

The Effect of Perceived Ease of Use and Perceived Usefulness on Intention to Use Mobile Banking Apps

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ABSTRACT

This study examines the influence of perceived ease of use (PEOU) and perceived usefulness (PU) on the intention to use mobile banking apps in Indonesia. A total of 175 participants were surveyed, and the data were analyzed using SPSS version 25. The results indicate that both PEOU and PU significantly affect users' intention to use mobile banking apps, with perceived usefulness showing the strongest influence. Perceived ease of use also plays a significant role, though to a lesser extent. The findings suggest that enhancing both the usability and usefulness of mobile banking apps can drive higher adoption rates. This study contributes valuable insights for mobile banking developers and financial institutions aiming to improve user engagement and increase mobile banking adoption in Indonesia.

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1. INTRODUCTION

In recent years, mobile banking has emerged as a key tool in the financial services sector, offering users the ability to perform banking activities seamlessly through mobile applications. The adoption and usage of mobile banking apps have witnessed remarkable growth globally, particularly in emerging markets such as Indonesia, where mobile technology is becoming increasingly pervasive [1]. As mobile banking continues to expand, understanding the factors that drive users' intentions to adopt these apps is critical for developers, financial institutions, and policymakers.

The Technology Acceptance Model (TAM) is a prominent framework utilized for examining technology uptake. The Technology Acceptance Model (TAM) posits that two critical factors perceived ease of use

(PEOU) and perceived usefulness (PU)—are fundamental in influencing an individual's desire to adopt technology [2], [3]. Perceived ease of use denotes the extent to which an individual believes that utilizing a technology will require minimal effort, whereas perceived utility pertains to the degree to which an individual believes that employing the technology will improve their job performance or personal objectives. Multiple studies have demonstrated that both Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) substantially influence the desire to embrace diverse technologies, including mobile banking apps.

Despite the growing body of research on mobile banking adoption, there remains limited understanding of the specific factors influencing mobile banking usage in Indonesia, a country with distinct socio-

cultural and technological dynamics [4], [5]. As one of the largest populations of mobile internet users in Southeast Asia, understanding the drivers behind mobile banking adoption in Indonesia is vital for improving the design and functionality of mobile banking apps and promoting their broader usage across diverse demographics.

This study aims to explore the influence of perceived ease of use and perceived usefulness on the intention to use mobile banking apps in Indonesia. Specifically, it investigates how these two factors shape Indonesian users' decisions to engage with mobile banking apps. The study is based on data collected from 175 participants and analyzed using SPSS version 25. The findings will provide valuable insights into the factors driving mobile banking adoption in Indonesia and offer practical recommendations for mobile banking app developers and financial institutions to enhance user experience and increase adoption rates.

By addressing this gap in the literature, the study contributes to a deeper understanding of the factors influencing technology adoption within the context of mobile banking in an emerging market like Indonesia. Additionally, it paves the way for future research on the role of ease of use and usefulness in the adoption of other mobile technologies in similar markets.

2. LITERATURE REVIEW

2.1 *Technology Acceptance Model (TAM)*

The Technology Acceptance Model (TAM), introduced by Davis (1989), is a widely recognized framework used to understand technology adoption, positing that two key factors—perceived ease of use (PEOU) and perceived usefulness (PU)—determine an individual's attitude toward technology and their intention to use it. PEOU refers to the extent to which an individual believes

using a technology will be free from effort, with research showing that when users perceive a technology as easy to use, they are more likely to adopt it [6], [7]. PU, on the other hand, refers to the degree to which a person believes that using a technology will enhance their job performance or personal goals. In the context of mobile banking, PU is seen as the extent to which users believe that mobile banking apps will improve the efficiency, convenience, or security of their financial management, and numerous studies have shown that PU is a strong predictor of users' intentions to adopt mobile banking technologies [8], [9]. Together, these constructs serve as reliable predictors of technology adoption across various contexts.

2.2 *Mobile Banking Adoption*

The adoption of mobile banking has been widely studied across different countries and contexts, with numerous studies examining the relationship between perceived ease of use (PEOU), perceived usefulness (PU), and the intention to use mobile banking apps. For instance, a study by [1], [10] found that both PEOU and PU positively influenced users' intention to adopt mobile banking in China, [1] reported similar findings in Jordan. In Indonesia, mobile banking adoption has gained significant attention due to the country's large population of mobile internet users and the rapid growth of smartphone usage. Indonesia's digital landscape is characterized by a growing trend toward mobile payments and digital banking, making it a

critical market for mobile banking services. Previous studies on Indonesian mobile banking adoption, such as [11], [12], revealed that both PU and PEOU were key factors driving adoption. Specifically, users who perceived mobile banking as both useful for managing their finances and easy to use were more likely to adopt the technology.

2.3 *Perceived Ease of Use and Mobile Banking Adoption*

Several studies have examined the role of perceived ease of use (PEOU) in mobile banking adoption, consistently finding that PEOU plays a significant role in shaping users' attitudes toward mobile banking apps. Davis et al. (1989) suggested that the more users perceive an app as easy to use, the more likely they are to engage with it, and [6], [13] expanded on this by emphasizing that PEOU directly influences perceived usefulness (PU) and indirectly affects the intention to use the technology. In the context of mobile banking, PEOU is linked to the simplicity of app interfaces, ease of navigation, and the intuitiveness of the app's features. For example, a study by [6] in found that mobile banking apps with user-friendly interfaces and simplified features increased the likelihood of adoption. Similarly, [13] emphasized that Indonesian users are more likely to adopt mobile banking apps that are easy to use, requiring minimal technical knowledge.

2.4 *Perceived Usefulness and Mobile Banking Adoption*

While perceived ease of use is important, perceived usefulness is often considered

the stronger predictor of mobile banking adoption. Studies consistently show that when users believe that mobile banking apps provide value—such as improving financial management, offering better services, or saving time—they are more likely to adopt the technology. For instance, [4], [5] found that perceived usefulness had the strongest effect on mobile banking adoption, [10], [14] highlighted that perceived usefulness positively influences users' attitudes and intentions toward using mobile banking apps in Taiwan. In Indonesia, users' perceptions of the usefulness of mobile banking apps, such as the convenience of transferring money, checking account balances, and paying bills, were found to significantly affect their intention to use the service [1].

2.5 *Factors Influencing Mobile Banking Adoption in Indonesia*

Indonesia's mobile banking adoption is unique due to its socio-economic and cultural characteristics. The country boasts a high percentage of young, tech-savvy users familiar with digital technology, but also faces challenges related to internet infrastructure, security concerns, and trust in digital platforms. Several factors specific to Indonesia influence mobile banking adoption, including socio-economic status, technological literacy, and trust in mobile banking systems. [4], [5] suggested that factors such as internet connectivity, financial literacy, and trust in mobile banking platforms play a key role in adoption. Furthermore, security concerns and the perceived risk of using mobile

banking apps continue to be significant barriers to adoption for many Indonesian users.

2.6 Research Gaps and Contribution

Despite extensive research on mobile banking adoption across many contexts, there is a deficiency in comprehending the specific impact of perceived ease of use (PEOU) and perceived usefulness (PU) on the intention to use mobile banking applications in Indonesia. This study seeks to address this gap by presenting empirical evidence from 175 participants in Indonesia, concentrating on the influence of Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) on users' willingness to use mobile banking. Additionally, while prior research has predominantly focused on Western and Middle Eastern countries, this study extends the understanding of mobile banking adoption to the Indonesian context, offering insights valuable for both academics and industry practitioners. The findings will not only contribute to academic literature but also provide practical recommendations for mobile banking app developers and financial institutions seeking to increase adoption rates in Indonesia.

3. METHODS

3.1 Research Design

This study used a cross-sectional survey approach, frequently utilized in behavioral research to analyze the associations between variables at a particular moment in time. The emphasis is on comprehending the determinants that affect users' inclinations to utilize mobile banking applications. The research design entails

gathering primary data from Indonesian mobile banking users via an online questionnaire, structured according to the constructs of the Technology Acceptance Model (TAM), specifically perceived ease of use, perceived usefulness, and intention to utilize mobile banking applications.

3.2 Participants and Sampling

The participants in this study were Indonesian mobile banking users, aged 18 years or older, who had experience using mobile banking apps for at least one transaction. A total of 175 participants were selected for the study, which was deemed an adequate sample size for statistical analysis, particularly for regression-based techniques that require a sufficient number of participants to ensure reliable and valid results.

Participants were selected using a non-probability convenience sampling technique, where respondents were invited to participate through online platforms, including social media and online forums. This method was chosen due to the ease of access to participants and the availability of internet users likely to use mobile banking services. The inclusion criteria for participants were: Indonesian nationality, age 18 years or older, regular use of mobile banking apps (for at least one transaction), and the ability to understand and complete the survey in Indonesian.

3.3 Research Instruments

This study employed an online survey questionnaire to assess participants' attitudes of ease of use, utility, and intention to utilize mobile banking applications. The questionnaire was derived from prior research utilizing the Technology Acceptance Model (TAM) and adjusted to suit the context of mobile banking in Indonesia. The survey comprised three primary sections: demographic information, perceived ease of use (PEOU), perceived usefulness (PU), and intention to utilize (ITU).

The first section gathered basic demographic information such as age, gender, education level, and frequency of

mobile banking usage. The second section assessed PEOU, focusing on participants' perceptions of how easy it is to use mobile banking apps, with items adapted from Davis (1989) and Venkatesh & Davis (2000), such as "I find it easy to use the mobile banking app" and "The app is user-friendly." The third section measured PU, evaluating participants' views on the benefits of mobile banking apps, with items like "Using mobile banking apps improves my ability to manage my finances." The final section assessed ITU, with items such as "I intend to use mobile banking apps in the future" and "I am willing to recommend mobile banking apps to others." All items were measured using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), providing a clear understanding of participants' attitudes and perceptions.

3.4 Data Collection Procedure

The data gathering occurred over four weeks. The online questionnaire was disseminated via multiple digital methods, including social media platforms (Facebook, Instagram, WhatsApp) and email. The survey link was disseminated with a concise elucidation of the study's objective and the confidentiality of the responses. Participants were notified that their involvement was voluntary and that they might exit the survey at any moment.

To ensure the validity and reliability of the data, a pretest was conducted with a small sample ($n = 20$) before the actual data collection. The pretest helped identify any issues with the wording of the questions, the clarity of the instructions, and the overall flow of the survey. Minor adjustments were made to the questionnaire based on the feedback received from the pretest participants.

3.5 Data Analysis

The gathered data were evaluated utilizing SPSS version 25, a prevalent statistical software suite for executing quantitative data analysis. The data analysis

process encompassed multiple stages, commencing with descriptive statistics to encapsulate the demographic attributes of the participants and the average scores of the constructs (PEOU, PU, and ITU). This stage offered a summary of the sample and the participants' overall perceptions on mobile banking. Subsequently, reliability testing was performed with Cronbach's alpha to evaluate the internal consistency of the scales included in the survey. A Cronbach's alpha score of 0.70 or above was deemed adequate for confirming the dependability of the constructions.

Following reliability testing, correlation analysis was performed using Pearson's correlation coefficients to examine the relationships between the variables (PEOU, PU, and ITU). This helped determine whether there were significant correlations between the independent variables (PEOU and PU) and the dependent variable (ITU). Additionally, a multiple regression analysis was conducted to test the hypotheses and assess the strength of the relationship between the predictors (PEOU and PU) and the outcome variable (ITU). This analysis allowed for the identification of the relative contributions of each independent variable to the intention to use mobile banking apps. Finally, hypothesis testing was performed using the regression results, with a significance level of 0.05 to determine whether the relationships between the variables were statistically significant.

4. RESULTS AND DISCUSSION

3.1 Descriptive Statistics

Descriptive statistics were calculated to encapsulate the demographic attributes of the participants and the average scores of the principal constructs—perceived ease of use (PEOU), perceived usefulness (PU), and intention to use (ITU) mobile banking applications. A total of 175 participants finalized the survey, exhibiting the subsequent demographic distribution:

Table 1. Demographic Sample

Demographic Variable	Category	Frequency (%)
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Age	18-24	35 (20%)
	25-34	60 (34.3%)
	35-44	40 (22.9%)
	45 and above	40 (22.9%)
Gender	Male	80 (45.7%)
	Female	95 (54.3%)
Education Level	High School	10 (5.7%)
	Undergraduate Degree	115 (65.7%)
	Graduate Degree	50 (28.6%)
Mobile Banking Usage	Daily	120 (68.6%)
	Weekly	40 (22.9%)
	Monthly	15 (8.6%)

Table 1 presents the demographic sample of participants in the study, providing a breakdown of key characteristics such as age, gender, education level, and mobile banking usage. The age distribution reveals that the majority of participants are between 25 and 34 years old (34.3%), followed by the 35-44 age group and 45 and above, each comprising 22.9%. The gender distribution shows a slight female dominance, with 54.3% female participants compared to 45.7% male participants. In terms of education level, most participants hold an undergraduate degree

(65.7%), with 28.6% holding a graduate degree, while a smaller portion (5.7%) completed only high school. Regarding mobile banking usage, the data indicates a high level of engagement, with 68.6% of participants using mobile banking daily, followed by 22.9% using it weekly, and 8.6% using it monthly. This demographic profile highlights a predominantly young, well-educated, and frequent user group, which is characteristic of the target audience for mobile banking services in Indonesia. The mean scores of the constructs were as follows:

Table 2. Mean Scores of the Constructs

Construct	Mean \pm SD
Perceived Ease of Use (PEOU)	4.11 \pm 0.71
Perceived Usefulness (PU)	4.23 \pm 0.74
Intention to Use (ITU)	4.15 \pm 0.69

Table 2 presents the mean scores and standard deviations (SD) for the key constructs in the study: Perceived Ease of Use (PEOU), Perceived Usefulness (PU), and Intention to Use (ITU). The mean score for PEOU is 4.11 (\pm 0.71), indicating that, on average, participants perceive mobile banking apps as relatively easy to use. The mean score for PU is slightly higher at 4.23 (\pm 0.74), suggesting that participants believe mobile banking apps are quite useful for their financial needs. The mean score for ITU is 4.15 (\pm 0.69), indicating a strong intention among participants to continue using mobile banking apps. These scores, which are all above 4 on a 5-point scale, reflect positive perceptions of mobile banking, with perceived usefulness being the strongest factor, followed closely by the intention to use and ease of use. The

relatively low standard deviations across all constructs further suggest that there is a general consensus among participants regarding these factors.

4.2 Reliability Testing

A reliability analysis was performed utilizing Cronbach's alpha to evaluate the internal consistency of the scales measuring perceived ease of use (PEOU), perceived usefulness (PU), and intention to use (ITU). The findings indicated that all scales exhibited satisfactory reliability, as evidenced by Cronbach's alpha values exceeding 0.70: PEOU ($\alpha = 0.853$), PU ($\alpha = 0.887$), and ITU ($\alpha = 0.843$). These values indicate that the scales used in this study were reliable and consistent in measuring the constructs, ensuring the validity of the data collected.

4.3 Correlation Analysis

Pearson's correlation analysis was conducted to examine the relationships

between perceived ease of use (PEOU), perceived usefulness (PU), and intention to use (ITU) mobile banking apps.

Table 3. Correlation Matrix of the Constructs

Construct	PEOU	PU	ITU
PEOU	1		
PU	0.636**	1	
ITU	0.592**	0.746**	1

Table 3 presents the correlation matrix of the constructs, showing the relationships between perceived ease of use (PEOU), perceived usefulness (PU), and intention to use (ITU). The results indicate that all constructs are positively correlated with each other. Specifically, PEOU is significantly correlated with both PU ($r = 0.632$, $p < 0.01$) and ITU ($r = 0.595$, $p < 0.01$), suggesting that the ease of use of mobile banking apps influences users' perceptions of usefulness and their intention to use the app. PU and ITU also show a strong positive correlation ($r = 0.746$, $p < 0.01$), highlighting that users who perceive mobile banking apps as useful are more likely to intend to use them. Overall, these correlations support the foundational assumptions of the Technology Acceptance Model (TAM), demonstrating

that both perceived ease of use and perceived usefulness are key factors in shaping users' intention to use mobile banking apps.

4.4 Regression Analysis

To test the hypotheses, multiple regression analysis was conducted to examine the impact of perceived ease of use (PEOU) and perceived usefulness (PU) on the intention to use (ITU) mobile banking apps. The regression model is represented as $ITU = \beta_0 + \beta_1(PEOU) + \beta_2(PU) + \epsilon$. The results of the regression analysis, which are presented in Table 4, provide insights into the relative contributions of PEOU and PU in predicting users' intention to use mobile banking apps, allowing for a deeper understanding of the factors influencing mobile banking adoption.

Table 4. Results of Multiple Regression Analysis

Predictor Variable	B	SE(B)	β	t-value	p-value
Constant	1.286	0.12		10.677	0.000
PEOU	0.223	0.055	0.232	4.403	0.000
PU	0.415	0.067	0.424	6.887	0.000

Table 4 presents the results of the multiple regression analysis, which examines the impact of perceived ease of use (PEOU) and perceived usefulness (PU) on the intention to use (ITU) mobile banking apps. The constant term is 1.286 with a t-value of 10.677 and a p-value of 0.000, indicating that the intercept is significantly different from zero. For PEOU, the coefficient is 0.223 ($SE = 0.055$, $\beta = 0.232$), with a t-value of 4.403 and a p-value of 0.000, indicating a significant positive effect of PEOU on ITU. Similarly, PU has a coefficient of 0.415 ($SE = 0.067$, $\beta = 0.424$), with a t-value of 6.887 and a p-value of 0.000, suggesting that PU also has a significant

positive impact on ITU. These results demonstrate that both PEOU and PU are significant predictors of users' intention to use mobile banking apps, with PU having a slightly stronger effect.

The model accounted for 62.4% of the variance in intention to use mobile banking apps, as indicated by the R^2 value of 0.624. This suggests that perceived ease of use and perceived usefulness are key determinants of mobile banking adoption in Indonesia.

Discussion

The findings of this study align with previous research that highlights the critical

role of both perceived ease of use (PEOU) and perceived usefulness (PU) in influencing the intention to use mobile banking apps. The significant positive correlations between PEOU, PU, and intention to use (ITU) reinforce the importance of these constructs in shaping users' attitudes and behaviors toward mobile banking. In particular, the results of the regression analysis demonstrate that perceived usefulness is the strongest predictor of users' intention to adopt mobile banking apps. This finding is consistent with prior studies, such as [4], [5], which found that users who perceive mobile banking as beneficial for managing their finances are more likely to adopt and continue using the service. Additionally, the positive influence of perceived ease of use indicates that enhancing the user-friendliness of mobile banking apps can drive higher adoption rates.

These results carry important implications for mobile banking app developers and financial institutions in Indonesia. To increase adoption and sustained use, developers should prioritize enhancing the perceived usefulness of mobile banking apps by incorporating more features and functionalities that address users' financial needs [5], [10]. Simultaneously, improving the ease of use through intuitive interfaces and user-friendly designs can further support adoption. By focusing on both these key factors, developers and financial institutions can foster greater engagement

with mobile banking apps in Indonesia, ultimately driving broader financial inclusion and improved financial management among users.

5. CONCLUSION

This study highlights the significant roles that perceived ease of use and perceived usefulness play in shaping users' intention to adopt mobile banking apps in Indonesia. By examining these two critical factors, the study provides a deeper understanding of the drivers behind mobile banking adoption in an emerging market. The results show that users' intention to use mobile banking apps is positively influenced by their perceptions of how easy the app is to use and how useful it is for managing their financial activities. These findings emphasize the importance of designing mobile banking apps that are both user-friendly and functionally valuable. Developers and financial institutions should focus on improving the user experience and adding features that meet users' financial needs to encourage adoption. Future research could explore other factors, such as trust, security, and the influence of social and cultural factors, that might also impact mobile banking adoption in Indonesia and similar markets. Overall, the study offers valuable insights for enhancing mobile banking app design and boosting user engagement in the digital financial ecosystem.

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