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The UTAUT Implementation Model in Defining the Behavioral Intention of Mobile Banking Users

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Abstract

Research aims: This goal is to comprehend how the UTAUT model was used to influence mobile banking behavior intentions and act as a mediator variable along with attitude.

Design/Methodology/Approach: A quantitative approach and a sample size of 110 respondents using mobile banking were used. The deployment questionnaire for the retrieval technique sample was completed using Google Forms, and the sampling strategy was a snowball. In this study, both data analysis and hypothesis evaluation were performed utilizing PLS-SEM.

Research findings: The study uncovered that out of ten hypotheses, seven were accepted, and three were rejected. In this study, performance expectancy, facilitating conditions, and social influence variables could all have an impact on attitude. With regard to behavioral intention, attitude served as a mediator between performance expectancy, social influence, and facilitating conditions. Aside from serving as a mediator, the attitude directly affected behavioral intentions. The results indicate that attitude was not significantly affected by effort expectations, and behavioral intentions were not significantly impacted by trust.

Theoretical Contribution/Originality: The Unified Theory of Acceptance and Use of Technology (UTAUT) was employed in this study to understand better how the UTAUT model was applied in influencing mobile banking behavior intentions, as well as how attitude functions as a variable mediator.

Practitioners/Policy Implications: Results from the study have implications for how mobile banking users' behavioral intentions may change depending on their performance expectancy, social influence, facilitating conditions, and attitudes.

Research Limitations/Implications: Further research is required to observe other aspects, such as the desire to keep utilizing mobile banking, as it is the focus of this study, which was restricted to behavioral intention based on the considerations of UTAUT-based mobile banking users.

Keywords: UTAUT; Trust; Behavioral Intention; Mobile Banking

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Introduction

The expeditious development of machinery will simplify society's activities and change people's lifestyles. Technological developments also have an impact on the banking industry to develop digital banking financial service activities (digital banking). In this case, the growth of digital banking services is capable of providing added value for banks to their customers, particularly in the form of easy access to various services and products offered by banks (Rachmawati et al., 2020). Banks are also currently using mobile banking as

a method of employing internet technology in digital financial services.

Mobile banking is a sophisticated application for mobile phones that belongs to all banks. It manages and controls every transaction of banking done by the users or the people who have an account at the bank. Accordingly, mobile banking enables its users to manage commercial transactions parenthetically and equip total command of a remote over customer information and monetary exchanges with various preferences to serve their needs, including account balance information and recent transactions, payments of peer-to-payments, digital charges, check payments, and money transfers between bank customers (Abu-Taieh et al., 2022). Mobile banking also facilitates all bank transactions, so the users do not have to visit the banks to conduct the transactions.

In Indonesia, mobile banking implementation does not fully have a positive perception from users; there are still many negative perceptions from users. One of them is the perception of the security of mobile banking transactions, which are vulnerable to account hacking and cracking of confidential information. This is evidenced by the Kompas.com news on December 30, 2022, regarding the breach of a mobile banking account, which caused IDR 120 million to be lost. Furthermore, the recent news about the spreading of APK files that can drain savings balances has added to public concern and resulted in a decline in public trust in mobile banking usage. As a result, to develop mobile banking, it is necessary to improve the application's features and comprehend what influences people's willingness to use information systems.

Acceptance of mobile banking use is determined and predicted by several factors that measure the likelihood of user action (Venkatesh et al., 2012). In this instance, the theory that can quantify how technology users act is the Unified Theory of Acceptance and Use of Technology (UTAUT). The purpose of UTAUT is to investigate and analyze the degree of adoption and put information technology into practice. Venkatesh et al. (2003) investigated the connection between the facilitating conditions from UTAUT and the performance expectancy, social influence, effort expectancy and facilitating condition.

Numerous studies have been conducted in the past regarding behavioral intentions for using mobile banking. In their research, Yeh et al. (2023) and Alkhowaiter (2022) found that effort expectancy, social influence, and performance expectancy had an exceptionally favorable outcome on attitude. It becomes apparent that attitude had a considerable contributing impact on behavioral intention and served as a mediator linking effort expectancy, social influence, and performance expectancy on behavioral intention. The findings of Alkhowaiter (2022) also showed that behavioral intention was significantly influenced favorably by attitude and trust. However, Bin-Nashwan et al. (2023) and de Blanes Sebastián (2023) discovered that behavioral intention was unaffected by trust.

Accordingly, research is needed regarding what elements drive behavioral intention. The endpoint of the current study is to investigate how the UTAUT model could affect consumers' behavioral intentions associated with mobile banking and the function of attitude as a moderating variable. As a result, the phrasing of the problem relates to the significance of attitude as a mediator and the way every component of the UTAUT model

may affect behavioral intention to take advantage of the use of mobile banking. Furthermore, this research has practical implications, such as providing management with ideas and considerations for aspects that might impact mobile banking customers' behavioral intentions. While the theoretical benefits are that the results of this research become a scientific study, they also improve science and serve as an important resource for upcoming research on the use of the UTAUT model.

Literature Review and Hypotheses Development

Unified Theory of Acceptance and Use of Technology

Venkatesh et al. (2003) conceived of the Unified Theory of Acceptance and Use of Technology (UTAUT). UTAUT is a theory that provides peculiar explanations regarding the acceptance and use of technology (Moorthy et al., 2019). UTAUT integrates eight models at once (Venkatesh et al., 2003): (1) Theory of planned behavior, (2) Technology acceptance model, (3) Innovation diffusion theory, (4) Theory of reasoned action, (5) Motivational model, (6) A model of combining TAM and TPB, (7) Model of PC utilization, and (8) Social cognitive theory. Within UTAUT, four exogenous variables shape behavioral intention in using technology, i.e., facilitating conditions, social influence, effort expectancy, and performance expectancy.

Performance Expectancy

Venkatesh et al. (2012) describe performance expectancy as a user's belief that employing technology would be beneficial for carrying out particular tasks. Performance expectancy is an essential exogenous variable to combine with attitudes inside the meta-UTAUT framework to understand better and explain behavior (Alkhowaiter, 2022). Furthermore, Dwivedi et al. (2017) found that individual perspectives are changed by the amount to which technology benefits them. There have been many studies done on the link between performance expectancy and attitude. This phrase implies that the greater a technology is perceived to be valuable for user activities, the more positive users' attitudes toward using technology. When consumers believe that technology does not add value to their activities, they are less likely to employ it. This indicates that performance expectancy has a substantial influence on user attitudes toward technology.

The study's findings shed light on how performance expectancy will affect how people perceive a system and their attitudes toward it (Alkhowaiter, 2022). Furthermore, Dwivedi et al. (2017) discovered that when using m-payments, the UTAUT variable with the largest influence on attitude is performance expectancy. This is because the amount to which technology becomes beneficial may influence individual opinions. The study's results are in keeping with Yeh et al. (2023), Upadhyay et al. (2022), Wu and Ho (2022), and Patil et al. (2020). In response to the researcher's curiosity about how attitude and performance expectancy relate, this research suggests the following hypothesis.

***H_1**: Attitude is significantly influenced favorably by performance expectancy.*

Effort Expectancy

According to a study by Venkatesh (2012), effort expectancy implies the magnitude of easiness regarding what activities must be conducted when utilizing new technologies. Yeh et al. (2023) discovered in their study that when a person believes that utilizing technology would bring convenience (perception of high effort expectation), it affects a person's attitude toward using the technology. It denotes that one aspect significantly affecting users' willingness to use technology is their expectation of effort, not only for new users who will use technology but also for users who have used technology when binding technological updates (Patil et al., 2020). Furthermore, Dwivedi et al. (2017) found that the amount to which technology delivers convenience shapes individual perspectives. According to Alkhowaiter (2022), effort expectancy in the meta-UTAUT framework is crucial to combine with attitudes to explain better and characterize behavior.

Plenty of investigations have already been undertaken to investigate the interaction between attitude and effort expectancy. According to the findings, a system's attitude is improved by effort expectancy (Alkhowaiter, 2022). Additionally, Dwivedi et al. (2017) revealed that effort expectancy is the most influential feature of attitude leveraging in their research. Conclusions drawn from the investigation have parallels with the findings obtained from prior studies by Upadhyay et al. (2022) and Wu and Ho (2022). As such, the researcher created a second hypothesis based on the theory and results of earlier experiments:

***H_2**: Attitude is significantly impacted favorably by effort expectancy.*

Social Influence

Accordingly, Venkatesh et al. (2012) stated that the degree to which individuals think others' trust is vital while setting up a new system is defined as their social influence. Regarding dependent factors, the part that social influence plays in choices regarding technology adoption is complicated. Three mechanisms—compliance, internalization, and identification—allow social influence to affect a person's behavior (Venkatesh et al., 2003). Alkhowaiter (2022), using the meta-UTAUT paradigm, also highlights the significance of integrating social influence with attitudes when attempting to explain behavior. According to this assertion, the more users are motivated to have a favorable attitude toward technology, the more other people believe that using technology is important. In contrast, the user's desire to be critical of technology use increases in proportion to how few other people believe that utilizing technology is significant.

Previous research on the link between social influence and attitude has been conducted. As shown by the results, social influence provides a profound effect on attitude (Yeh et al., 2023). Dwivedi et al. (2017) and Alkhowaiter (2022) uncovered similar results despite the fact that attitude is the component that contributes the least. The researcher,

therefore, formulated a third hypothesis based on the theory and results of earlier experiments:

***H_3**: Social influence provides a profound effect on attitude.*

Facilitating Condition

A facilitating condition is a person's perception of the tools and assistance required to carry out a behavioral intention (Venkatesh et al., 2012). Alkhowaiter (2022) stated that, under the meta-UTAUT framework, it is necessary to combine attitudes in explaining behavior. Furthermore, Dwivedi et al. (2017) discovered in their study that providing a facilitating condition may be associated with reduced effort and higher performance expectancy, which could result in a positive outlook. To put it another way, a person's approach to utilizing the system increases in direct proportion to how much they think the infrastructure and organization encourage its use. Conversely, the less someone thinks the infrastructure and organization support using the system, the less positive their attitude is toward using it.

Previously, research on the association between facilitating conditions and attitude was carried out. According to the findings, facilitating conditions had a positive influence on attitude and served as the most significant determinant in establishing an attitude (Alkhowaiter, 2022). Wu and Ho (2022) and Dwivedi et al. (2017) did similar studies and obtained the same results. Thus, the below hypothesis was put forward:

***H_4**: Attitude is significantly influenced favorably by facilitating conditions.*

Attitude

Venkatesh et al. (2003) contended that the term attitude refers to a person's feelings about engaging in particular behaviors, whether they are positive or negative. According to the META-UTAUT framework, attitude is one of the main variables merged with external UTAUT components to understand better and explain behavior (Alkhowaiter, 2022). This seems to be aligned with Upadhyay et al. (2022) insights, who discovered that including an attitude variable in the META-UTAUT framework may reflect individual acceptance of technology. Attitude is also the biggest predictor of behavioral intention (Venkatesh et al., 2003; Wu & Ho, 2022) and has an essential role in describing models of technology usage by users (Dwivedi et al., 2017). This observation corroborates with the results published by Yeh et al. (2023), Upadhyay et al. (2022), Alkhowaiter (2022), and Patil et al. (2020), who indicated that attitude increases behavioral intention substantially

The TRA model also asserts that attitude is a mediating variable. Yeh et al. (2023) and Wu and Ho (2022), who uncovered that attitude had a mediating influence, provide evidence to support this claim. In this instance, attitude effectively mediates the link between behavioral intention and performance expectancy. According to Dwivedi et al. (2017),

when technology offers advantages, it will affect attitudes that impact intentions. The TAM model also holds that the intent of an individual to utilize a technology increases in proportion to how useful the appliance is (Davis et al., 1989). This implies that behavioral intention can be created via performance expectancy through attitude.

Then, in their research, Yeh et al. (2023) and Wu and Ho (2022) observed that attitude positively mediated the relation between effort expectancy and behavioral intention. As stated by Dwivedi et al. (2017), when technology offers convenience, it will affect attitudes that affect intentions. Furthermore, the TAM model holds that a person's intentions to utilize technology are influenced by how consistently convenient a technology is, with a greater positive attitude being associated with it (Davis et al., 1989). The implication of this is that effort expectancy may impact behavioral intention via attitude.

Moreover, attitude positively mediates the association between social influence and behavioral intention (Wu & Ho, 2022; Yeh et al., 2023). This indicates that the degree to which a person values other people's trust when adopting a new system determines the attitude developed by that fact. The association between facilitating conditions and behavioral intention is also positively mediated by attitude (Wu & Ho, 2022; Yeh et al., 2023). This suggests that attitudes acquired as a result of the state of the facilities that are now in use impact behavioral intention. This denotes that behavioral intentions can be created through attitudes through social influence and facilitating conditions. Therefore, the researcher proposed below hypotheses:

***H_5**: Behavioral intention is significantly impacted positively by attitude.*

***H_6-H_9**: Between the exogenous and endogenous variables, attitude works as a mediator.*

Trust

The magnitude whereby one has optimism regarding a particular set of services and embraces that these services are secure from issues related to privacy and security is often referred to as trust. Trust is important to help users surmount feelings of uncertainty about m-service (Shafinah et al., 2013). As defined by Sankaran and Chakraborty (2020), trust is a construct typically utilized in studies related to financial transactions such as m-banking. There has been prior research on the connection between trust and behavioral intention. Based on the research findings of Abu-Taieh et al. (2022), Alkhowaiter (2022), Kumar et al. (2020), and Al-Saedi et al. (2020), trust strongly influenced behavioral intention. This indicates that trust may rise along with behavior and eagerness to implement technology (Sarkar et al., 2020). However, further studies by de Blanes Sebastián et al. (2023) and Bin-Nashwan et al. (2023) displayed the absence of a substantial relationship between trust and behavioral intention. Hence, the following hypothesis was derived:

***H_{10}**: On behavioral intention, trust produces a substantial advantageous impact.*

Research Methods

The study's methodology was quantitative because it set more weight on verification theories by assessing research variables with numbers and managing data analysis using statistical procedures. The examination's target audience was people who utilized their smartphones for banking purposes. It employed samples of research because the number of users could not be known with certainty. There were 110 consumers as samples. The technique of sampling was the snowball sampling method. Questionnaire distribution was conducted through a Google Form. The researcher then scrutinized the data and assessed the hypothesis, adopting Partial Least Squares-Structural Equation Modeling (PLS-SEM).

Several anterior studies were used to adopt and adapt variable measurements. Performance expectancy was measured by four indicators from Venkatesh et al. (2003), Rahi et al. (2019), and Upadhyay et al. (2022). Effort expectancy was assessed by four indicators proposed by Venkatesh et al. (2003) and Rahi et al. (2019). Social influence was estimated by four indicators mentioned by Venkatesh et al. (2003) and Rahi et al. (2019). Facilitating conditions were checked by four indicators adapted from Venkatesh et al. (2003), Rahi et al. (2019), and Upadhyay et al. (2022). Attitude was calibrated by four indicators adapted from Venkatesh et al. (2003) and Wu and Ho (2022). Behavioral intention was determined by three indicators from Venkatesh et al. (2003) and Al-Saedi et al. (2020). Concurrently, trust was measured by four indicators adapted from Abu-Taieh et al. (2022). The practical measurements of the variables studied are as follows.

Table 1 Measurements

Variable	Measurement	Source
Effort Expectancy	As an Internet user, it is clear and understandable for me to interact using mobile banking.	Venkatesh et al. (2003), Rahi et al. (2019)
	Using a mobile phone makes me more skillful.	
	It is easy for me to use mobile banking.	
	It is easy for me to learn to operate mobile banking.	
Performance Expectancy	By using mobile banking, it is useful to carry out transactions.	Venkatesh et al. (2003), Rahi et al. (2019), Upadhyay et al. (2022)
	By using mobile banking, transactions will quickly be conducted.	
	By using mobile banking, I will develop my productivity.	
	By using mobile banking, overall payment will be improved.	
Social Influence	Based on people influencing my behavior, they think that mobile banking should be used.	Venkatesh et al. (2003), Rahi et al. (2019)
	Based on people who are important to me, they think that mobile banking should be used.	
	Mobile banking is considered important for financial transactions.	
	Based on people whose opinions I respect, they prefer me to use mobile banking.	

Table 1 Measurements (cont')

Variable	Measurement	Source
Facilitating Condition	If I have difficulty using mobile banking, it will be easy for me to get help.	Venkatesh et al. (2003), Rahi et al. (2019), Upadhyay et al. (2022)
	There are special instructions available to me for using mobile banking.	
	There are some necessary resources when I use mobile banking.	
	There is some necessary knowledge when I use mobile banking.	
Trust	I believe that it is safe to transfer money using mobile banking.	Abu-Taieh et al. (2022)
	I believe that transferring money is safe when I use mobile banking.	
	I get bank notifications when something happens to deal with bank transactions.	
	I have experienced that I believe it is safe to use mobile banking.	
Behavioral Intention	Using mobile banking will be useful in the future.	Venkatesh et al. (2003), Al-Saedi et al. (2020)
	I predict I will use mobile banking for any transactions in my daily life.	
	I plan to use mobile banking as frequently as possible for transactions.	
Attitude	It is a good choice to use mobile banking.	Venkatesh et al. (2003), Wu and Ho (2022)
	It is a wise choice to use mobile banking.	
	It is a pleasant choice to use mobile banking.	
	In my opinion, using mobile banking is highly recommended.	

Results and Discussion

Characteristics of Respondents

Table 2 illustrates the respondents' various characteristics, showing how age, gender, and occupation affected the variation. Based on the age, it can be concluded that a large percentage of respondents who signed engagement in this research represented 31-35 years, with a total of 42 respondents and a percentage of 38.2%. The female users were dominant, with 69 respondents, which was 62.7%. Likewise, there were 38 respondents, or 34.5%, belonging to the respondents who worked in private business.

Table 2 Characteristics of respondents

No	Characteristics of Respondents	Total Respondents	
		Frequency	**Percentage**
	Ages		
1	≤ 20 years old	7	6.4%
2	21 - 25 years old	24	21.8%
3	26 - 30 years old	7	6.4%
4	31 - 35 years old	42	38.2%
5	35 - 40 years old	9	8.2%
6	41 - 45 years old	12	10.9%
7	46 - 50 years old	6	5.5%
8	≥ 51 years old	3	2.7%
Total		110	100%
	Gender		
1	Male	41	37.3%
2	Female	69	62.7%
Total		110	100%
	Profession		
1	Student	31	28.2%
2	Private employee	38	34.5%
3	State-owned enterprise employee	8	7.3%
4	Civil Servant	8	7.3%
5	Others	25	22.7%
Total		110	100%

Data Analysis

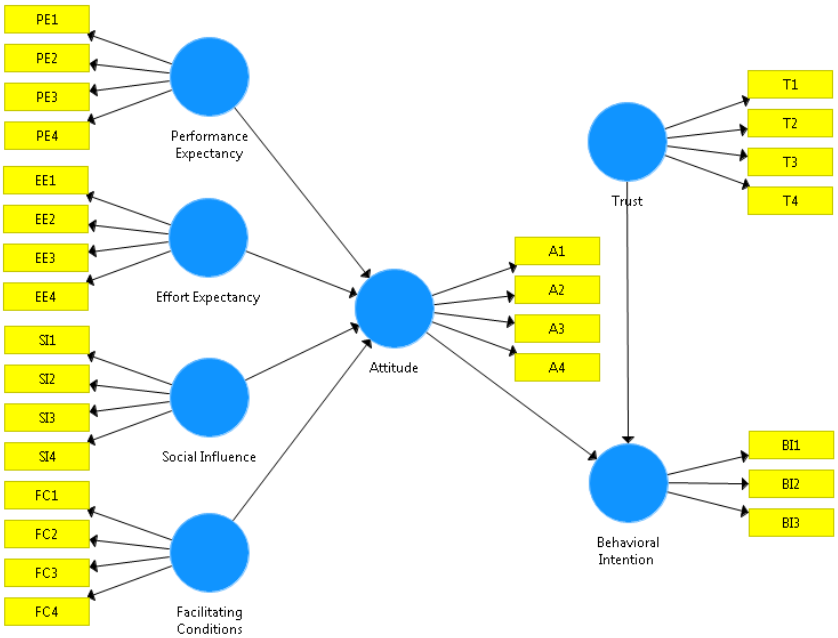

Figure 1 The structural model

The method for analysis of Structural Equation Modeling using Partial Least Squares (SEM-PLS) was applied in this study. Data analysis commenced with formulating a structural model and then evaluating the reliability and validity associated with the determining model (outer model). It also involved examining the significance of the relationship among variables (inner model).

Evaluation of Measurement Models (Outer Model)

By examining the outer loading values of every single indication on its corresponding hidden factor, the convergence validity examination in this study was captured. Outer loading value > 0.7 implies that a variable defined 50% or more of the indicator variance. The results of processing with the PLS algorithm for outer loading are displayed in the Table 3.

Table 3 Outer loading values

Variable	Indicator	Outer Loading
Performance Expectancy	PE1	0.770
	PE2	0.751
	PE3	0.841
	PE4	0.841
Effort Expectancy	EE1	0.787
	EE2	0.833
	EE3	0.797
	EE4	0.764
Social Influence	SI1	0.821
	SI2	0.860
	SI3	0.707
	SI4	0.861
Facilitating Conditions	FC1	0.748
	FC2	0.715
	FC3	0.826
	FC4	0.817
Attitude	A1	0.872
	A2	0.868
	A3	0.883
	FC4	0.841
Behavioral Intention	BI1	0.838
	BI2	0.885
	BI3	0.890
Trust	T1	0.913
	T2	0.882
	T3	0.765
	T4	0.848

In Table 3, it was observed that all indicators revealed more than 0.7 outer loading values. It denotes that each variable could be disclosed by its indicators and complied with the prerequisites of convergent validity.

Further, the measurement of reliability was assessed by utilizing Cronbach's alpha and composite reliability. Cronbach's alpha is a parameter that assesses a variable exhibiting excellent composite reliability based on an estimate of the alpha coefficient, where an indicator group referred to composite reliability estimates a variable through a composite reliability value (Solimun et al., 2017). In addition, Cronbach's alpha concludes the same factor loading for all items, while composite reliability does not estimate this but contemplates the various item loading factors. With the provision of CR > 0.70 and Cronbach's alpha > 0.60, the reliability of each variable was met. The findings of Cronbach's alpha analysis and composite reliability can be presented in the Table 4.

Table 4 Composite reliability and Cronbach's alpha values

Variables	Composite Reliability	Cronbach's Alpha
Performance Expectancy	0.878	0.643
Effort Expectancy	0.874	0.633
Social Influence	0.887	0.664
Facilitating Conditions	0.859	0.605
Attitude	0.923	0.750
Behavioral Intention	0.905	0.760
Trust	0.915	0.729

From Table 4, all the constructs had greater than 0.7 Cronbach's alpha values and composite reliability values, indicating their reliability.

Evaluation of the Structural Model (Inner Model)

The structural framework (inner model) evaluation step comprises verifying the quality of the model (model fit) and the hypothesis. The test of the model's goodness-of-fit is recorded concerning the R square value (R^2). Partial hypothesis testing is provided by focusing on the significance of the link among variables.

Table 5 R-Square Value (R^2)

Endogen Variable	R-Square	Adjusted R-Square
Attitude	0.603	0.588
Behavioral intention	0.483	0.473

The adjusted R-squared score of the intrinsic attitude variable equaled 0.588, as illustrated in Table 5. The value discloses that the firmness of the exogenous variables in predicting attitude was 58.8%. Furthermore, the adjusted coefficient of determination R-statistic for behavioral intention equaled 0.473. This number exposes that the confidence level of exogenous factors for estimating behavior intention was approximately 47.3%.

Hypothesis Testing

Hypothesis testing is captured by examining that values to actuate the direction of influence among variables are estimated by the original sample estimates (O), and the coefficient of t (T) and p-value (P) determine the significance level of the influence. A positive effect is expressed by the original sample estimates (O) close to +1 express, though a negative effect is expressed by values close to -1. Suppose the statistic coefficient of the t (T) value is higher than 1.96 or the p-value (P) is smaller than the threshold for significance cutoff (0.05). In that case, the effect of the relationship between variables is statistically significant. The Table 6 shows the outcomes of testing the research hypothesis:

Table 6 Influence Between Variables

hypothesis	O	T	P	Information
Performance Expectancy → Attitude	0.237	2.332	0.020	Supported (H_1)
Effort Expectancy → Attitude	-0.014	0.149	0.882	Rejected (H_2)
Social Influence → Attitude	0.311	3.293	0.001	Supported (H_3)
Facilitating Conditions → Attitude	0.348	3.003	0.003	Supported (H_4)
Attitude → Behavioral Intention	0.583	5.724	0.000	Supported (H_5)
Performance Expectancy → Attitude → Behavioral Intention	0.138	2.166	0.031	Supported (H_6)
Effort Expectancy → Attitude → Behavioral Intention	-0.008	0.145	0.885	Rejected (H_7)
Social Influence → Attitude → Behavioral Intention	0.181	2.382	0.018	Supported (H_8)
Facilitating Conditions → Attitude → Behavioral Intention	0.203	2.990	0.003	Supported (H_9)
Trust →_ Behavioral Intention	0.157	1.773	0.077	Rejected (H_{10})

Based on Table 6, it can be noticed that of the ten hypotheses proposed, three hypotheses were rejected, particularly H2, H7, and H10. According to Hypothesis 1, attitude was significantly influenced favorably by performance expectancy. The test results displayed an original sample estimate (O) value of 0.237 with the coefficient of the t (T) value of 2.332. These results were significant because the coefficient of the t (T) value was higher than 1.96 (2.332 > 1.96) with a p-value (P) smaller than 0.05 (0.020 < 0.05), so H_1 was supported.

For Hypothesis 2, effort expectancy significantly improved attitude. According to the test results, the original sample estimate (O) was -0.014, with the coefficient of t (T) value being 0.149. As a result of these findings, it is confirmed that the difference was not significant because the coefficient of the t (T) value was smaller than 1.96 (0.149 < 1.96) with a p-value (P) higher than 0.05 (0.882 > 0.05), H_2 was rejected.

According to Hypothesis 3, social influence had a strong positive impact on attitude. The test's results showed that the coefficient of t value (T) was 3.293, and an original sample estimate (O) value was 0.311. Because the coefficient of t (T) value was higher than 1.96 (3.293 > 1.96) with a p-value (P) lower than 0.05 (0.001 < 0.05), these results were shown as significant, so H_3 was supported.

Conforming to Hypothesis 4, facilitating conditions had a strong positive impact on attitude. According to the test results, the original sample estimate (O) value was 0.348, and the coefficient of t (T) value was 3.003. Since the coefficient of t (T) value was higher than 1.96 (3.003 > 1.96) with a p-value (P) lower than 0.05 (0.003 < 0.05), these results were significant, so H_4 was supported.

Based on Hypothesis 5, attitude significantly influences behavioral intention favorably. The test outcomes reveal that the original sample estimate (O) is 0.583, and the coefficient of t (T) value is 5.724. These findings are noteworthy because a p-value (P) is less than 0.05, and the coefficient of t (T) value is more than 1.96 (5.724 > 1.96), so H_5 is supported.

In harmony with Hypothesis 6, behavioral intention was positively mediated by attitude in relation to performance expectancy. The test's results revealed that the coefficient of the t (T) value was 2.166, with an original sample estimate (O) value of 0.138. The coefficient of the t (T) value was higher than 1.96 (2.166 > 1.96) with a p-value (P) lower than 0.05 (0.031 < 0.05), making these results significant, so H_6 was supported.

In congruence with Hypothesis 7, behavioral intention was positively influenced by effort expectancy through the mediation of attitude. The test's findings uncovered that the original sample estimate (O) was -0.008, with a coefficient of t (T) value of 0.145. Given these findings, it is said that the relationship between the variables was not significant because the coefficient of the t (T) value was less than 1.96 (0.145 > 1.96), and the p-value (P) was higher than 0.05 (0.885 > 0.05), so H_7 was rejected.

According to Hypothesis 8, social influence on behavioral intention was favorably mediated by attitude. The test's results disclosed that the coefficient of t value was 2.382, with an original sample estimates (O) value of 0.181. The significance of these findings is justified by the fact that the coefficient of t (T) value was higher than 1.96 (2.382 > 1.96) with a p-value (P) lower than 0.05 (0.018 < 0.05), so H_8 was supported.

For Hypothesis 9, attitude effectively mediated the impact of facilitating conditions on behavioral intention. The test's findings indicated that the original sample estimate (O) was 0.203, which had a coefficient of t (T) value of 2.990. The coefficient of the t (T) value

was higher than 1.96 (2.990 > 1.96) with a p-value (P) lower than 0,05 (0.003 < 0.05), making these results significant, so H_9 was supported.

Consistent with Hypothesis 10, behavioral intention was positively impacted by trust. The test results unveiled that the coefficient of the t (T) value was 1.773, with an original sample estimate (O) value of 0.157. Given these findings, it was concluded that they were not statistically significant because a p-value (P) was higher than 0.05 (0.077 > 0.05), and the coefficient of t (T) value was less than 1.96 (1.773 < 1.96), so H_{10} was rejected.

Discussion

The findings demonstrate that performance expectations significantly influenced attitudes. It denotes that the stronger the user's optimism about the benefits acquired through technology, the more encouraging the user's attitude toward technology. These findings indicate that when users acknowledge that mobile banking provides benefits, such as convenience in making transactions and granting users the ability to make transactions more quickly, they will have a positive perception regarding the use of the service. In addition, users will respond well to mobile banking services when they feel that mobile banking can boost performance in making payment transactions as a whole. These results are in agreement with those of previous research by Yeh et al. (2023), Alkhowaiter (2022), Upadhyay et al. (2022), Wu and Ho (2022), Patil et al. (2020), and Dwivedi et al. (2017).

Additionally, there was no discernible correlation between effort expectancy and attitudes. It implies that the ease of mobile banking service technology did not make a user's response positive to use mobile banking. This experience could arise because the easier it is for mobile banking to be used by users, the easier it is for mobile banking to be hacked and impulsively used by users. It is in contrast with previous research conducted by Alkhowaiter (2022), Yeh et al. (2023), Upadhyay et al. (2022), Wu and Ho (2022), Patil et al. (2020), and Dwivedi et al. (2017).

The research findings also identified that social influence had a significant beneficial impact on attitude. It suggests that a user's attitude toward using mobile banking technology will increase as their level of trust in the technology's use as recommended by others increases. This phenomenon demonstrates that recommendations and opinions considered important by people around them can boost individuals' positive reactions to mobile banking technology. The results are similar to those of the previous studies by Alkhowaiter (2022), Yeh et al. (2023), and Dwivedi et al. (2017).

Attitudes were notably determined by facilitating conditions. The conclusions drawn from the findings of this research correspond with prior studies conducted by Alkhowaiter (2022) and Wu and Ho (2022), who found that facilitating conditions could firmly establish an attitude towards a system. It implies that the more favorable a person's perception of technology support, the higher the individual's attitude toward using technology. In other words, facilitating conditions play a crucial role in shaping attitudes. In addition, Rachmawati et al. (2020) suggested that facilitating conditions can have implications for

attitudes. In this case, facilitating conditions such as smartphones, Internet access, call centers, and application security are remarkable in bolstering mobile banking service technology.

Moreover, behavior intention was significantly influenced positively by attitude. It indicates that the higher the attitude of an individual in response, the higher the intention to perform certain behaviors. The findings of this research support Alkhowaiter (2022), Yeh et al. (2023), Upadhyay et al. (2022), Wu and Ho (2022), Patil et al. (2020), and Dwivedi et al. (2017) that attitude had a mediating effect. This finding is also similar to Yeh et al. (2023), proving that the connection between performance expectancy and behavioral intention, the interaction involving social influence and behavioral intention, and the relationship between facilitating conditions and behavioral intention were mediated positively by attitude. Nonetheless, there is currently nothing to suggest that attitude encompasses an influence on the relationship between effort expectancy and behavioral intention. This phenomenon could arise because, even though mobile banking is acknowledged to be easy to use and easily understood by users, it is not assured that users will respond well to this technology.

Finally, the findings also demonstrated that behavioral intention was not significantly impacted by trust. It could occur because people still challenge the security and privacy of mobile banking. A large number of mobile banking account cracks show that the security of mobile banking data still needs to be improved and is an exceptional concern for the banking sector. They are in contrast to those reported by Abu-Taieh et al. (2022), Alkhowaiter (2022), Kumar et al. (2020), and Al-Saedi et al. (2020). However, this study is similar to the research of Bin-Nashwan et al. (2023) and de Blanes Sebastián et al. (2023), who found that trust had no significant effect on behavioral intention.

Conclusion

This study aims to examine how the UTAUT model was used to explain the behavioral intentions of mobile banking users, with attitude serving as a mediating variable. In conclusion, of the ten hypotheses, three hypotheses were rejected: H2 (attitude was significantly impacted favorably by effort expectancy), H7 (effort expectancy on behavioral intention was advantageously mediated by an attitude), and H10 (trust had a positive effect on behavioral intention). Meanwhile, the other seven hypotheses were accepted, i.e., H1 (attitude was significantly influenced favorably by performance expectancy), H3 (social influence provided a profound effect on attitude), H4 (attitude was significantly influenced favorably by facilitating conditions), H5 (behavioral intention was significantly impacted positively by attitude), H6 (performance expectancy on behavioral intention was kindly mediated by attitude), H8 (social influence on behavioral intention was enthusiastically mediated by attitude), and H9 (facilitating conditions on behavioral intention were advantageously mediated by an attitude). The results, as mentioned above, validate the meta-UTAUT hypothesis that integrating attitude elements in UTAUT research is crucial for more effectively comprehending and predicting behavior.

Some limitations of the study might be highlighted, and recommendations for additional study could be made. To start with, this study restricted itself to the impact of exogenous variables on endogenous variables with the help of mediating impacts. Age or experience can be included as a moderating component in future studies to enhance. Second, this study was limited to behavioral intention variables. This variable only measured the intention to use mobile banking. As a result, it is essential to look into additional factors affecting the sustainability of mobile banking through the continuous usage intention variable.

In general, this research contributes from both a theoretical and practical standpoint. From a practical standpoint, this study offers recommendations and ideas for management to take into account when determining how technology is used and what elements can affect users' behavioral intentions in mobile banking. As a source of pertinent references for more research, this study also adds to the theoretical perspective of researchers interested in the issue of UTAUT. The study's findings have implications for how mobile banking users' behavioral intentions may vary depending on their performance expectancy, social influence, facilitating conditions, and attitudes.

References

Abu-Taieh, E. M., AlHadid, I., Abu-Tayeh, S., Masa'deh, R., Alkhawaldeh, R. S., Khwaldeh, S., & Alrowwad, A. (2022). Continued intention to use of m-banking in Jordan by integrating UTAUT, TPB, TAM and service quality with ML. *Journal of Open Innovation: Technology, Market, and Complexity, 8*(3), 120. https://doi.org/10.3390/joitmc8030120

Alkhowaiter, W. A. (2022). Use and behavioural intention of m-payment in GCC countries: Extending meta-UTAUT with trust and Islamic religiosity. *Journal of Innovation & Knowledge, 7*(4), 100240. https://doi.org/10.1016/j.jik.2022.100240

Al-Saedi, K., Al-Emran, M., Ramayah, T., & Abusham, E. (2020). Developing a general extended UTAUT model for M-payment adoption. *Technology in Society, 62*, 101293. https://doi.org/10.1016/j.techsoc.2020.101293

Bin-Nashwan, S. A., Shah, M. H., Abdul-Jabbar, H., & Al-Ttaffi, L. H. A. (2023). Social-related factors in integrated UTAUT model for ZakaTech acceptance during the COVID-19 crisis. *Journal of Islamic Accounting and Business Research*. https://doi.org/10.1108/jiabr-02-2022-0038

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319. https://doi.org/10.2307/249008

de Blanes Sebastián, M. G., Antonovica, A., & Sarmiento Guede, J. R. (2023). What are the leading factors for using Spanish peer-to-peer mobile payment platform Bizum? The applied analysis of the UTAUT2 model. *Technological Forecasting and Social Change, 187*, 122235. https://doi.org/10.1016/j.techfore.2022.122235

Dwivedi, Y. K., Rana, N. P., Jeyaraj, A., Clement, M., & Williams, M. D. (2017). Re-examining the unified theory of acceptance and use of technology (UTAUT): towards a revised theoretical model. *Information Systems Frontiers, 21*(3), 719–734. https://doi.org/10.1007/s10796-017-9774-y

Kumar, A., Dhingra, S., Batra, V., & Purohit, H. (2020). A framework of mobile banking adoption in India. *Journal of Open Innovation: Technology, Market, and Complexity, 6*(2), 40. https://doi.org/10.3390/joitmc6020040

Moorthy, K., Chun T'ing, L., Chea Yee, K., Wen Huey, A., Joe In, L., Chyi Feng, P., & Jia

Yi, T. (2019). What drives the adoption of mobile payment? A Malaysian perspective. *International Journal of Finance & Economics, 25*(3), 349–364. https://doi.org/10.1002/ijfe.1756

Patil, P., Tamilmani, K., Rana, N. P., & Raghavan, V. (2020). Understanding consumer adoption of mobile payment in India: Extending Meta-UTAUT model with personal innovativeness, anxiety, trust, and grievance redressal. *International Journal of Information Management, 54*, 102144. https://doi.org/10.1016/j.ijinfomgt.2020.102144

Rachmawati, I. K., Bukhori, M., Majidah, Y., Hidayatullah, S., & Waris, A. (2020). Analysis of use of mobile banking with acceptance and use of technology (UTAUT). *International Journal of Scientific & Technology Research, 9*(8), 534–540.

Rahi, S., Othman Mansour, M. M., Alghizzawi, M., & Alnaser, F. M. (2019). Integration of UTAUT model in internet banking adoption context. *Journal of Research in Interactive Marketing, 13*(3), 411–435. https://doi.org/10.1108/jrim-02-2018-0032

Sankaran, R., & Chakraborty, S. (2022). Factors impacting mobile banking in India: empirical approach extending UTAUT2 with perceived value and trust. *IIM Kozhikode Society & Management Review, 11*(1), 7–24. https://doi.org/10.1177/2277975220975219

Sarkar, S., Chauhan, S., & Khare, A. (2020). A meta-analysis of antecedents and consequences of trust in mobile commerce. *International Journal of Information Management, 50*, 286–301. https://doi.org/10.1016/j.ijinfomgt.2019.08.008

Shafinah, K., Sahari, N., Sulaiman, R., Yusoff, M. S. M., & Ikram, M. M. (2013). Determinants of user behavior intention (BI) on mobile services: a preliminary view. *Procedia Technology, 11*, 127–133. https://doi.org/10.1016/j.protcy.2013.12.171

Solimun, S., Fernandes, A. A. R., & Nurjannah, N. (2017). *Metode Statistika Multivariat: Permodelan Persamaan Struktural (SEM)*. UB Press.

Upadhyay, N., Upadhyay, S., Abed, S. S., & Dwivedi, Y. K. (2022). Consumer adoption of mobile payment services during COVID-19: extending meta-UTAUT with perceived severity and self-efficacy. *International Journal of Bank Marketing, 40*(5), 960–991. https://doi.org/10.1108/ijbm-06-2021-0262

Venkatesh, Morris, Davis, & Davis. (2003). User acceptance of information technology: toward a unified view. *MIS Quarterly, 27*(3), 425. https://doi.org/10.2307/30036540

Venkatesh, Thong, & Xu. (2012). Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. *MIS Quarterly, 36*(1), 157. https://doi.org/10.2307/41410412
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2002388

Wu, C. G., & Ho, J. C. (2022). The influences of technological characteristics and user beliefs on customers' perceptions of live chat usage in mobile banking. *International Journal of Bank Marketing, 40*(1), 68–86. https://doi.org/10.1108/IJBM-09-2020-0465

Yeh, H.-C., Yu, M.-C., Liu, C.-H., & Huang, C.-I. (2022). Robo-advisor based on unified theory of acceptance and use of technology. *Asia Pacific Journal of Marketing and Logistics, 35*(4), 962–979. https://doi.org/10.1108/apjml-07-2021-0493