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THE INFLUENCE OF TECHNOLOGY ACCEPTANCE ON THE INTENTION TO USE ONLINE BANKING APPLICATIONS FOR FINANCIAL TRANSACTIONS AMONG GENERATION B USERS IN BANGKOK, THAILAND

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Abstract
This study aimed to investigate the influence of technology acceptance on the intention to use online banking applications for financial transactions. This research was conducted using quantitative research. The sample was 400 Generation B individuals who have previously used online banking applications in Bangkok, Thailand. The research instrument employed was a questionnaire. Descriptive statistics were used for data analysis, while inferential statistics for hypothesis testing involved multiple regression analysis. The study findings indicated that the influence of technology acceptance, regarding relative advantages, compatibility, and complexity affected the intention to use online banking applications among Generation B users in Bangkok with a statistical significance level of .05.
Keywords: Technology Acceptance, Intention to Use Services, Online Banking Applications

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Introduction

The world has currently entered an era where technology plays a crucial role, particularly the use of mobile technology in financial transactions (Dunham et al., 2001). Consumer behavior is rapidly changing, leading daily life to increasingly rely on technology, including the rising trends of Fintech and startups related to various financial services. Kongphalee (2020) stated that Thailand is promoting the concept of a cashless society, with the government adjusting its strategic plans and developing the infrastructure for electronic payment systems by collaborating with commercial banks and the Bank of Thailand to advance banking applications (Tansakul, 2022).

This transformation has resulted in heightened competition in the digital technology service sector, alongside new risks such as cyber risk. Therefore, government digital agencies must enhance governance and elevate consumer protection to build trust and understanding in safely using financial services. This risk has led some consumer groups to feel concerned and distrustful of mobile banking, stemming from misunderstandings and a lack of awareness about its benefits (Dunham et al., 2001). Consequently, building trust is a vital factor influencing customers' decisions to utilize these services, particularly among elderly individuals who are concerned about using technology (Rodkhem & Chaiprasit, 2019).

According to the 2022 report on the situation of Thai elderly, Thailand has 13 million senior citizens, accounting for 20% of the population, which includes the Generation B individuals aged 60 and above. This group possesses both time and purchasing power and continues to seek financial services. However, Gen Bs may need to adapt to the digital era that emphasizes online transactions, especially using mobile phones for various transactions (Magotra et al., 2018). Mobile banking applications are one example developed to meet this demand (Chiwosophit, 2019).

The acceptance of technology and the awareness of its benefits have motivated Gen B consumers to choose mobile phone services for their transactions (Thep-on et al., 2023), particularly in Bangkok, Thailand, where there has been continuous growth in the number of Internet banking and mobile banking users. This study aims to examine the influence of technology acceptance on the intention to use online banking applications for financial transactions among Generation B consumers in Bangkok. The findings of this study will guide banks in developing online banking applications that effectively meet the future needs of the elderly population.

Literature Review

Influence of Relative Advantage on the Intention to Use Online Banking Applications

One of the key factors impacting technology acceptance is the users' perception that online banking applications are more beneficial than traditional methods (Li et al., 2021). Speed and convenience are major factors that create a relative advantage (Khrais & Alghamdi, 2021). Users can perform financial transactions, such as money transfers, bill payments, and balance inquiries quickly and conveniently through online banking applications, saving time and reducing the costs of traveling to a bank (Jebarajakirthy & Shankar, 2021). Additionally, easier access to banking services without restrictions on location and time enhances users' perception of the value of using online banking applications (Wang et al., 2018).

Influence of Compatibility on the Intention to Use Online Banking Applications

When online banking applications can adapt well to customers' lifestyle and spending behaviors, there is a higher likelihood of acceptance (Ugur & Turan, 2019). Applications that meet user needs and align with daily routines make users feel that they are convenient and easy to use (Divya & Hebbar, 2021). Furthermore, the ability to support existing technologies, such as smartphones or other services used by customers, increases the likelihood of acceptance for the application (Awais et al., 2022).

Influence of Complexity on the Intention to Use Online Banking Applications

Complexity in using online banking applications is a significant factor affecting users' intention to utilize these services (Gao et al., 2019). Users who find the applications overly complex tend to have a reduced intention to use the services (Venkatesh et al., 2003). A positive user experience, easily-used design of applications and providing clear guidance help reduce users' perception of complexity. Additionally, having a support system and a responsive team that can answer questions and resolve issues promptly will make users feel that the service is straightforward and encourage them to try it (Parasuraman et al., 2005).

Influence of Observability on the Intention to Use Online Banking Applications

The observable effects of technology on individuals within society will enhance the acceptance of that technology (Corral et al., 2021). Recognizing the benefits of using online banking applications, such as displaying account balances, transaction alerts, and confirmation of transactions, will increase users' confidence in the application's credibility and their intention to use the service more (Ntsiful et al., 2020; Yin & Lin, 2022).

Research Hypotheses

The influence on technology acceptance consists of the influence of relative advantages, compatibility, complexity, and observability, which affect the intention to use online banking applications for financial transactions among Gen B users.

Research Framework

The researcher has reviewed literature, textbooks, concepts, theories, and related works to develop a research framework, as illustrated in Figure 1.

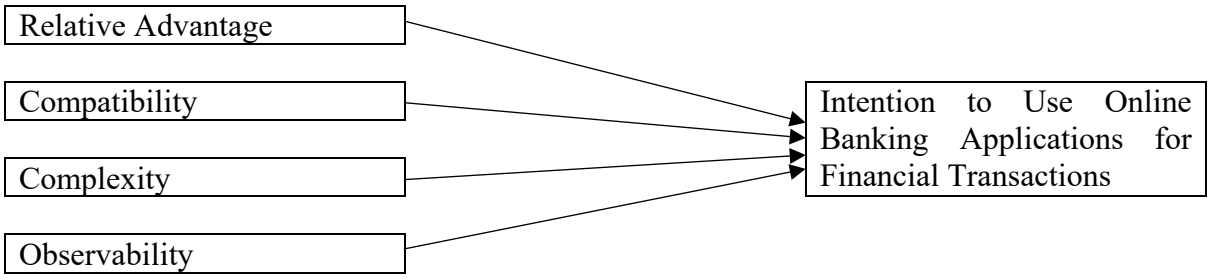

Figure 1 Research Framework

Research Methodology

This research employed a survey approach, using questionnaires as the primary tool for data collection from the sample. The purpose of this survey research was to study the factors influencing the intention to use online banking applications for financial transactions among the elderly in Bangkok, Thailand.

Population and Sample

The population for this study consisted of Generation B individuals who have used online banking applications in the Bangkok area, with the unit of analysis being individual persons. The sample size was determined using Cochran's formula (Cochran, 1977), which is referenced in several research works. This formula is used when the exact population size is unknown but there is a need to estimate the proportion of the population, with a confidence level set at 95% and an allowable margin of error of 5%. Therefore, the calculated sample size is 384 samples. To cover the entire population and ensure accuracy, the researcher reserved an additional 5% of the sample, resulting in an approximate sample size of 400. For sample selection, the researcher employed non-probability sampling, specifically purposive sampling, which involves selecting samples based on their characteristics, focusing on Generation B individuals who have previously used online banking applications in the Bangkok area.

Data Collection and Data Analysis

In this study, the researcher utilized an online questionnaire that underwent validation for reliability. The Item-Objective Congruence (IOC) index was calculated at 0.97, and the overall reliability, as assessed by Cronbach's alpha coefficients, ranged from .87 to .94, indicating high reliability of the questionnaire (Vanishbanchaya, 2003).

In testing the research hypotheses, the researcher employed multiple regression analysis using the Enter method. Issues of multicollinearity among independent variables were examined using Tolerance and Variance Inflation Factor (VIF) statistics.

Research Results

The analysis of personal data revealed that most respondents were female, with an age range of 58 to 62 years. The majority were self-employed and held at least a bachelor's degree, with an average monthly income between 10,001 and 40,000 baht.

Analysis of Acceptance of Technology and Intent to Use Online Banking Applications for Financial Transactions among Generation B Users in Bangkok

This analysis aims to describe the general influence of technology acceptance and the intention to use online banking applications for financial transactions among Generation B users in Bangkok, as shown in Tables 1 and 2.

Table 1 presents the mean and standard deviation of the overall influence of technology acceptance.

Influence of technology acceptance	Mean	Standard deviation	Interpret
- Relative advantages	4.31	.62	High
- Compatibility	4.01	.74	High
- Complexity	3.18	.90	Moderate
- Observability	4.01	.72	High
Total mean	**3.88**	**.74**	**High**

From Table 1, it was found that respondents had their opinion about the influence of technology acceptance at a high level. When considering each factor, the influence of relative advantage was at the highest level and received the highest level of agreement from respondents, followed by observability, which also gained the high level of agreement. In contrast, the influence of complexity was at the lowest level of agreement, which was rated at a moderate level.

Table 2 presents the mean and standard deviation of the intention to use online banking applications for financial transactions among Generation B users in Bangkok.

Intention to use	Mean	Standard deviation	Interpret
- Performance Expectancy	4.15	.73	High
- Facilities	4.20	.63	High
- Social influence	3.55	.73	High
- Anxiety	3.75	.56	High
- Perceive usefulness	4.05	.69	High
- Perceived ease of use	3.98	.73	High
Total mean	**3.95**	**.68**	**High**

From Table 2, respondents expressed their overall intention to use the services at a high level. When considering individual factors, the perceived ease of use ranked the highest, followed by the performance expectancy, both rated at high levels. Conversely, social influence was at the lowest level of agreement but still retained a high level of rating.

Hypothesis Testing Results

This analysis aims to address the research objectives to study the influences of technology acceptance on the intention to use online banking applications for financial transactions among Generation B users in Bangkok, testing the research hypothesis that technology acceptance influences the intention to use online banking applications. This was accomplished using normal regression analysis, but since this technique requires that no independent variables be highly correlated (Multicollinearity), the researcher must first check the Tolerance and Variance Inflation Factor (VIF) of all independent variables, which represents the condition testing for multiple regression analysis, as shown in Table 3.

Table 3 presents the Tolerance and VIF values for the independent variables.

Variables	**tolerance**	**VIF**
- Relative advantages	.40	2.53
- Compatibility	.39	2.58
- Complexity	.98	1.02
- Observability	.53	1.90

From Table 3, it was evident that the predictor variables had low correlations, as indicated by Tolerance values greater than 0.2 (Pedhazur, 1997) and VIF values less than 4 (Dialsingh et al., 2001). Therefore, it was in accordance with the initial agreement of using the multiple regression analysis statistics. Then, the linearity of the scores from the criterion variables and the predictive variables was tested using the analysis of variance method or the F-test statistic, as shown in Table 4.

Table 4 presents variance of the influence of technology acceptance on the intention to use online banking applications

Sources of data	**SS**	**df**	**MS**	**F**	**Sig.**
Regression equation	64.46	4	16.12	**119.98**	**.000****
Variance	53.60	395	.134		
Total	117.52	**399**			

**Statistically significant at the .01 level

Table 4 presents all independent variables that can significantly predict the influence of technology acceptance on the intention to use online banking applications at the .01 level of statistical significance. A stepwise regression analysis was then conducted to develop an equation that expresses the influence of technology acceptance on the intention to use online banking applications, as shown in Table 5.

Table 5 presents statistical values of predictive variables used to predict intention to use online banking application services.

Predictive variables	**b**	**S.E.**	***β***	**t**	**Sig.**
- Relative advantages (X_1)	.358	.071	.298	5.060	.000**
- Compatibility (X_2)	.374	.068	.348	5.516	.000**
- Complexity (X_3)	-.189	.084	-.160	-2.242	.026*
- Observability (X_4)	.086	.064	.080	1.357	.176
Constant values (a)	.729	.195		3.738	.000**
R = .74, R2 = .54, SEE = .37, F = 119.98, Sig of F = .000					

*Statistically significant at the .05 level.; **Statistically significant at the .01 level.

Table 5 indicated the multiple regression coefficients of predictive variables used to predict the intention to use online banking applications and constant values with a statistical significance at the .05 level. The researcher therefore used the coefficients of predictive variables to write an equation showing the influence of technology acceptance on the intention to use online banking application services using raw scores as follows:

$Y = .73 + .36(X_1) + .37(X_2) + -1.89(X_3)$

The analytic results of the influence of technology acceptance on the intention to use online banking applications through multiple regression analysis revealed that, as indicated in Table 5, there were three significant predictor variables affecting the intention to use online banking applications: the influence of relative advantages (X1), compatibility influence (X2), and complexity influence (X3). On the other hand, the observability influence (X4) was found to be statistically insignificant.

The influence of relative advantages (X1) had a coefficient of .36 and a t-value of 5.060 (Sig. = .000), indicating that users are more likely to utilize online banking applications when they perceive clear relative advantages over other services.

This influence of relative advantage was positive and statistically significant at the .01 level, suggesting that with an increase of 1 unit in relative advantages (X1), the intention to use online banking applications increases by 0.36 units. Meanwhile, the compatibility influence (X2) had a coefficient of .37 and a t-value of 5.516 (Sig. = .000), signifying that users are more inclined to use online banking applications when they feel that the application aligns well with their lifestyle or daily activities. This compatibility influence was also positive and statistically significant at the .01 level, indicating that an increase of 1 unit in compatibility influence (X2) leads to an increase of 0.37 units in the intention to use online banking applications. Lastly, the complexity influence (X3) had a coefficient of -1.89 and a t-value of -2.242 (Sig. = .026), indicating that users are less likely to utilize online banking applications if they find them complicated to use. This influence of complexity was negative and statistically significant at the .05 level, suggesting that an increase of 1 unit in perceived complexity will reduce the intention to use online banking services by 0.19 units. On the other hand, the observability influence (X4) had a coefficient of b = -0.086 and a t value of -1.357 (Sig. = .176), which showed that the observability of online banking applications did not significantly influence the intention to use these services.

When analyzing the adjusted coefficient of determination (Adjusted R Square = 0.54), it was found that the influence of technology acceptance on the intention to use online banking applications was explained by the relative advantages (X1), compatibility (X2), and complexity (X3), accounting for 54%. The remaining 46% was attributed to other factors not considered in this analysis.

Research hypothesis testing revealed that the influences of relative advantages, compatibility, and complexity all affected the intention to use online banking applications for financial transactions among Generation B users, while the observability influence did not significantly affect this intention.

Conclusion and Discussion

The findings indicated that the influence of technology acceptance on the intention to use online banking applications was driven by the relative advantages (X1), compatibility (X2), and complexity (X3), which together account for 54%. The remaining 46% was influenced by other unconsidered factors. This may be because these three aspects of technology acceptance played a crucial role in online banking application use among Generation B, leading them to embrace technologies that impact their intention to use online banking services and fostering diversity in organizing marketing activities. This is consistent with the research conducted by Karlnate & Vannavanit (2021), which examined the technology acceptance model and trust

affecting the use of the "SCB Easy" service. It was found that perceived ease of use and trust in the service significantly influence the use of "SCB Easy" mobile banking services from Siam Commercial Bank at the highest level. The factors of perceived ease of use and trust positively influenced mobile banking usage with coefficients of 0.421 and 0.393, respectively. This was also in line with the research of Montazemi & Qahri-Saremi (2015), which investigated factors of trust in mobile banking services, indicating that trust in the bank affected mobile banking usage. The trust established in the bank's branches was highly related to mobile banking services and significantly determined the effectiveness of these services. Furthermore, since mobile banking services do not have direct interaction with customers, even if customers have long-standing trust in the bank, increasing trust in mobile banking services requires advancements in security measures to foster customer confidence and ensure ease of use.

Recommendations

1) Developing a user-friendly application: The design of the online banking application should prioritize simplicity and ease of use, to facilitate quick and convenient financial transactions for Generation B users.

2) Promoting advisory services: The bank should provide financial transaction consultation services to build confidence and acceptance of technology among Generation B users, which will lead to increased usage of online banking applications.

3) Developing system quality and security: The bank should enhance the quality and security of its online banking system, ensuring it is accessible anytime, anywhere, to increase user convenience.

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