differences, and cross-country connections.

Keywords: Technology Acceptance Model; Intention of Use; Mobile Banking Services

Introduction

Technological intelligence is revolutionizing the world today, with the electronics business, e-commerce, and mobile business enhancing on a large scale (Trivedi, Mehta & Sharma, 2021). Consumers increasingly prefer mobile accessories, and banking operations are facing increased competition (Wang, Wagner, Sundhararajan & Joo, 2021). Technological expansion offers opportunities for service producers to develop new services and adapt to customer preferences (Gonzalez, Mitra & Turel, 2020). Banks are launching new delivery channels, such as ATMs, the Internet, and mobile phones, to provide customers with more options (Sukwadi, Sant Caroline & Yu-Hsin Chen, 2022). Mobile banking offers self-service mechanisms for customers to connect with banking services (Sultana & Akter, 2021), enabling them to perform banking operations on their mobile phones, further expanding the financial services sector (Ibrahim, Sare & Adam, 2021).

In the mid-1990s, banks utilized the Internet to enhance customer experiences and provide m-banking services, enabling access, management, and transactions on bank accounts (Bati & Gozupek, 2019), offering a comprehensive range of financial services (Mavers & Baker, 2021). Mobile banking is a convenient and interactive way for customers to access banking services on their mobile phones or smartphones (Chabbi, Boudour & Semchedine, 2020). This system offers convenient, pervasive, and collectivity banking services anytime, anywhere (Mavers & Baker, 2021). With highly competitive banking environments, banks are focusing on strategies to achieve competitive advantages (Gonzalez, Mitra & Turel, 2020).

Mobile banking improves customer account balances, bill payments, and fund transfers, demonstrating significant capability for the banking sector (Ibrahim, Sare & Adam, 2021). With 50.1 million smartphone users in Thailand (Electronic Transactions Development Agency, 2021a), this research aims to investigate factors influencing customer behavior and usage of mobile banking

Citation: Guo, H., Ling, Q., Nan, X., Wei, Y.C., & Wunsuk, P., (2023). Technology Acceptance Model to Intention of Use the Mobile Banking Services in Chiang Mai Province, Thailand. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (4), 131-140; DOI: https://doi.org/10.60027/ijsasr.2023.3077

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (4): July-August 2023, pages 131-140. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2023.3077

services. Thailand's unique characteristics make it an attractive target for further research (Electronic Transactions Development Agency, 2021b).

Over the past two decades, researchers (Gonzalez, Mitra & Turel, 2020; Kwok, Yan, Qu & Lau, 2021) have explored the technology acceptance model (TAM) to understand customer acceptance of information technologies (Miraz, Hassan & Mahyadin, 2021). However, TAM does not account for mobile banking adoption (Parikh, Patel & Jaiswal, 2021). The theory of planned behavior (TPB) reveals user behavior (Yu & Song, 2021), with trust being a crucial factor for mobile banking adoption (Parikh, Patel & Jaiswal, 2021). Studies (Gonzalez, Mitra & Turel, 2020; Kwok, Yan, Qu & Lau, 2021; Yu & Song, 2021) show that perceived usefulness and ease of use are significant factors influencing online consumer behavior. Mobile banking adoption is influenced by factors like perceived security and privacy, ease of use, usefulness, and trust. These factors influence users' decisions to adopt new technology. Banking and financial services management should explore these aspects to improve consumer perception (Chen, Tao & Zhou, 2019). Studies (Dimitriadis & Kyrezis, 2010; Lin, Lu, Wang & Wei, 2011; Chen, Tao & Zhou, 2019; Liu, et.al., 2019; Filieri, et.al., 2021; Minh-Duc, 2021; Tiwari, Tiwari & Gupta, 2021) show a strong relationship between banks and customers, making mobile banking services a valuable tool for businesses.

The primary objective of this study is to analyze the behavioral consequences associated with the intention to utilize mobile banking services. This will be achieved by initially identifying the various factors that influence the perceived utility, perceived convenience of use, and trustworthiness of mobile banking services. The research model was developed and assessed through a survey conducted among residents of Chiang Mai province, Thailand. The objective was to examine the impact of trust intentions and their underlying factors on individuals' inclination to adopt mobile banking services.

Research Objective

This paper aims to examine the influence of technology acceptance on the intention to use mobile banking services in Chiang Mai Province, Thailand.

Literature Review and Conceptual Framework

The subsequent section of this study provides a review of the relevant literature and empirical studies that pertain to the research hypothesis under the stated research objective. This section elucidates the principles underlying the application of financial technology and the model for adopting such technology.

Financial Technology Application

Technological advancements have surpassed traditional branch-based retail banking in developed countries, making it essential for banks to gain competitive advantages in the financial market (Ibrahim, Sare & Adam, 2021; Trivedi, Mehta & Sharma, 2021). This has led to the adoption of Internet communication technology (ICT) (Wang, Wagner, Sundhararajan & Joo, 2021) and the development of mobile banking. ICT has enabled banks to offer customers greater flexibility (Au & Kauffman, 2008), efficiency, and consistent service through self-service technologies like ATMs, internet banking, and mobile banking (Rohlinger & Bunnage, 2015). However, the Internet banking market has become more competitive, leading to the rise of mobile banking (Ibrahim, Sare & Adam, 2021).

Mobile banking is a cellular service distribution that allows customers to interact with their banking through a virtual store and mobile device (Yukhno, 2021). It offers greater mobility, quality, availability, and utility compared to traditional banking services (Kamkankaew, et al., 2021). Mobile banking services enable customers to perform banking procedures accidentally, make payments, access information, and monitor capital market quotations (Wang, Wagner, Sundhararajan & Joo, 2021). This service adds value to customers by allowing banking operations to be carried out anywhere, outside the bank's opening hours, providing greater efficiency, time savings, convenience, and a sense of control (Ibrahim, Sare & Adam, 2021). However, the mobile banking market is still small compared to banking transactions and has a slow adoption rate (Kamkankaew, 2020). High penetration and barriers are delaying the use of mobile services in banking transactions (Kapadia, 2020).

Citation: Guo, H., Ling, Q., Nan, X., Wei, Y.C., & Wunsuk, P., (2023). Technology Acceptance Model to Intention of Use the Mobile Banking Services in Chiang Mai Province, Thailand. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (4), 131-140; DOI: https://doi.org/10.60027/ijsasr.2023.3077

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (4): July-August 2023, pages 131-140. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2023.3077

In conclusion, technological advancements have surpassed traditional retail banking in developed countries, requiring banks to gain competitive advantages in the financial market. ICT has enabled banks to offer flexibility, efficiency, and consistent service through self-service technologies like ATMs and mobile banking. However, the Internet banking market has become more competitive, leading to the rise of mobile banking. This cellular service distribution offers greater mobility, quality, availability, and utility compared to traditional banking services. However, the mobile banking market is small and has a slow adoption rate due to high penetration and barriers.

Technology Adoption Model (TAM Model)

The technology acceptance model (TAM) was developed by Davis (1989) to understand customer attitudes and behavior. It focuses on perceived usefulness and ease of use, focusing on personal performance and user-friendliness. The TAM model supports a decisive approach to technology adoption, enabling user behavior in diverse technological innovations (Ajzen, 1991; Yu & Song, 2021). Davis, Bagozzi, and Warshaw (1989) emphasized cognition over actual use in technology adoption. While users have limited decision-making power, it's insufficient for consumption contexts (Yu & Song, 2021). Potential users approve or reject technology based on their feelings and thoughts (Wai & Wai, 2021). Mobile banking, as a service, assumes the cost of adoption and voluntary use (Bagheri, Bondori, Allahyari, & Surujlal, 2021; Yu & Song, 2021). Perceived ease of use impacts customer attitudes and usefulness, affecting their intention to use a system (Bagheri, Bondori, Allahyari, & Surujlal, 2021). The TAM model analyzes factors affecting customer expectations, attitudes, and intentions, intending to use is a recurring antecedent in literature (Parikh, Patel & Jaiswal, 2021).

Intent of use

The intention to use is a construct that represents a consumer's probability of using a specific technology in a representative period (Xu, 2013). It reflects an individual's propensity to adopt a technology based on their attitude toward it (Gonzalez, Mitra & Turel, 2020). In e-commerce, intentions of use are significant predictors of effective participation (Oh, Lehto & Park, 2009). The intention to use is based on the expectation that customers can make logical decisions based on their perception (Davis, 1989; Fishbein & Ajzen, 1975; Ajzen, 1991), and it is a predictor of real consumer behavior in purchase decisions (Joo., 2016).

Perceived usefulness

Perceived usefulness refers to an individual's perception of technology's efficiency and performance, affecting trust and intention to use mobile banking applications (Fishbein & Ajzen, 1975). It reflects how easily and efficiently mobile banking makes queries and transactions, positively influencing consumer intention to use (Tiwari, Tiwari & Gupta, 2021). Mobile banking is a technological innovation that aligns with the TAM model and diffusion of innovations (Tom & Rakesh, 2021). Perceived usefulness and ease of use can reduce risks and encourage trust, impacting trust and use determinants (Davis, 1989). The effect of perceived usefulness on the intent of use has been confirmed in previous studies (Chen, Tao & Zhou, 2019; Grover, et al., 2019; Liu, et al., 2019; Kwok, Yan, Qu & Lau, 2021; Minh-Duc, 2021; Tiwari, Tiwari & Gupta, 2021). In such a way, the hypothesis of this study is proposed:

Hypothesis 1 (H1): Perceived usefulness impact on intent of use for mobile banking in Chiang Mai Province, Thailand.

Perceived ease of use

Perceived ease of use is a key element of the TAM model, influencing customer attitudes and adoption of new technology (Fishbein & Ajzen, 1975). Research shows that perceived ease of use directly affects customer attitudes and is related to technological usefulness (Filieri, et.al, 2021; Kwok, Yan, Qu & Lau, 2021; Minh-Duc, 2021; Tiwari, Tiwari & Gupta, 2021). Indirectly, perceived ease of use affects the intention to adopt technologies in mobile banking (Adams, Nelson & Todd, 1992). However, mobile device restrictions can make it challenging for users to use mobile banking (Tom & Rakesh, 2021), potentially affecting customer confidence and understanding of banking service providers. By focusing on basic activities and improving customer experience, the model aims to attract

Citation: Guo, H., Ling, Q., Nan, X., Wei, Y.C., & Wunsuk, P., (2023). Technology Acceptance Model to Intention of Use the Mobile Banking Services in Chiang Mai Province, Thailand. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (4), 131-140; DOI: https://doi.org/10.60027/ijsasr.2023.3077

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (4): July-August 2023, pages 131-140. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2023.3077

consumers' attention and improve their experience (Filieri, et.al., 2021). The effect of perceived ease of use on the intent of use has been confirmed in previous studies (Chen, Tao & Zhou, 2019; Liu, et.al., 2019; Filieri, et.al., 2021; Kwok, Yan, Qu & Lau, 2021; Minh-Duc, 2021; Tiwari, Tiwari & Gupta, 2021). In such a way, the hypothesis of this study is proposed that

Hypothesis 2 (H2): Perceived ease of use impact on intent of use for mobile banking in Chiang Mai Province, Thailand.

Trust of use

Fishbein & Ajzen (1975) and (Davis, 1989) described that trust to use is a crucial condition for customer expectations and intention to trust technology. It involves competence to use, integrity, benevolence, and predictability. Competence to use refers to the customer's expectation of the technology's capabilities, skills, and knowledge, while benevolence implies the customer's interest in the bank's management (Lin, Lu, Wang & Wei, 2011). Integrity is the expectation that the bank follows fundamental principles and is encouraged by trustworthy customers (Wang, Genc & Peng, 2020). Recognizing competence, benevolence, and integrity in mobile banking can help resolve customer attitudes toward using the application (Lu, Yang, Chau & Cao, 2011). Trust to use is the foundation of customer perceptions of technology acceptance systems (Dimitriadis & Kyrezis, 2010), and consumers recognize the specialized know-how of mobile banking. Banks provide the capacity and transactional services, ensuring customer satisfaction and trust. The effect of trust of use on the intent of use has been confirmed in previous studies (Dimitriadis & Kyrezis, 2010; Lin, Lu, Wang & Wei, 2011; Chen, Tao & Zhou, 2019; Liu, et.al., 2019; Filieri, et.al., 2021; Minh-Duc, 2021; Tiwari, Tiwari & Gupta, 2021). In such a way, the hypothesis of this study is proposed:

Hypothesis 3 (H3): Trust of use impact on intent of use for mobile banking in Chiang Mai Province, Thailand.

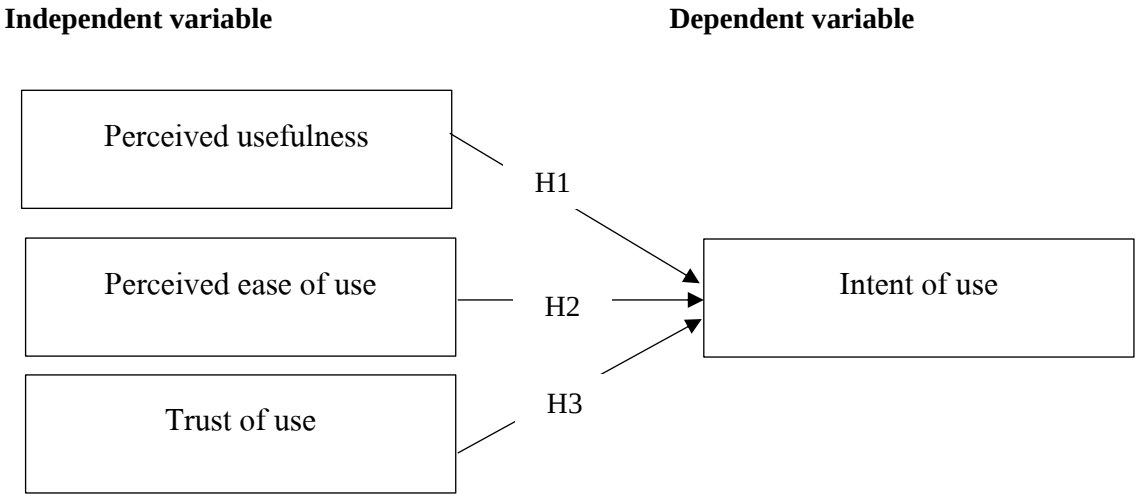

Figure 1 The conceptual framework of this study

Research Methodology

Research paradigm

A quantitative research method was exploited in this study. The research comprised the results of data accumulated from users of mobile banking in Chiang Mai Province, Thailand. This research applied a questionnaire as a measurement tool. During the management of the data collection, it was found that 25 users were no longer uncompleted and were therefore excluded from the sample. The

Citation: Guo, H., Ling, Q., Nan, X., Wei, Y.C., & Wunsuk, P., (2023). Technology Acceptance Model to Intention of Use the Mobile Banking Services in Chiang Mai Province, Thailand. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (4), 131-140; DOI: https://doi.org/10.60027/ijsasr.2023.3077

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (4): July-August 2023, pages 131-140. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2023.3077

total number of questionnaires was 375, representing a 93.75 percent response rate on the final sample of this study. The structured questionnaire was the research instrument which consisted of 20 items designed to determine aspects of perceived usefulness, perceived ease of use, trust of use, and intent of use. The questionnaire of this research noted that previous empirical works (Dimitriadis & Kyrezis, 2010; Lin, Lu, Wang & Wei, 2011; Chen, Tao & Zhou, 2019; Liu, et.al., 2019; Filieri, et.al., 2021; Kwok, Yan, Qu & Lau, 2021; Minh-Duc, 2021; Tiwari, Tiwari & Gupta, 2021). The scale of questionnaires employed a five-point Likert scale ranging from 'Strongly Disagree' (1) to 'Strongly Agree' (5). The reliability of Cronbach's alpha coefficient estimates for perceived usefulness, perceived ease of use, trust of use, and intent of use ranged from 0.759 to 0.916, which the value of Cronbach's Alpha is considered as very good for further testing of the study. To examine the research hypothesis, multiple regression was used.

Research Result

The result of this study is considered by the research objective. To identify and analyze the impact of perceived usefulness, perceived ease of use, and trust using on the intent of use for mobile banking in Chiang Mai Province, Thailand. This research has handled the core test that has directly helped this research in determining whether their advised hypothesis is accepted or rejected. It can be summarized that the main test that has been presented in this research is descriptive statistics to test the normal distribution of each variable, correlation analysis, and enter method regression analysis. These tests will serve in attending to the evidence and validating the impact of perceived usefulness, perceived ease of use, and trust to use on the intent of use for mobile banking in Chiang Mai Province, Thailand.

Descriptive statistics of the variables

To discover the dimension of perceived usefulness, perceived ease of use, trust of use, and intent of use, average mean score, standard dilation (SD), Skewness (SK), and Kurtosis (KU) for each statement were calculated and displayed in the table below.

Table 1 Descriptive statistics of the variables

Variables	Mean	SD.	SK	KU	Meaning of Mean
Perceived usefulness	3.68	0.495	1.097	0.572	Agree
Perceived ease of use	3.56	0.603	1.025	1.178	Agree
Trust of use	3.78	0.630	0.869	0.835	Agree
Intent of use	3.46	0.620	0.708	0.644	Agree

According to Table 1, most of the variables are rated as Agree as follows; trust to use (Mean = 3.78; SD = 0.630; SK = 0.869; KU = 0.835); perceived usefulness (Mean = 3.68; SD = 0.495; SK = 1.097; KU = 0.572); perceived ease of use (Mean = 3.56; SD = 0.603; SK = 0.869; KU = 0.835) and intent of use (Mean = 3.78; S.D. = 0.630; SK = 0.869; KU = 0.835) respectively. In all the variables, the standard deviation was concluded to be zero. It means that all of the value variables were completed to the mean. The ranges of the skewness of all variables were enclosed by the range of twice the standard error of the skewness of the variables. It indicated that the values were not reached the highest point. Then as well, the ranges of the Kurtosis of all variables were enclosed by the range of twice the standard error of the Kurtosis of the variables. It indicated that the variables were not reached their highest point (Barbosa Cabral, de Souza & Leão, 2022). Then the data distributions of the resultant variables were generally normal.

Correlation analysis

Correlation analysis is applied to quantify the relationship between the extended variables. In this study, the correlation analysis table (Table 2) is based on the Pearson correlation values and significant level. Before starting to test the hypotheses, all the independent variables, which are perceived usefulness (PU), perceived ease of use (PE), and trust to use (TU), have to be positively interlinked with the dependent variable, which is the intent of use (Y_IU). The data shows that the correlation value has a positive linear relationship with sig level =.001.

Citation: Guo, H., Ling, Q., Nan, X., Wei, Y.C., & Wunsuk, P., (2023). Technology Acceptance Model to Intention of Use the Mobile Banking Services in Chiang Mai Province, Thailand. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (4), 131-140; DOI: https://doi.org/10.60027/ijsasr.2023.3077

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (4): July-August 2023, pages 131-140. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2023.3077

Table 2 Correlation analysis

	Y_IU	PU	PE	TU
Y_IU	1.000	0.746**	0.790**	0.727**
PU	0.746**	1.000	0.732**	0.862**
PE	0.790**	0.732**	1.000	0.760**
TU	0.727**	0.862**	0.760**	1.000

The strongest correlation is between Perceived usefulness (PU) and trust of use (TU), with the correlation being positive (r = 0.862, sig level =.001). The weak correlation is between the intent of use (Y_IU) and trust of use (TU), with the correlation being positive (r = 0.727, sig level =.001). The data shows that the correlation values (r) between the variables are highly correlated with a linear combination of the other covariates than 0.700, which is represented by multicollinearity. Table 2, it is shown that the VIF values have not more than 10. The VIF values of this study are 1.207 to 1.314. The tolerance values are below 0.10, which are 0.761 to 0.829. Thus, it can be concluded that there is no multicollinearity (Hair, et al., 2010). All variables can be investigated for hypothesis testing.

Table 3 shows the result of multicollinearity testing

Variables	VIF values	Tolerance values	Meaning
Perceived usefulness (PU)	1.314	0.761	Not Multicollinearity
Perceived ease of use (PE)	1.207	0.829	Not Multicollinearity
The trust of use (TU)	1.261	0.793	Not Multicollinearity

Hypothesis Testing

To investigate the hypothesis, the enter method regression analysis was adopted to determine the impact of perceived usefulness, perceived ease of use, and trust use on the intent of use for mobile banking in Chiang Mai Province, Thailand. This regression equation model can be expressed thus:

$$Y\_IU = a + ß\ PU + ß\ PE + ß\ TU + e$$

The running of entering method regression analysis shows that the results for testing modified hypothesis 1 (H1), hypothesis 2 (H2), and hypothesis 3 (H3) with entering method regression scores are shown in Table 4. The results indicated that all independent variables are positive impact and a significant relationship between intent of use (P_IU), perceived usefulness (PE) (ß = 0.321, p = 0.000), perceived ease of use (PU) (ß = 0.309, p = 0.000) and trust of use (TU) (ß = 0.315, p = 0.000). The model is significant overall (F = 137.0.43 p = 0.000) and has explanatory power (Adjusted R^2 = 0.515). This means that 51.50 percent of the total variation in the model can be explained by the perceived usefulness, perceived ease of use, and trust of use on the intent of use for mobile banking in Chiang Mai Province, Thailand.

Table 4 shows the result of entering the method regression analysis

Independent Variable	Dependent Variable: Y_IU				
	b	**SE**	**ß**	**t**	**p-value**
a(constant)	1.219	0.127		9.626	0.000
PE	0.228	0.029	0.321	7.875	0.000
PU	0.231	0.029	0.309	7.920	0.000
TU	0.233	0.030	0.315	7.901	0.000
R = 0.720, R^2 = 0.519, Adjusted R^2 = 0.515, R^2_{change} = 0.519 F = 137.043, Sig F = 0.000, Durbin-Watson = 1.977					

** p > 0.05*

Citation: Guo, H., Ling, Q., Nan, X., Wei, Y.C., & Wunsuk, P., (2023). Technology Acceptance Model to Intention of Use the Mobile Banking Services in Chiang Mai Province, Thailand. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (4), 131-140; DOI: https://doi.org/10.60027/ijsasr.2023.3077

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (4): July-August 2023, pages 131-140. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2023.3077

Based on the result from the table above, the regression equation for this model is presented below:

$$Y\_IU = 0.127 + ß\ (0.321)\ PU + ß\ (0.309)\ PE + ß\ (0.3015)\ TU + e$$

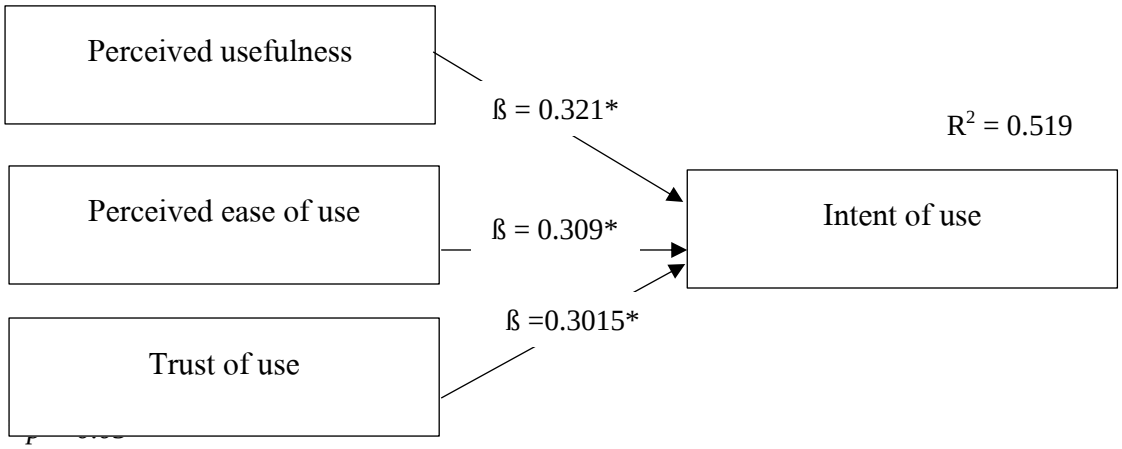

Figure 1 shows the resulting model of this study.

Discussion

This research paper aims to examine the influence of technology acceptance on the intention to use mobile banking services in Chiang Mai Province, Thailand. From the regression equation for this model above, it can be determined that perceived usefulness is higher, and users will perceive higher the intent of use for mobile banking. Hypothesis 1 (H1), therefore, is confirmed with a standardized coefficient Beta 0.321 and significant level 0.05 ($p < 0.05$). The result of hypothesis 1 is supported by several studies (Chen, Tao & Zhou, 2019; Grover, et.al., 2019; Liu, et.al., 2019; Kwok, Yan, Qu & Lau, 2021; Minh-Duc, 2021; Tiwari, Tiwari & Gupta, 2021). In combination with the positive relationship of perceived ease of use are more likely to rate an intent of use for mobile banking. As a result, hypothesis 2 (H2) is confirmed with a standardized coefficient Beta 0.309 and a significant level of 0.05 ($p < 0.05$). This would mean users who live in more perceived ease of use would be more likely to adopt the intent of use for mobile banking. The result of hypothesis 2 developed the relational paradigm for the empirical works by Su, Wang & Yan (2018) Chen, Tao & Zhou (2019) Liu, et.al. (2019) Filieri, et.al. (2021) Kwok, Yan, Qu & Lau (2021) Minh-Duc (2021) and Tiwari, Tiwari & Gupta (2021). Accordingly, the positive impact between trust of use and intent of use is acceptable, and hypothesis 3 (H3) is confirmed with a standardized coefficient Beta 0.315 and a significant level of 0.05 ($p < 0.05$). The positive relationship with the intent of use is explained that the more users in a relative trust of use, the more they are likely to the intent of use mobile banking. The result of hypothesis 3 is similar to Dimitriadis & Kyrezis (2010) Lin, Lu, Wang & Wei (2011) Su, Wang & Yan (2018) Chen, Tao & Zhou (2019) Liu, et al. (2019) Filieri, et al. (2021) Minh-Duc (2021) and Tiwari, Tiwari & Gupta (2021) who conducted the effect of trust of use on the intent of use.

Conclusion

Over the last few years, several studies have been carried out on a worldwide scale that attempts to explain individual behavior of acceptance of new technologies. In Thailand, this study address presenting a conceptual model, where theories such as Financial Technology Application and Technology Adoption (TAM Model) are integrated and applied to country reality. As already mentioned, Thailand is one country in Asians which the highest infiltration rate in mobile services and presents interesting to develop this study because it becomes interesting to understand the perceived usefulness, perceived ease of use, and trust to use impact on intent of use for mobile banking in Chiang

Citation: Guo, H., Ling, Q., Nan, X., Wei, Y.C., & Wunsuk, P., (2023). Technology Acceptance Model to Intention of Use the Mobile Banking Services in Chiang Mai Province, Thailand. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (4), 131-140; DOI: https://doi.org/10.60027/ijsasr.2023.3077

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (4): July-August 2023, pages 131-140. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2023.3077

Mai Province, Thailand. To achieve the intended objectives, this study conforms to the existing model in the literature and, through a collected questionnaire, the necessary data. Based on the conceptual model, this study was able to partially explain the intent of use for mobile banking in Chiang Mai Province, Thailand (0.515) that 51.50 percent of the total variation in the model can explain that perceived usefulness, perceived ease of use and trust to use impact on intent of use for mobile banking in Chiang Mai Province, Thailand. The result expressed that the essential determinants of intent to use mobile banking which is the effect of perceived usefulness, perceived ease of use, and trust of use for mobile banking in Chiang Mai Province, Thailand.

Recommendation

This research presents contributions, both for academic and professional management.

Academic recommendation

This research examines the impact of perceived usefulness, ease of use, and trust of use on mobile banking intent in Thailand. The study highlights the country's collective culture, which allows individuals to be influenced by others' opinions. This collective culture contributes to Thai banking's advantage in adopting mobile banking, as positive customer opinions influence acceptance behavior. The research concludes that perceived usefulness, ease of use, and trust of use are the strongest antecedents of mobile banking intent, directly influencing behavior intention.

Professional management recommendation

Thai banks must introduce mobile banking services to improve customer satisfaction and productivity. This will help identify the best service for customers and compare it to existing services like Internet banking. Addressing risk is crucial, starting with existing users who have low concerns about the service. This will encourage new customers to try the service.

This research focuses on mobile banking in Chiang Mai Province, Thailand, and cannot be applied to other provinces or countries. Future studies should explore the correlation between mobile banking and Internet banking, considering factors like banking business environment and technological differences. Further research should explore customer acceptance, service users' values, and cross-country connections.

References

Adams, D. A., Nelson, R. R., & Todd, P. A. (1992). Perceived Usefulness, Ease of Use, and Usage of Information Technology: A Replication. *MIS Quarterly*, 16(2), 227–247.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior Human Decision Process*. 50,179–211.

Au, Y. A., & Kauffman, R. J. (2008). The economics of mobile payments: Understanding stakeholder issues for an emerging financial technology application. *Electronic Commerce Research & Applications*, 7(2), 141–164.

Bagheri, A., Bondori, A., Allahyari, M. S., & Surujlal, J. (2021). Use of biologic inputs among cereal farmers: application of technology acceptance model. *Environment, Development & Sustainability*, 23(4), 5165–5181.

Barbosa Cabral, C. R., de Souza, N. L., & Leão, J. (2022). Bayesian measurement error models using finite mixtures of scale mixtures of skew-normal distributions. *Journal of Statistical Computation & Simulation*, 92(3), 623–644.

Bati, S., & Gozupek, D. (2019). Joint Optimization of Cash Management and Routing for New-Generation Automated Teller Machine Networks. *IEEE Transactions on Systems, Man & Cybernetics. Systems*, 19(12), 2724–2738.

Chabbi, S., Boudour, R., & Semchedine, F. (2020). A Secure Cloud Password and Secure Authentication Protocol for Electronic NFC Payment Between ATM and Smartphone. *Ingenierie Des Systemes d'Information*, 25(2), 139–152.

Chen, X., Tao, D., & Zhou, Z. (2019). Factors affecting reposting behavior using a mobile phone-based user-generated-content online community application among Chinese young adults. *Behavior & Information Technology*, 38(2), 120–131.

Citation: Guo, H., Ling, Q., Nan, X., Wei, Y.C., & Wunsuk, P., (2023). Technology Acceptance Model to Intention of Use the Mobile Banking Services in Chiang Mai Province, Thailand. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (4), 131-140; DOI: https://doi.org/10.60027/ijsasr.2023.3077

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (4): July-August 2023, pages 131-140. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2023.3077

Davis, F.D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Q*. 13(3):319–340.

Davis. F.D., Bagozzi, R.P. & Warshaw, P.R. (1989). User acceptance of computer technology: a comparison of two theoretical models. *Management Science*, 35(8), 982–1003. https://doi.org/10.1287/mnsc.35.8.982

Dimitriadis, S., & Kyrezis, N. (2010). Linking trust to use intention for technology-enabled bank channels: The role of trusting intentions. *Psychology & Marketing*, 27(8), 799–820.

Electronic Transactions Development Agency. (2021a). *Thailand Internet User Behavior 2020*. Ministry of Digital Economy and Society: Bangkok, Thailand.

Electronic Transactions Development Agency. (2021b). *Value of e-Commerce Survey in Thailand 2020*. Ministry of Digital Economy and Society: Bangkok, Thailand.

Filieri, R., Acikgoz, F., Ndou, V., & Dwivedi, Y. (2021). Is Trip Advisor still relevant? The influence of review credibility, review usefulness, and ease of use on consumers' continuance intention. *International Journal of Contemporary Hospitality Management*, 33(1), 199–223.

Fishbein, M., & Ajzen, I. (1975). *Expectation, Attitude, Intention, and Behavior: An Introduction to Theory and Research. Reading*, MA: Addison-Wesley.

Gonzalez, E., Mitra, S., & Turel, O. (2020). Motivational Impacts on Intent to Use Health-Related Social Media. *Journal of Computer Information Systems*, 60(2), 136–145.

Grover, P., Kar, A. K., Janssen, M., & Ilavarasan, P. V. (2019). Perceived usefulness, ease of use, and user acceptance of blockchain technology for digital transactions – insights from user-generated content on Twitter. *Enterprise Information Systems*, 13(6), 771–800.

Hair, J.F., Black, W.C., Babin, B.J., & Anderson, R.E. (2010*). Multivariate Data Analysis. Seventh Edition*. Prentice Hall, Upper Saddle River, New Jersey.

Ibrahim, M., Sare, Y. A., & Adam, I. O. (2021). An application of frequency domain approach to the causal nexus between information, communication, and technology infrastructure and financial development in selected countries in Africa. *International Journal of Finance & Economics*, 26(1), 1206–1235.

Joo. J. (2016). Exploring Korean Collegians' Smartphone Game Behavior: Focusing on Conciseness, Perceived Ease of Use, Perceived Enjoyment, Flow, and Intent to Use. *Journal of Digital Convergence*, 14(1), 379–386.

Kamkankaew, P. (2020). Corporate Brand Management: The Way to Success for Small and Medium Enterprise. *Journal of Management Sciences, Suratthani Rajabhat University*, 7(2), 218 - 238.

Kamkankaew, P., Chaunwan, C., Phattarowas, V., Limpiaongkhanan, P., Khumwongpin, S. & Sribenjachot, S. (2021). The Impact of Disposal Behavior on Business after the COVID-19: A Preliminary Holistic View of Thai Business. *MUT Journal of Business Administration*, 18(2), 26-42.

Kapadia, J. M. (2020). Blockchain Technology: Application in the Financial Industry. *Scholedge International Journal of Management & Development*, 7(8), 130–135.

Kwok, P. K., Yan, M., Qu, T., & Lau, H. Y. K. (2021). User acceptance of virtual reality technology for practicing digital twin-based crisis management. *International Journal of Computer Integrated Manufacturing*, 34(7/8), 874–887.

Lin, J., Lu, Y., Wang, B., & Wei, K. K. (2011). The role of inter-channel trust transfer in establishing mobile commerce trust. *Electronic Commerce Research & Applications*, 10(6), 615–625.

Liu, Y., Wang, M., Huang, D., Huang, Q., Yang, H., & Li, Z. (2019). The impact of mobility, risk, and cost on the users' intention to adopt mobile payments. *Information Systems & E-Business Management*, 17(2–4), 319–342.

Lu, Y., Yang, S., Chau, P. Y. K., & Cao, Y. (2011). Dynamics between the trust transfer process and intention to use mobile payment services: A cross-environment perspective. *Information & Management*, 48(8), 393–403.

Mavers, S., & Baker, R. (2021). A Look at an Automation Adoption Through a Human Performance Technology Lens: A Case Study of Bank Tellers and Automated Teller Machines. *Performance Improvement*, 60(2), 21–30.

Citation: Guo, H., Ling, Q., Nan, X., Wei, Y.C., & Wunsuk, P., (2023). Technology Acceptance Model to Intention of Use the Mobile Banking Services in Chiang Mai Province, Thailand. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (4), 131-140; DOI: https://doi.org/10.60027/ijsasr.2023.3077

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (4): July-August 2023, pages 131-140. ISSN: 2774-0366
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2023.3077

Minh-Duc Le. (2021). User acceptance of enterprise resource planning systems: a study in small and medium enterprises in Vietnam. *International Journal of Entrepreneurship & Innovation Management*, 25(1), 72–104.

Miraz M. H., Sharif. K. I. M., Hassan. M. G., M. A., Mahyadin F. B. (2021). Bitcoins in the Malaysian Economy, *Journal of Management, Economics, and Industrial Organization*, 5(3), 70-85.

Oh, S., Lehto, X., & Park, J. (2009). Travelers' Intent to Use Mobile Technologies as a Function of Effort and Performance Expectancy. *Journal of Hospitality Marketing & Management*, 18(8), 765–781.

Parikh, A., Patel, J. D., & Jaiswal, A. K. (2021). Managing job applications online: integrating website informativeness and compatibility in theory of planned behavior and technology acceptance model. *Decision (0304-0941)*, 48(1), 97–113.

Rohlinger, D.A., & Bunnage, L. A. (2015). Connecting people to politics over time? Internet communication technology and retention in MoveOn.org and the Florida Tea Party Movement. Information. *Communication & Society*, 18(5), 539–552.

Su, P., Wang, L., & Yan, J. (2018). How users' Internet experience affects the adoption of mobile payment: a mediation model. *Technology Analysis & Strategic Management*, 30(2), 186–197.

Sukwadi, R., Sant Caroline, S. & Yu-Hsin Chen, G. (2022). Extended technology acceptance model for Indonesian mobile wallet: Structural equation modeling approach. *Engineering and Applied Science Research*, 49(2), 146-154.

Sultana, F. & Akter, A. (2021). Women E-Commerce: Perspective in Bangladesh. *Journal of Management, Economics, and Industrial Organization*, 5(3), 1-13.

Tiwari, P., Tiwari, S. K., & Gupta, A. (2021). Examining the Impact of Customers' Awareness, Risk and Trust in M-Banking Adoption. *FIIB Business Review*, 10(4), 413–423.

Tom, R., & Krishnan, M. R., (2021). *A MODEL OF ANTECEDENTS OF BEHAVIOURAL INTENTION TO USE ONLINE BANKING: MEDIATING ROLE OF PERCEIVED EASE OF USE*, Journal of Commerce & Accounting Research **(JCAR)**, 2021, 10(2), PP30-39

Trivedi, S., Mehta, K., & Sharma, R. (2021). Systematic Literature Review on Application of Blockchain Technology in E-Finance and Financial Services. *Journal of Technology Management & Innovation*, 16(3), 88–100.

Wai, M., C. & Wai, C., LJ. (2021). 5G Connected Autonomous Vehicle Acceptance: The Mediating Effect of Trust in the Technology Acceptance Model. *Asian Journal of Business Research*, 11(1), 1–21.

Wang, J., Wagner, N., Sundhararajan, Son, L. H., & Joo, M. (2021). Application of wavelet transform image processing technology in financial stock analysis. *Journal of Intelligent & Fuzzy Systems*, 40(2), 2017–2027.

Wang, L., & Yan, J. (2018). How users' Internet experience affects the adoption of mobile payment: a mediation model. *Technology Analysis & Strategic Management*, 30(2), 186–197.

Wang, Y., Genc, E., & Peng, G. (2020). Aiming the Mobile Targets in a Cross-Cultural Context: Effects of Trust, Privacy Concerns, and Attitude. *International Journal of Human-Computer Interaction*, 36(3), 227–238.

Xu, H. (2013). The Effect of Perceived Security on Consumers' Intent to Use: Satisfaction and Loyalty to M-Commerce in China. *Journal of Electronic Commerce in Organizations*, 11(4), 37–51.

Yu, Z., & Song, X. (2021). User Intention of Anonymous Social Application "Soul" in China: Analysis based on an Extended Technology Acceptance Model. *Journal of Theoretical & Applied Electronic Commerce Research*, 16(7), 2898–2921.

Yukhno, A. S. (2021). Perspective of Blockchain Technology Application in Corporate Governance: Recent Trends. *Management Sciences*, 11(2), 57–72.

Citation: Guo, H., Ling, Q., Nan, X., Wei, Y.C., & Wunsuk, P., (2023). Technology Acceptance Model to Intention of Use the Mobile Banking Services in Chiang Mai Province, Thailand. International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (4), 131-140; DOI: https://doi.org/10.60027/ijsasr.2023.3077