Analyzing Determinants of Mobile Banking Adoption in the Context of Indonesian Sharia Banks: A UTAUT 3 Framework

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ABSTRACT
Mobile Banking become one of the main components in digital strategy. Bank Syariah Indonesia also provides BSI services Mobile. BSI usersMobile continues to increase but not yet comparable to the total number of BSI customers. This study aims to determine the factors that influence behavioral intention in using Mobile Banking BSI. In this study applying quantitative methods and using the theory of UTAUT-3. This study took a sample of Islamic banking students in Yogyakarta. The research was analyzed using the SEM approach (Structural Equation Model) PLS based (Partial Least Square). The statistical test results show that the Facilitating Conditions (Facilitating Conditions) and Price Value (Price Value) influencing intention in usage behavior Mobile Banking BSI to Islamic Banking students in Yogyakarta.

Keywords: UTAUT 3, Mobile Banking, Behavioral Intentions

A. INTRODUCTION
Technology around the world is growing rapidly and has an impact on all areas of people's lives, such as the economy, education, and tourism. The increasingly sophisticated technology has brought people into the digital era (Khairani & Giri, 2020). Various business sectors have made technological innovations to support and improve their business, including the banking sector, both conventional banking and sharia
banking. One of the technologies developed by banking is: mobile banking. Mobile banking is one of the banking service products using the sophistication of GPRS (General Package Radio Services) technology which aims to make it easier for customers to carry out banking transactions (Angelina, 2022).

The transfer of banking activities to digital is regulated by the Financial Services Authority (OJK) in regulation number 12/POJK.03/2018 concerning the Implementation of Digital Banking Services by Commercial Banks or POJK Digital Banking Services. The background to the issuance of this regulation is due to banking innovation in the increasingly developing information technology sector (Rita & Fitria, 2021). Almost all banks in Indonesia, both state-owned banks and private banks, have offered facilities mobile banking for each customer. Mobile banking become the main thing in the digital strategy of the banking sector in Indonesia. This is based on a Price Waterhouse Coopers (pWc) survey in 2018. This shows the importance of using technology in the banking world as a long-term strategy, especially in switching financial transactions to non-cash (Rita & Fitria, 2021).

In line with this, this study aims to determine the factors that influence intention in usage behavior Mobile Banking Indonesian Sharia Bank. This study offers novelty related to the theory used, namely UTAUT 3.

B. LITERATURE REVIEW AND HIPOTESIS

Literature Review

Mobile Banking Bank Syariah

The Financial Services Authority explained that mobile Banking or also called m-Banking namely banking transactions...
using the media cellphone either in application form m-Banking or mobile operator default application. Appearance of facilities Mobile Banking have a positive impact on users. With service Mobile Banking Mobile phones make it easier for customers to carry out banking activities without any time and space limits. Banking institutions provide services Mobile Banking one of which aims to attract customers (Putranto, 2020).

**Expansion Model Unified Theory of Acceptance and Use of Technology (UTAUT)**

**Unified Theory of Acceptance and Use of Technology** is a model developed by Venkatesh et al. (2003) to understand the factors that influence technology acceptance and use. UTAUT theory focuses on predicting the adoption and use of a technology. UTAUT Theory (Unified Theory of Acceptance and Use of Technology) is a theory developed to predict technology adoption and use. This theory combines eight different theories and models, Theory of Reasoned Action (TRA) by Ajzen & Fishbein (1975), Technology Acceptance Model (TAM) by Davis et al. (1989), Motivational Models, Theory of Planned Behavior (TPB) by Ajzen (1985), combined TPB/TAM, PC Utilization Model, Diffusion of Innovation Theory (IDT) by Rogers et al. (2004), and Social Cognitive Theory (SCT).

In this model, there are four constructs that are proven to influence the Behavioral Intention in using a technology, namely Performance Expectations, Business Expectations, Social Influence, and Facilitating Conditions. In 2012, the UTAUT theory was developed into UTAUT 2 by Venkatesh.
with the addition of three constructs, namely Hedonic Motivation, Value, and Habit. The purpose of adopting these three approaches is to complete the construct on UTAUT (Venkatesh et al., 2012). The UTAUT3 model is an extension of UTAUT2 by adding one construct, namely Personal Innovation in the information technology (IT) domain. This model is a comprehensive model and the developer of the UTAUT-3 model claims that the explanatory power of this model in predicting technology adoption is 66% (Akbar, 2021).

**Behavioral Intention**

Agarwal and Karahanna (2000) state that behavioral intention (behavioural intention) is the desire (intention) of the individual to perform a particular behavior. Behavioral intention (behavioural intention) interpreted as the perception of how likely an individual is to benefit from something in a condition (Kwateng et al., 2019).

In this case, intention in use means the level of individual desire to use the service mobile banking. The results of previous research indicate that behavioral intention (behavioural intention) can predict well from the use of technology or systems by users. If the product or service has good quality, competitive prices, and provides a positive experience for customers, then it is likely that the customer will become loyal and will consider buying or using the product or service again in the future so that they can compete and even win the competition.
Hypothesis Development

**Performance Expectancy**

Performance expectations (*performance expectancy*) defined as how much a person believes or hopes for the ability of a technology to provide benefits and advantages in improving performance in carrying out certain tasks better (Venkatesh et al., 2003). If the m-banking service used can help banking transaction activities and generate profits, then the individual's perception of the service will be positive (Anjani & Mukhlis, 2022).

Behavioral intention (*behavioural intention*) is an individual's desire to perform a behavior and the possibility that the behavior will be carried out in the future and continue to repeat it. Behavioral intention or intention to perform a behavior is very important in shaping the use of a technology or system. (Venkatesh et al., 2003). In research conducted by (Alalwanet *et al.*, 2022) explained that *performance expectancy* (performance expectations) has a positive and significant effect on behavioral intention (*behavioural intention*). Based on the description above, the researcher formulated the hypothesis as follows:

Hypothesis 1: Performance Expectations Have a Positive and Significant Influence on Intention in Usage Behavior M-Banking Sharia Bank

**Effort Expectancy**

*Effort Expectancy* (business expectations), namely the level of ease and comfort in operating an information technology so that individuals want to use the information technology (Venkatesh et al., 2003). Every individual hopes that a new technology or system can be easily used without the
need for great effort, so that they can switch to the technology easily.

In the context of this research, technology mobile banking must provide more convenience so that people are intentioned in using it. In research conducted by (Herlambang & Dewauntil, 2018) it was found that effort expectancy influence on customer intention in using the service mobile banking. Based on the description above, the researcher formulated the hypothesis as follows:

Hypothesis 2: Business Expectations Have a Positive and Significant Influence on Intention in Usage Behavior M-Banking Sharia Bank

**Social Influence**

Social Influence (social influence) is defined as the degree to which an individual feels that an important person beside them thinks that they should use a new technology or system (Venkatesh et al., 2003). This concerns the influence of people from the individual's immediate environment (family, friends, superiors) on his perceptions and behavior related to certain activities (Savić & Pešterac, 2019). According to Venkatesh et al. (2003) concluded that social influence is a strong predictor that can influence intention in using a system or technology.

In the context of this study, social influence means how someone believes other people to also use the system mobile banking. In research (Anjani & Mukhlis, 2022) it was found that social influence had a positive and significant effect on behavioral intention (behavioural intention). Based on the description above, the researcher formulated the hypothesis as follows:
Hypothesis 3: Social Influence Has a Positive and Significant Influence on Intention in Usage Behavior M-Banking Sharia Bank

**Facilitating Conditions**

Facilitating conditions (facilitating condition) defined as the level of confidence of an individual in technical support such as infrastructure and resources that support or support the use of an information technology or system (Venkatesh et al., 2003). According to Venkatesh et al. (2003) facilitating conditions refer to the user's perception of the available resources and support. In using a system including services mobile banking, definitely requires the availability of appropriate resources, knowledge and infrastructure, it can be assumed that these conditions are largely dependent on the individual's intention to use them (Savić & Pešterac, 2019). The better the availability of facilities that support the use of a technology, the higher the intention in using that technology.

In the research conducted (Chaidir, Ro'is, & Akhmad Jufri, 2021) it was explained that facilitating conditions had a positive and significant effect on the intention to behave using m-banking. Based on the description above, the researcher formulated the hypothesis as follows:

Hypothesis 4: Facilitating Conditions Have a Positive and Significant Influence on Intention in Use Behavior M-Banking Sharia Bank

**Hedonic Motivation**

Hedonic motivation or hedonic motivation is defined as the pleasure motivation obtained in using technology or systems (Venkatesh et al., 2012). Intrinsic utilities, such as joy,
pleasure, entraining, and enjoyment are included by Venkatesh et al. (2012) under the concept of hedonic motivation along with extrinsic utility namely efficiency, usability, performance expectation in the same model (Venkatesh et al., 2012). Conceptually hedonic motivation is defined as the pleasure felt from using a system or technology so that it influences the acceptance and use of technology directly. In the research conducted (Santoso & Rachmawati, 2021) it is explained that hedonic motivation has a positive and significant influence on behavioral intention in service use m-banking. Based on the explanation above, the researcher formulated the following hypothesis:

Hypothesis 5: Motivation Hedonic Has a Positive and Significant Influence on Intention in Usage Behavior M-Banking Sharia Bank

Price Value

Venkatesh et al. (2012) proposed price value as a construct of technology adoption, which is the variation between the costs incurred and the benefits obtained. Venkatesh et al. (2012) define price value as cognitive trade-offs made by consumers between the perceived benefits of information technology applications and the monetary and non-monetary costs associated with the use of these technologies. Price value plays an important role in encouraging someone's intention in using a technology or system. The price value is said to be positive if the monetary costs incurred are lower than the benefits of using technology.

In the context of this study, what consumers consider is cost smartphone and mobile data that must be issued to use mobile banking. From the results of research conducted
(Nopiani & Putra, 2021), it is explained that price values have a positive effect on intention to use m-banking. Based on the description above, the researcher formulated the hypothesis as follows:

Hypothesis 6: Price Value Has a Positive and Significant Influence on Intention in Usage Behavior M-Banking Sharia Bank

**Habit**

_Habit_ or habits, namely certain actions that are carried out repeatedly based on the experience and knowledge of an individual (Venkatesh et al., 2012). According to Ramdan et al. (2017), there are three habit criteria, namely past behavior, reflex behavior, and individual experience. Habit is the degree to which a person tends to use automatic products or technology due to learning (Nopiani & Putra, 2021). The more often someone uses a technology until it becomes a habit, then their intention in continuing to use the technology will also be higher. In research conducted by (Putranto, 2020) it is explained that habit is a factor that determines the intention to use the service mobile banking in Indonesia. Based on the description above, the researcher formulated the hypothesis as follows:

Hypothesis 7: Habit has a positive and significant impact on intention in usage behavior M-Banking Sharia Bank

**Personal Innovativeness**

Personal Innovativeness in TI or personal innovation in IT, which is a personality trait of someone who tends to try and adopt the latest advances in IT (Pinto, Abreu, Costa, & Paiva, 2022). Farooq et al. (2017) have recognized that
personal innovation in IT is a stable characteristic that makes people intentioned in testing new technologies. According to some experts, personality characteristics such as personal innovation influence technology adoption, especially in the IT field (Farooq et al., 2017). In research conducted by (Kamalasena & Sirisena, 2021) it was explained that personal innovation in IT has a positive effect on technology or system adoption in the form of E-Learning. Based on the description above, the researcher formulated the hypothesis as follows:

Hypothesis 8: Personal innovation in IT has a positive and significant impact on intention in usage behavior M-Banking Bank Syariah

![Conceptual Research Model](image-url)

**Figure 1: Conceptual Research Model**

C. RESEARCH METHOD

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Data analysis

This study used a questionnaire approach (primary data) with a Likert scale of 1 (strongly disagree) to 4 (strongly agree), while the method convenience sampling used and the data obtained is taken online (google form). The research object focuses on Islamic banking students at UIN Sunan Kalijaga, Ahmad Dahlan University, Alma Ata University, Indonesian Islamic University, and STEI Yogyakarta.

Measurement Method

Hypothesis testing or data analysis in this study uses techniques Partial Least Square – Structural Equation Model (PLS-SEM). The analytical tools used in this study are the SmartPLS 4 application for hypothesis testing and SPSS 25 for descriptive analysis. In data analysis using PLS-SEM it is divided into Measurement Models (outer model) and Structural Models (inner model).

Results

Measurement model assessment (outer model)

The first tests performed were convergent and discriminant validity tests, examined using scores outer loadings and average variance extracted (AVE). Meanwhile, discriminant validity is checked by looking at the value Fornell-Larcker criterion. The output shows that overall value outer loading higher than 0.7 and AVE value greater than 0.50. These results indicate the existence of convergent validity among reflective constructs. Then what is done is reliability testing by checking
the value cronbach’s alpha and composite reliability. Output shows value cronbach’s alpha is in the range of 0.808 to 0.932, while CR is in the range of 0.887 to 0.951.

**Structural model assessment (inner model)**

The R Square value is used to determine how much the endogenous variables are influenced by exogenous variables. How much variation in exogenous variables is explained by endogenous variables can be measured using this R Square (R2). The R Square output in this study is 0.544, which means that the model in this study has high prediction accuracy. Then Q Square is also used in this study. Q Square is used to measure how well each change in the dependent or independent variable is able to predict the dependent variable. The Q Square value in this study is 0.544 which means it has a high prediction accuracy. Also, evaluate Goodness of Fit (GoF) is also used with a resulting value of 0.69 which means that this research is of good quality.

Referring to the output of the direct relationship, it can be analyzed that the relationship between facilitating conditions and price value to behavioral intention show significance (p-value < 0.10). Therefore hypotheses 4 and 6 are supported in this study. While the relationship between performance expectancy, effort expectancy, social influence, hedonic motivation, habit, and personal innovativeness to behavioral intention has a p-value > 0.10. So it can be concluded that hypotheses 1, 2, 3, 5, 7, and 8 were rejected in this study. More fully presented in table 4.

<table>
<thead>
<tr>
<th>hypothesis</th>
<th>Path</th>
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<th>Information</th>
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Discussion

The purpose of this study is to determine the factors that influence technology adoption *M-Banking* Bank Syariah Indonesia for Islamic Banking students and to find out recommendations for improvement for the future based on evaluation results. This study resulted that two out of eight positive proven variable relationships could predict technology adoption *M-Banking* Bank Syariah Indonesia for Islamic Banking students at universities in Yogyakarta, namely UIN Sunan Kalijaga, Ahmad Dahlan University, Alma Ata University, Indonesian Islamic University, and STEI.

The effect of Performance Expectancy on the Behavioral Intention of Islamic Banking students in using BSI M-Banking cannot be proven empirically in this study. So this proves that Performance Expectations do not affect Behavioral Intention in using BSI mobile banking for Islamic Banking students in Yogyakarta statistically. This means that students still lack confidence in using the BSI Mobile Banking application to complete their financial transactions and feel that they have not improved the performance of their financial transactions.

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>statistics</th>
<th>values</th>
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</tr>
</thead>
<tbody>
<tr>
<td>H1: PE → BI</td>
<td>-0.015</td>
<td>0.155</td>
<td>0.877</td>
<td>Rejected</td>
</tr>
<tr>
<td>H2: EE → BI</td>
<td>-0.026</td>
<td>0.244</td>
<td>0.807</td>
<td>Rejected</td>
</tr>
<tr>
<td>H3: SI → BI</td>
<td>0.131</td>
<td>1.272</td>
<td>0.203</td>
<td>Rejected</td>
</tr>
<tr>
<td>H4: FC → BI</td>
<td>0.266</td>
<td>2.346</td>
<td>0.019</td>
<td>Accepted</td>
</tr>
<tr>
<td>H5: HM → BI</td>
<td>-0.007</td>
<td>0.050</td>
<td>0.960</td>
<td>Rejected</td>
</tr>
<tr>
<td>H6: PV → BI</td>
<td>0.472</td>
<td>4.335</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>H7: H → BI</td>
<td>0.111</td>
<td>0.806</td>
<td>0.420</td>
<td>Rejected</td>
</tr>
<tr>
<td>H8: PI → BI</td>
<td>0.075</td>
<td>0.891</td>
<td>0.373</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

Table 4. Outcome of The Structural Model
The results in this study also cannot prove the effect of Effort Expectancy on Behavioral Intention in using BSI mobile banking for Islamic Banking students in Yogyakarta. These results are consistent with the findings of research conducted by Chaidir, Ro'is, & Akhmad Jufri (2021) which said that Business Expectations did not have a significant effect on Behavioral Intention in using mobile banking. BSI mobile banking is not necessarily easy for customers to accept and use properly. There are times when there are problems or obstacles when customers will use the mobile banking application. For example internet access is disrupted due to maintenance or bad weather, difficulty accessing applications, payment or transfer problems, and so on.

In this study, there was no influence between Social Influence (SI) on Behavioral Intention (BI). This finding is in line with research conducted by (Alalwan, Dwivedi, & Rana, 2017) which shows that social factors do not significantly influence consumer intention in adopting services. Mobile Banking. This means that Islamic Banking student banking customers in Yogyakarta are less intentioned in the recommendations and attitudes of their reference group in deciding their intention in adopting a technology.

In this study, Facility Conditions proved to have an effect on Behavioral Intentions. This means that facilities are one of the factors that can affect someone in using BSI Mobile Banking services. These results are in line with research conducted by (Savić & Pešterac, 2019) which explains that Facility Conditions are the third antecedent of the UTAUT model which influences intention in using Mobile Banking. Research conducted by Dewayanti (2018) also showed the same results.
In this study, Facility Conditions proved to have an effect on Behavioral Intentions. This means that facilities are one of the factors that can affect someone in using the service Mobile Banking BSI. These results are in line with research conducted by (Savić & Pešterac, 2019) which explains that Facility Conditions are the third antecedent of the UTAUT model which influences Intention in using Mobile Banking. Research conducted by Dewayanti (2018) also showed the same results.

In this study, no significant effect was found between Hedonic Motivation (FC) on Behavioral Intention (BI). This means that students use BSI mobile banking technology not based on pleasure, pride, or being entertained.

In this study it is proven that Price Value (PV) has a significant effect on Behavioral Intention (BI) in using M-Banking. This is consistent with research conducted by Nopiani & Putra (2021) and (Savić & Pešterac, 2019) which states that price values have a positive effect on the intention to use mobile banking. The cost of using BSI Mobile Banking is relatively cheap when compared to the benefits you get. In addition, it also does not burden users in terms of administrative costs.

This study cannot prove a significant effect of Habit construct (H) on Behavioral Intention (BI). The results of this study are supported by research conducted by Fatahudin (2020) which states that Habit (H) has no significant effect on Behavioral Intention (BI). This means that the use of BSI Mobile Banking is not a top priority for Islamic Banking students in Yogyakarta even though they have used Mobile Banking several times.
In the results of this study Personal Innovation (PI) has no significant effect on Behavioral Intention (PI). These results are in line with research conducted by Pinto et al. (2022) which stated that respondents were not influenced by their tendency to become early adopters of a new technology. Respondents are also less concerned about the new features offered by BSI Mobile Banking, for example the payment feature through the Quick Response Indonesian Standard (QRIS) so that they can resist the urge to make transactions.

D. CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the research described in the previous chapter, the following conclusions can be drawn:

I. Based on the results of statistical analysis using the UTAUT-3 model processed using SmartPLS software, it was found that the magnitude of the influence of the UTAUT-3 constructs on Behavioral Intention was 64%.

2. Several factors have been proven to influence the Behavioral Intention of Islamic Banking students in Yogyakarta in using Bank Syariah Indonesia Mobile Banking empirically. Among these factors, namely the Facility Condition and Price Value directly affect the Behavioral Intention positively. The relationship between the Facility Condition variable and Price Value on Behavioral Intention has a t-statistics value above the threshold. While Performance Expectations, Business Expectations, Social Influence, Hedonic Motivation, Habits, and Personal Innovation in IT are not proven to influence the Behavioral Intention of Islamic Banking students in Yogyakarta in using Bank Syariah Indonesia Mobile Banking.
Based on these findings, there are several recommendations that can be given to the parties, including:

1. For companies, it is necessary to increase promotions related to Mobile Banking so that people are more intentioned in using it, develop and improve features in the application so that customers can easily and efficiently use BSI Mobile Banking services, and always pay attention to factors that can affect customer satisfaction and improve quality and quality in This is so that people are intentioned and satisfied in using BSI Mobile Banking.

2. For the wider community, this research can become literature and reference in understanding the importance of using Mobile Banking, especially BSI Mobile Banking which can facilitate transactions and as one of the manifestations of the Islamic economy through digital financial facilities.

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