

Application of the Utaut and Trust That Influences Mobile Banking

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ABSTRACT: The mobile banking phenomenon may still be at the implementation stage, although its frequency is already evident. It is important to consider the introduction of mobile banking in developing countries, as it can increase financial inclusion, improve the banking system, and ultimately have a positive impact on the economy. This study aims to analyze the effect of performance expectations, effort expectations, social influences, supportive conditions, and trust on behavioral intention to use the system as well as the usage behavior of mobile banking users, with experience as a moderator variable. The PLS-SEM analysis technique consists of two models, namely the measurement model called the outer model and the structural model called the inner model, hypothesis testing, and MRA testing which will be processed using SmartPLS 4 statistics through primary data obtained from distributing questionnaires to the mobile banking user community in Jabodetabek. The results showed that performance expectations and effort expectations affect behavioral intention to use the system, and behavioral intention to use the system affects usage behavior. The effect of supportive conditions on behavioral intention to use the system can be moderated by experience.

KEYWORDS: Behavioral intention, Experience, Trust, Usage behavior, Utaut.

I. INTRODUCTION

The phenomenon of mobile banking in its current form may still be at the implementation stage, although its frequency is obvious. They emphasize the importance of introducing mobile banking in developing countries, as it can increase financial inclusion, improve the banking system, and ultimately have a positive impact on the economy. Mobile banking is an internetbased banking model that uses wireless devices and services to allow bank customers to manage banking transactions using smartphones.

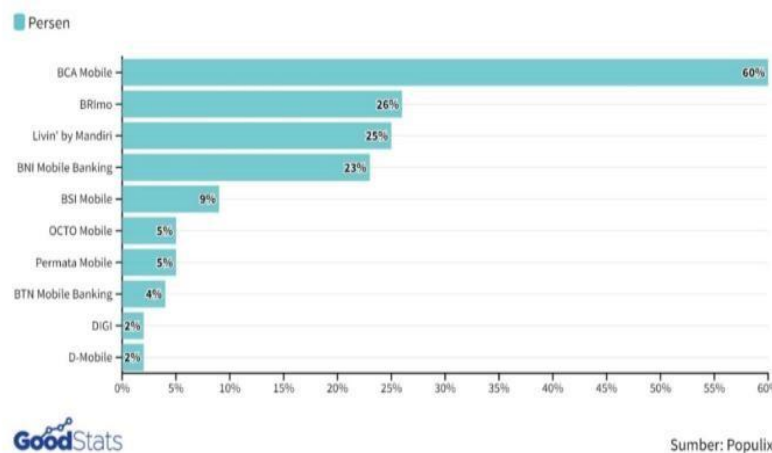


Figure 1. 10 mobile banking applications most used by Indonesian people in 2022

Source: goodstats.id

In the Populix survey results released by goodstats mobile banking application, BCA mobile is in first place with a percentage reaching 60 percent as the mobile banking application with the most users in 2022. After that, BRImo has a total of 26 percent of users, Livin by Mandiri has a percentage of 26 percent. 25 percent, BNI reached 23 percent, the BSI mobile application with a percentage of 9 percent, octo mobile and gem mobile with a percentage of 5 percent, BTN mobile banking with a percentage of 4 percent, from Bank BJB on the DIGI application, as well as the Danamon bank mobile application, namely D-Mobile with the same percentage, where each achieved 2 percent.

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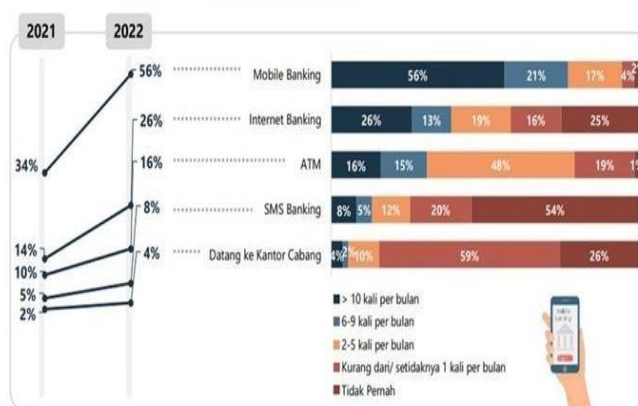


Figure 2. Access to Indonesian Community Banking 2022
Source: sharingvision.com

Based on the results of a survey conducted by 7,000 respondents in research with the theme "eChannel, Fintech, eCommerce and eLifestyle 2022", the number of respondents who used mobile banking more than 10 times a month increased by 56 percent, 6-9 times per month increased by 21 percent, 2-5 times a month it increases by 17 percent, once a month by 4 percent and never by 2 percent. After that all other services, such as internet banking, ATM, SMS Banking, and coming to branch offices are much smaller.



Figure 3. Banking and Financial Apps Services 2022
Source: marketing.co.id

Based on the results of the Consumer Preference towards Banking and e-Wallet Apps survey. The study shows that up to 64 percent of respondents have banking and financial services applications on their cellphones, 91 percent of respondents use mobile banking applications, 84 percent use e-wallets, and 33 percent of respondents have digital banking applications.

The UTAUT (Unified Theory of Acceptance and Use of Technology) model approach explains user behavior toward information technology. According to Venkatesh, Morris, Davis, and Davis (2003), UTAUT is a model that combines eight previously developed models. The UTAUT model approach shows that performance expectations, effort expectations, social influences, and supportive conditions affect behavioral intentions and usage behavior. These four factors can be moderated by gender, age, and experience. Several empirical studies have adopted this model and obtained various findings.

Previous research on performance expectations conducted by Merhi, Hone, and Tarhini (2019) shows that performance expectations are a significant predictor in Lebanon but not in the UK. Research by Samsudeen, Selvaratnam, and Mohamed (2022) shows that effort expectations have a significant effect on intention. Research by Saparudin, Rahayu, Hurriyati, Sultan, and Ramdan (2020) shows that social influence significantly affects the intention to continue using mobile banking. Research conducted by Merhi, Hone, and Tarhini (2019) also found that supportive conditions influence the intention to use mobile banking. Anjani and Mukhlis (2022) found that behavioral intention has a positive and significant influence on the behavior of using BRI mobile banking. Research by Abu-taie et.al (2022) shows that perceived trust has a positive and significant effect on behavioral intention. Research by Kwateng, Atiemo, and Appiah (2019) shows that experience variables have a moderating impact on performance expectations, effort expectations, social influence, facilitation conditions, and trust.

On the other hand, the results of Sari and Cristiana's research (2021) show that performance expectations do not affect intention to use. Research by Rita and Fitria (2021) shows that business expectations do not affect behavioral intention. Based on the results of research conducted by Sari and Cristiana (2021), social influence does not affect the intention to use mobile banking. Research by Khadijah and Putri (2019) shows that supportive conditions do not affect behavioral intention. Research conducted by Rita and Fitria (2021) shows that trust does not affect behavioral intention.

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Research Purposes

1. Analyzing the effect of performance expectations, effort expectations, social influences, facilitation conditions, and trust on behavioral intentions in using the system.
2. Analyzing the effect of behavioral intention in using the system on use behavior.
3. Analyzing the effect of performance expectations, effort expectations, social influences, facilitation conditions, and trust on behavioral intentions in using the system moderated by experience variables.

Research Contribution

The benefits of the research carried out can be explained and explained as follows

1. Theoretical Benefits

This scientific research is one of the stages of development and training of scientific thinking, so it is useful and brings new knowledge to the author, especially to users in accepting mobile banking technology.

2. Practical Benefits

It is hoped that the results of this study will be useful for banking companies in Indonesia to study and evaluate more deeply the influence of performance expectations, effort expectations, social influences, facilitation conditions, and trust on behavioral intentions in using the system moderated by experience variables. Thus, it is hoped that banking companies in Indonesia can make a better contribution to customers or society. In addition, the variables studied can also be used as a reference to improve the service system.

LITERATURE REVIEW

The Unified Theory of Acceptance and Use of Technology (UTAUT) model is one of the technology acceptance models designed by Venkatesh, Morris, Davis, and Davis in 2003. UTAUT brings together key elements from eight widely recognized theories of technology acceptance into one comprehensive theoretical framework. The eight theories include the theory of reasoned action (TRA), technology acceptance model (TAM), motivational model (MM), theory of planned behavior (TPB), combination of TAM and TPB, PC utilization model (MPTU), innovation diffusion theory (IDT), and social cognitive theory (SCT).

Performance Expectation

Sari & Cristiana (2021) define performance expectancy as the extent to which a person believes using a system will improve their performance. In the context of this study, performance expectancy can be interpreted as how much people believe in using mobile banking to enhance their work efficiency and results.

A. Perceived Usefulness

Refers to the extent to which a person believes that by using a particular system, his performance will improve (Venkatesh, Morris, Davis & Davis, 2003).

B. Extrinsic Motivation

Motivation is driven by the desire to perform an activity because it is considered important to achieve other benefits, such as job performance, increased salary, or promotion (Venkatesh, Morris, Davis & Davis, 2003).

C. Job Fit

According to Venkatesh, Morris, Davis & Davis (2003), this refers to the system's ability to improve individual job performance or effectiveness.

D. Relative Advantage

This refers to the view that using innovation is considered superior compared to previous methods or technologies (Venkatesh, Morris, Davis & Davis, 2003).

E. Expectation of Results

According to Venkatesh, Morris, Davis & Davis (2003), this relates to expectations of the results obtained from a behavior, both in terms of job performance and personal expectations.

Effort Expectancy

Effort expectancy describes the extent to which the ease of use of a system is perceived. If the system is easy to use, work becomes lighter; conversely, if the system is difficult to use, greater effort is required to utilize it (Venkatesh, Morris, Davis & Davis, 2003).

A. Perceived Ease of Use

Perceived ease of use is defined by Venkatesh, Morris, Davis & Davis (2003) as a person's belief that using a particular system does not require much effort.

B. Complexity

Complexity refers to the extent to which a system is perceived as relatively difficult to understand and use (Venkatesh, Morris, Davis & Davis, 2003).

C. Ease of Use

Ease of use reflects the degree to which an innovation is perceived as difficult to use (Venkatesh, Morris, Davis & Davis, 2003).

Social Influence

According to Abu-taieh et al. (2022), social influence (SI) is defined as the extent to which a person feels that important people in their life think they should use the system.

A. Subjective Norm

Subjective norm is defined by Venkatesh, Morris, Davis & Davis (2003) as a person's view of the extent to which people important to them believe they should or should not engage in a particular behavior.

B. Social Factors

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Refers to the extent to which individuals internalize the subjective norms and culture of their reference group, as well as the existence of certain interpersonal agreements with others in various social contexts (Venkatesh, Morris, Davis & Davis, 2003).

C. Image

Image is defined by Venkatesh, Morris, Davis & Davis (2003) as the extent to which the use of innovation can improve a person's image or status in their social system.

Facilitating Conditions

It has been found that less experienced consumers often face more difficulties in understanding new or complex information, which affects their ability to learn new technologies (Kwateng, Atiemo & Appiah, 2019).

A. Perceived Behavioral Control

Describes individuals' perceptions of internal and external constraints that can affect their behavior, including self-efficacy, ease of access to resources, and supportive technological conditions (Venkatesh, Morris, Davis & Davis, 2003).

B. Facilitating Conditions

Facilitating conditions are defined by Venkatesh, Morris, Davis & Davis (2003) as factors in the environment, such as the availability of computer assistance, that make tasks easier to complete.

C. Compatibility

Compatibility refers to the extent to which the current values, needs, and experiences of potential users are perceived as compatible with an innovation (Venkatesh, Morris, Davis & Davis, 2003).

Behavioral Intention to Use the System

According to Mufingatun, Prijanto, & Dutt (2020), user behavior reflects how often they use mobile banking in their daily lives. Meanwhile, behavioral intention is used to measure the extent to which users want to use mobile banking for transactions and other financial activities.

Use Behavior

Venkatesh, Morris, Davis & Davis (2003) define usage behavior as the conditions that support users in adopting and using information technology.

Trust

According to Rita & Fitria (2021), trust is defined as a person's desire to remain loyal to a service provider based on positive expectations of the service provider's future actions. Trust reflects the subjective belief that someone or something is reliable and the willingness to accept guarantees from that party.

1. Ability

Refers to the characteristics and competencies of the seller or organization in influencing and supporting a specific area. This includes how the seller offers services and protects transactions from interference from other parties, ensuring that consumers get satisfaction and safety during transactions.

2. Benevolence

The willingness of the seller to create mutual satisfaction that is mutually beneficial between himself and the consumer. The seller strives to achieve maximum profit while still ensuring a high level of consumer satisfaction. The seller is not only focused on profit but is also active in meeting the needs and satisfaction of consumers.

3. Integrity

Refers to the behavior of the seller in conducting its business. This includes the reliability of the information provided to consumers, as well as the conformity between the quality of the products sold and the facts informed so that the products can be trusted.

Experience

According to Kwateng, Atiemo & Appiah (2019), as consumers gain experience, they tend to use technology with a more practical approach. The more experience they have, the greater their familiarity with technology, and the better their knowledge structure to support learning in technology use. Framework of Thought

In this study, the independent variables analyzed include Performance Expectations, Effort Expectations, Social Influence, Facilitating Conditions, and Trust. The dependent variable measured is Usage Behavior. In addition, the variable of Behavioral Intention to Use the System serves as a variable that can act as both an independent and dependent variable. Experience is used as a moderating variable in this study.

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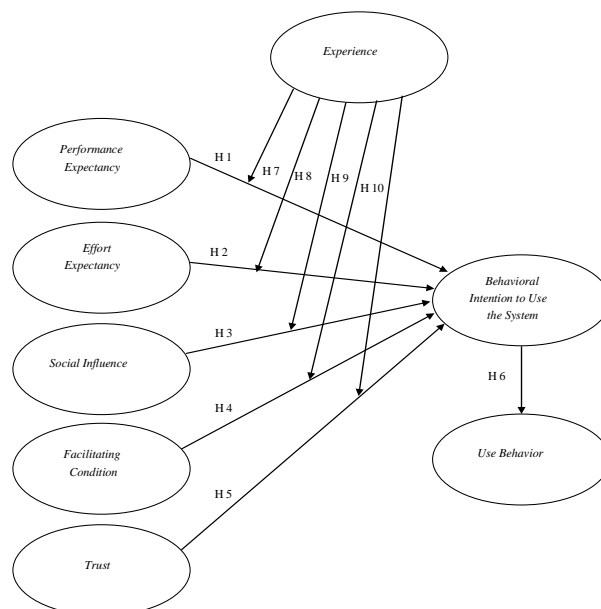


Figure 4. Research Model Hypothesis

1. The Effect of Performance Expectations on Behavioral Intentions to Use the System

Research conducted by Mufingatun, Prijanto, & Dutt (2020) shows that performance expectations (PE) have a positive and significant effect on behavioral intention (BI). This finding is supported by the research of Abu-taieh et al. (2022), which also states that performance expectations (PE) have a positive and significant effect on behavioral intentions (BI). H1: Performance Expectations Affect Behavioral Intention to Use the System.

2. The Effect of Effort Expectations on Behavioral Intention to Use the System

Based on research conducted by Mufingatun, Prijanto, & Dutt (2020), effort expectations (EE) have a positive and significant effect on behavioral intention (BI). This finding is reinforced by the results of research by Abu-taieh et al. (2022), which also states that business expectations (EE) have a positive and significant effect on behavioral intentions (BI).

H2: Effort Expectations Affect Behavioral Intention to Use the System.

3. The Effect of Social Influence on Behavioral Intention to Use the System

Mufingatun, Prijanto, & Dutt (2020) state that social influence (SI) has a positive and significant influence on behavioral intention (BI). This finding is confirmed by Kaur & Arora's (2021) research, which states that social influence (SI) has a positive impact on behavioral intention (BI).

H3: Social Influence affects Behavioral Intention to Use the System.

4. The Effect of Facilitating Conditions on Behavioral Intention to Use the System

Research by Iskandar, Hartoyo, & Hermadi (2020) shows that facilitating conditions (FC) have a positive and significant influence on behavioral intention (BI). This research is supported by the findings of Rita & Fitria (2021), who added that the FC variable has a partial influence on behavioral intention in using BNI mobile banking among Indonesian migrant workers. H4: Facilitating Conditions Affect Behavioral Intention to Use the System.

5. The Effect of Trust on Behavioral Intention to Use the System

The results of research by Merhi, Hone, & Tarhini (2019) show that behavioral intention (BI) to adopt mobile banking services is influenced by trust (TR). This finding is supported by research by Abu-taieh et al. (2022), which states that perceived trust (PT) has a positive and significant influence on behavioral intention (BI).

H5: Trust affects Behavioral Intention to Use the System.

6. The Effect of Behavioral Intention to Use the System on Usage Behavior

Research by Anjani & Mukhlis (2022) shows that behavioral intention has a positive and significant influence on the behavior of using BRI mobile banking. This finding is supported by research by Iskandar, Hartoyo, & Hermadi (2020), which also states that behavioral intention (BI) has a positive and significant effect on usage behavior (UB) in the context of mobile banking. H6: Behavioral Intention to Use the System Affects Usage Behavior.

7. Moderation of Experience on Performance Expectations

Venkatesh, Morris, Davis & Davis (2003) state that positive experience has a significant moderating effect on Performance Expectations. This finding is reinforced by the research of Kwateng, Atiemo & Appiah (2019), which shows that experience moderates the effects of Performance Expectations in the adoption and use of mobile banking services in Ghana. H7: Experience Moderates the Effect of Performance Expectations.

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8. Moderation of Experience on Business Expectations

Research conducted by Venkatesh, Morris, Davis & Davis (2003) shows that positive experience has a significant moderating effect on Expected Effort. Research by Kwateng, Atiemo & Appiah (2019) also found that experience has a moderate impact on Expected Effort (EE) in the adoption and use of mobile banking services in Ghana.

H8: Experience Moderates the Effect on Expected Effort.

9. Moderation of Experience on Social Influence

Based on research by Venkatesh, Morris, Davis & Davis (2003), positive experience has a significant moderating effect on Social Influence. This finding is reinforced by the research of Kwateng, Atiemo & Appiah (2019), which shows that Social Influence (SI) affects respondents who have experience.

H9: Experience Moderates Influence on Social Influence.

10. Moderation of Experience on Facilitating Conditions

Research conducted by Venkatesh, Morris, Davis & Davis (2003) states that positive experience has a significant moderating influence on Facilitating Conditions. Research by Kwateng, Atiemo & Appiah (2019) also revealed that facilitating conditions can influence respondents based on their level of experience. H10: Experience Moderates the Influence on Facilitating Conditions.

11. Moderation of Experience on Trust

Based on research conducted by Kwateng, Atiemo & Appiah (2019), experience has a moderating influence on trust in the adoption and use of mobile banking services in Ghana. H11: Experience Moderates the Influence on Trust.

THEORETICAL BACKGROUND

The object of this research is mobile banking, with a population consisting of mobile banking users who live in Jabodetabek. The sampling technique used is non-probability sampling, with a purposive sampling method. According to Hair et al. (2019), the ideal sample size should be more than 100. As a general rule, the minimum sample is five times the number of items analyzed, with a ratio of 10:1 as a more recommended size. This study has 26 statement items, so the number of samples needed is $26 \times 10 = 260$ samples to represent the population of mobile banking users in Jabodetabek. Type and Source of Data

This study uses quantitative data. The quantitative data was obtained through an online questionnaire distributed to mobile banking users who were willing to become respondents. The data source used is primary data, which is collected directly by researchers using research questionnaire instruments.

CONCLUSIONS

The convergent validity test results show that all indicators have met the convergent and discriminant validity criteria with high values. All statements for each variable in this study are reliable and have met good convergent validity. The research data was processed using SmartPLS 4 with the following graph:

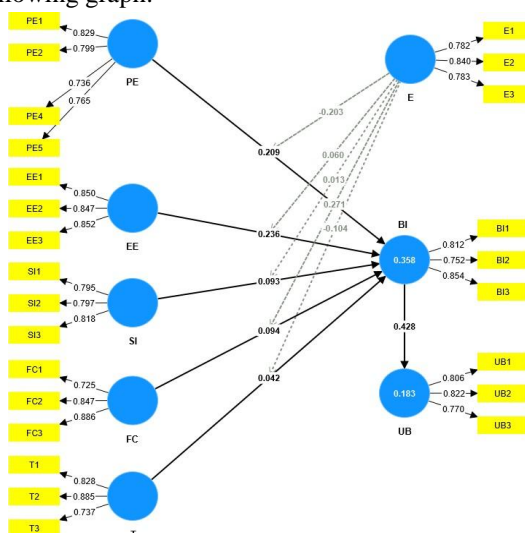


Figure 7. Results of Data Processing II

Source: SmartPLS 4 (2023)

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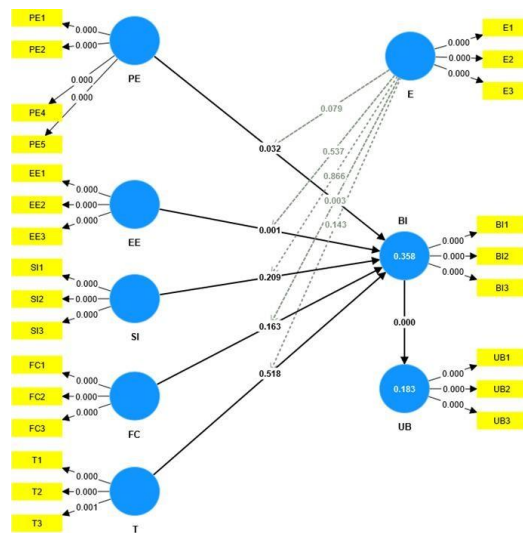


Figure 8. Results of Data Processing III

Source: SmartPLS 4 (2023)

Performance Expectations and Effort Expectations have a significant effect on Behavioral Intention to Use the System, while Social Influence, Facilitating Conditions, and Trust do not show a significant effect on Behavioral Intention to Use the System. Behavioral Intention to Use the System has a significant influence on Usage Behavior. However, experience cannot moderate the relationship between Performance Expectations, Effort Expectations, Social Influence, and Trust in Behavioral Intention to Use the System. In contrast, experience can moderate the relationship between Facilitating Conditions and Behavioral Intention to Use the System.

Mobile banking users can improve their performance, increase work efficiency, improve the quality of results, complete tasks faster, and increase work effectiveness. A person's intention to use mobile banking is not only influenced by positive performance results but also by the ease of use of the mobile banking application. Mobile banking users can also find it easy to transact, make payments, and invest. Experience affects the extent to which the availability of facilities impacts users' interest in using them, which in turn will increase users' desire to use mobile banking.

ACKNOWLEDGMENT

For companies, the results of this study can be an important consideration in efforts to increase Behavioral Intention to Use the System. In this study, effort expectancy was shown to have the greatest influence among other variables, so it is hoped that banks can ensure that a person's intention to use mobile banking is not only influenced by positive performance results but also by ease of use.

For future researchers, it is recommended to use the UTAUT 2 or UTAUT 3 model, including variables such as Price Value, Hedonic Motivation, and Habit, as well as adding intervening variables such as credibility and innovation. Future researchers are also expected to use different research subjects and expand the scope and sample of the study, to make further contributions to the development of science. In addition, it is recommended that future researchers test the UTAUT model using SEM (Structural Equation Modeling) with other analytical tools such as AMOS, LISREL, and so on.

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