

The Analysis of User Acceptance Using UTAUT and Delone & McLean Model: Study Case of Banking Mobile Application

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Abstract

This study aims to determine the acceptance of the use of mobile banking applications and analyze the factors that influence their acceptance. The models proposed in this study are the UTAUT and Delone & McLean integration models. The criteria for respondents in this study were mobile banking users for at least 4 months and using purposive sampling. Data analysis was carried out using the PLS-SEM approach. In this study, 5 of the 8 hypotheses were accepted. Then, the factors that affect the acceptance of mobile banking users are obtained, namely performance expectancy, social influence, service quality, and information quality. Then the factors that do not affect user acceptance are effort expectancy, facilitating conditions, and system quality. The findings of this study are that 78.3% of users accept that they want to use mobile banking in the future and recommend it to mobile banking developers in the hope that in the future the application will be easier to understand, compatible with all smartphone systems that are used by many people, and system quality will be improved to minimize constraints on the application.

Keywords: mobile banking, acceptance, utaut, delone & mclean, application.

INTRODUCTION

Information technology is developing rapidly over time. The advancement of information technology has had a very positive impact on people in Indonesia because it makes it easier for people to carry out various activities (DeLone & McLean, 2003). Various things are starting to be digitized in various sectors, which helps companies or institutions support the main activities in their organizations. Of course, this goes hand in hand with the increase in internet users in Indonesia, which encourages companies or institutions to digitize their business processes. Around 191 million individuals will access the internet in Indonesia, according to a recent study. By 2025, this figure is projected to increase to almost 240 million. Indonesia is one of the world's largest online markets, with more than 171 million internet users.

Popular online activities include social media and mobile messaging. Mobile internet use is growing rapidly and now accounts for more than 64% of all internet usage. Along with the development of internet users, every organization or institution in various sectors is also trying to make innovations that involve the use of the internet in their business processes. In companies in the banking sector, customers no longer need to go to ATMs or banks to carry

out banking activities such as payments or money transfers. Customers now only need to carry out some transaction activities, such as money transfers, digital money top-ups, and the like, via the internet (Andry et al., 2020). With the development of internet users in Indonesia, many banks provide services that can be accessed using the internet, one of which is mobile banking. According to previous researcher, mobile banking can be interpreted as an interaction in which customers connect to the bank via mobile devices such as cellphones, smartphones, or tablets (Fahrezi & Pradana, 2021). Many banks operate mobile banking to improve transaction service activities for their customers. Previous researcher said that this bank is a bank resulting from the consolidation of several banks which officially began operating in 2021. The result of the merger of three state-owned banks made this bank the largest Islamic bank in Indonesia.

Even so, there are still many who are not satisfied with the services available through mobile banking. One of the complaints that many people submit is that there is no maintenance notification when a user requests an activation code. Maintenance notifications are sent when a request for an activation code has been sent, but the credit remains deducted, which is a complaint from customers who use mobile banking. These complaints are supported by literature, which states that verification of the OTP code continues to fail and does not provide convenience in service compared to other large banks (Tannady et al., 2020). From literature, there were also complaints that mobile banking was not user-friendly because a user pressed the wrong donate button, which originally wanted to press the OK button, but because the two buttons are close together, the user pressed the wrong donate button (Tannady et al., 2020). Another complaint is that there are frequent interruptions due to application maintenance, which does not last long and affects user comfort (Chaidir et al., 2021). Based on previous research, it is also stated that users complain about the quality of the system, some of which are account login access, which always asks for pin and password input, notifications that announce failed information, activation tokens that are not always sent, applications that are difficult to run by iPhone users, as well as fund withdrawals and transfer features that always fail (Gunawan et al., 2019).

The acceptance and use of the mobile banking system by bank customers are determined by several factors, and these factors are related to one another. The Unified Theory of Acceptance and Use of Technology (UTAUT) model is one of the models that can verify the adoption and use of mobile banking technology (Laukkanen, 2017). The model created by William H. DeLone and Ephraim R. McLean, which consists of six parameters determining the success of information systems, is one that can be used to assess user satisfaction with using the system (Venkatesh et al., 2003). The development of this idea involved incorporating service quality into net benefits and including human and organizational consequences.

METHOD

This study employed a quantitative approach methodology. The author employs both data collection methods and data analysis methods in this quantitative approach method. Three methods were used to obtain the data: the first was observation, which involved closely observing the research object mobile banking. Second, literature studies related to this research. And finally, conduct a survey by distributing questionnaires indirectly using Google Forms to mobile banking users. After data collection was carried out, data analysis was carried out in a statistical way based on the proposed model, which was classified using data processing software, namely Microsoft Excel. Then, with the aid of SmartPLS, an analysis of the outer model and inner model was done using the PLS-SEM model approach. The outcomes of the analysis that were gleaned from the research are then used to guide the interpretation process. In accordance with the established research restrictions, the

conclusions reached are comparable to the issues addressed in the previously discussed research. The population in this study were users of the mobile banking application. In this study, the sampling method was purposive sampling, namely the sample selection method with certain considerations or criteria. Since the total population of mobile banking users, the authors believe that 150 samples are sufficient.

RESULT AND DISCUSSION

Based on the gender of the respondents, it is known that of the total of 165 respondents who answered the research questionnaire, 53% were female and 47% were male. This happened because when distributing the questionnaires, women were more willing to fill them out than men. as many as 51% of respondents aged 18–25 years, then 37% of respondents aged 26–32 years, then 4% of respondents aged 33–39 years, and 8% of respondents aged over 40 years. This happens because researchers have more relationships with people aged between 18 and 25 years, and they also consider that age to be someone's productive age to use technology. As many as 43% of respondents were students or university students, 37% were private employees, 7% were entrepreneurs, 3% were civil servants, and the remaining 10% were other workers who usually exist in Indonesia. This happens because researchers have more relationships with students, so respondents are dominated by students.

As many as 53% of respondents with an undergraduate education level, 35% of respondents with a high school education level, 9% of respondents with a D3 education level, and for respondents with a Masters, Middle School, or Elementary education level, each was 1%. This happens because respondents with an undergraduate education level can be considered technologically literate to use mobile banking, so respondents are dominated by people with an undergraduate education level. As many as 30% of respondents have income in the range below Rp. 1,000,000, then 29% of respondents have an income of around Rp. 1,000,000 to Rp. 3,000,000, then 25% of respondents have income in the range of Rp. 3,000,000 to Rp. 5,000,000, and 16% of respondents have income above Rp. 5,000,000. This happened because the work of the respondents was dominated by students, who were most likely given income or pocket money from their parents, with pocket money income in the range of less than Rp. 1,000,000. 59% of respondents have experience using the internet for more than 10 years, then as many as 35% of respondents have experience using the internet in the range of 6–10 years, and as many as 6% of respondents have experience using the internet in the range of 1–5 years. This can happen because the internet has long been implemented in Jakarta, around the 1990s; therefore, the duration of internet use by most respondents is dominated by a period of more than 10 years. 98% of respondents have used electronic-based services, and as many as 2% of respondents have never used electronic-based services. This can happen because many Jakarta residents already use electronic-based services, so the respondents are dominated by those who have experience using electronic-based services.

As many as 42% of respondents have used mobile banking for more than 1 year; 27% of respondents have used mobile banking for a period of 9 months to 1 year; and 31% of respondents have used mobile banking for a period of 4 to 8 months. This can happen because the mobile banking application was made more than one year ago, which also means that the respondents have sufficient experience using mobile banking. 24% of respondents use mobile banking very often, 50% of respondents often use mobile banking, 6% of respondents use mobile banking quite often, 10% of respondents rarely use mobile banking, and 9% of respondents rarely use mobile banking. This can happen because with the development of technology, everything is made easier through digital access, one of which is mobile banking, where use via smartphones can be used anywhere, so respondents are dominated by the frequency of respondents' use of mobile banking with frequent intensity. 31% of respondents

often use the transfer feature, 25% of respondents often use the account info feature, 17% of respondents often use the payment feature, 11% of respondents often use the purchase feature, 9% of respondents often use the QRIS feature, 6% of respondents often use the cash withdrawal feature without cards, and 1% of respondents often use other features. This happens because the main activity in using mobile banking is to transfer money, so respondents are dominated by people who frequently use the transfer feature on mobile banking.

From the results of the measurement model analysis, it has a good reliability value, all the indicators used in this study have an AVE value above 0.500, as do cross-loading and Fornell-Larcker's, which have criteria in accordance with the specified conditions. Referring to the results of the t-test in the structural model analysis shows that H1, namely the relationship $PE \rightarrow IMB$, is accepted. This can also be proven from the acquisition of the path coefficient (β) which has a value of 0.299, which means that the $PE \rightarrow IMB$ hypothesis has a significant relationship. It can be concluded that perceived usefulness, relative advantage, and expected results from using the application influence the user's intention to use the application. The results of the t-test in the structural model analysis show that H2, namely the relationship $EE \rightarrow IMB$, is rejected. This can also be proven from the acquisition of the path coefficient (β) which has a value of 0.011, which means that the $EE \rightarrow IMB$ hypothesis has an insignificant relationship. From these results, it can be concluded that ease of use, perceived ease of use, and complexity of the application do not affect the intention to use mobile banking. This is expected because the features in the application are still difficult for users to understand.

The results of the t-test in the structural model analysis show that H3, namely the relationship $SI \rightarrow IMB$, is accepted. This can also be proven from the acquisition of the path coefficient (β) which has a value of 0.111, which means that the $SI \rightarrow IMB$ hypothesis has a significant relationship. From these results, it can be concluded that subjective norms, social factors, and user impressions of the application influence the intention to use mobile banking. Structural model analysis shows that H4, namely the relationship $FC \rightarrow IMB$, is rejected. However, as seen from the acquisition of the path coefficient (β) which has a value of 0.157, it means that the $FC \rightarrow IMB$ hypothesis has a significant relationship. From this, it can be said that users' feelings of compatibility, perceived behavioral control, and the conditions of the facilities in the application do not affect their intention to use mobile banking. This is because the mobile banking application is not yet compatible with or easy to run on all systems on smartphones. Structural model analysis shows that H5, namely the $SVQ \rightarrow IMB$ relationship, is accepted. This can also be proven from the acquisition of the path coefficient (β) which has a value of 0.489, which means that the $SVQ \rightarrow IMB$ hypothesis has a significant relationship. From this, it can be said that users' feelings about services with good guarantees, responsiveness, empathy, and trustworthiness in the application will affect their intention to use mobile banking.

Referring to the results of the t-test in the structural model analysis shows that H6, namely the $SQ \rightarrow IMB$ relationship, is rejected. This can also be proven from the acquisition of the path coefficient (β) which has a value of 0.143, which means that the $SQ \rightarrow IMB$ hypothesis has a significant relationship. It can be concluded that users feel that system navigation, functionality, a system that is always updated regularly, and the fast response of the mobile banking application, which is an indicator of system quality, have no effect on their desire to use mobile banking. This is because the quality of the mobile banking system is not good enough, such as frequent maintenance for a long time and frequent failure to verify the OTP code, which reduces the pulse, so that users do not have a high desire to use the application based on the quality of the mobile banking system. Structural model analysis

shows that H7 i.e. IQ $\rightarrow$ BMI, is accepted. However, seen from the acquisition of the path coefficient (β) it can be said that users feel that easy-to-understand information, completeness of information, timeliness to bring up the latest information, as well as useful information, influence their intention to use mobile banking. Structural model analysis shows that H8, i.e., the IMB $\rightarrow$ AMB relationship, is accepted. From these results, it can be said that the user believes that the user's desire, motivation, and intensity (frequency) in using the application affect the user's actual use of mobile banking.

CONCLUSION

Research has succeeded in providing information on how big the acceptance rate of mobile banking users, and examining what factors influence mobile banking user acceptance, namely performance expectancy, social influence, service quality, and information quality. There are five hypotheses accepted out of eight hypotheses. From the rejected hypothesis, the user's perception of desire to use mobile banking is not influenced by system quality, business expectations, or conditions that facilitate users desire to use mobile banking. This happens because of the problems that have been discussed in the early chapters. Therefore, the results of this study can be used as suggestions and evaluation materials for banks in developing mobile banking. Referring to this study, researchers provide recommendations to banks to develop mobile banking systems, especially on matters related to system quality factors, business expectations, and conditions that facilitate mobile banking.

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