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# Factors involved in adopting mobile banking for Sharia Banking Sector using UTAUT 2

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**Abstract**

The technology development and covid 19 that hit 2020 have triggered an increase in digital transactions in Indonesia in recent years. The condition of the Indonesian people, which is dominated by the productive age classified as digital savvy, further strengthens the opportunities and challenges for digital transformation in almost all industrial fields. This study aimed to determine the critical factors for consumers in behavioral intentions to use mobile banking. The model examining the factors in this study used constructs in the unified technology acceptance user technology (UTAUT) extension theory, UTAUT 2. Perceived value is the construct for non-monetary value. Perceived credibility was also included to predict behavioral intentions. This study used 305 respondents as a cross-generational sampling in Indonesia. Structural Equation Method (SEM) and smart pls 3.0 software were used to analyze the data. Perceived credibility was revealed to be the strongest predictor of an individual's behavioral intention to apply mobile banking. Furthermore, performance expectancy, effort expectancy, facilitating conditions, habit, and perceived value (except social influence and hedonic motivation) were also shown to be the main predictors of consumer behavioral intentions. This study is expected to shed insight into mobile banking adoption and help the banking industry, particularly Sharia banking in Indonesia, launch a strategy to increase market share through the digitalization of banking, especially mobile banking services.

**Keywords** : Sharia banking; mobile banking; behavioral intention; mobile banking adoption; UTAUT 2; perceived credibility
**JEL Classification** : G210, N310, G41



## 1. INTRODUCTION

The raising of digital technology has entered almost all industries in Indonesia in the last decade. This is marked by the use of technology in various digital activities that leave a granular data trail down to the individual level (Bank Indonesia, 2019). The data from 2010 to 2019 show that, on average, the number of internet users increased by 23.72% annually. In 2019, internet users in Indonesia increased by 47.69% (The World Bank, 2021).

Moreover, data on mobile cellular subscribers from 2010 to 2019 demonstrates that there was an increasing number of 61.52% of cellular phone users in Indonesia (The World Bank, 2021), which then encouraged industry players to integrate cross-service digital platforms to form a new exclusive ecosystem through mastering the data.

In addition, the pandemic conditions in Indonesia due to the covid 19 virus hitting in 2020 further pushed the shift in the pattern of economic transactions in the community from offline transactions to online transactions. In the second quarter of 2020, the percentage of payment instruments when the people shopped through digital service reached 10.8%, divided into mobile banking, internet banking, and electronic money with 5.7%, 3%, and 2.1%, respectively (APJII, 2020).

Due to this phenomenon, the banking industry, both conventional and Sharia, is also forced to digitize by integrating the digital banking service system to provide the latest service to maintain customer retention and loyalty, including increasing its market share through digital innovation. On the other hand, Sharia banking can gain market share in the field of halal products (Kosher products). In 2020, electronic money and bank transfers dominated the payment methods for halal product transactions in the e-commerce marketplace with a share of 42.10% and 23.08%, respectively. In addition, the incessant promotion of the use of electronic money in collaboration with the e-commerce marketplace platform as well as applications for obtaining installment approvals that are relatively easy and fast with a market share of 6.92% have encouraged an increase in the use of electronic money and payments with cardless installments (Bank Indonesia, 2020).

Several studies have shown that several reasons cause the public's low interest in opening accounts at Sharia banks. One of the factors affecting consumer interest in buying products and services is consumers' motivation. Motivation is the underlying force that pushes people to take some action, signifying the motive why a person acts or behaves in a certain way (Schiffman and Wisenblit, 2015). In this case, consumer motivation is influenced by two reasons, consumer motivation in opening digital-based online accounts (IT) and consumer motivation in Sharia banks.

Opening an online account using mobile banking (m-banking) is closely related to digital-based Information Technology (IT). Users' absorption and acceptance of technology are also essential to encourage individual use intentions. This is because the new products or services most likely to gain their success are closely bound to which extent the knowledge of what influences consumers to get new products or services offered is (Yu, 2012). In UTAUT theory, Venkatesh et al. (2003) mentioned that four main items play an extensive role in defining user acceptance and behavior of employing technology: performance expectancy, effort expectancy, social influences, and facilitating conditions. The UTAUT model resulted by Venkatesh et al. (2003) was the sum of a comparison of eight competing models; TRA, TAM, MM, TPB/DTPB, Combined TAM and TPB (C-TAM-TPB), MPCU, Innovation Diffusion Theory (IDT), and Social Cognitive Theory (SCT). This UTAUT theory was later developed by Venkatesh et al. (2012) into UTAUT 2, which modified UTAUT theory to adapt aspects of technology use by consumers better.

Banking technology bears a high risk of security and trust from the public. Amin et al. (2008) applied the TAM model to assess the adoption of mobile banking, which contains five factors, covering perceived usefulness, perceived credibility, perceived ease of use, the amount of information, and normative pressure. This study, which was conducted on 158 respondents in Malaysia, found that a significant relationship was evident between

perceived ease of use and perceived credibility and usefulness, as well as a substantial impact on perceived usefulness, perceived ease of use, perceived credibility, several information on mobile banking and normative pressure against a person's behavioral intentions. This theory is supported by Yu's (2012) research which used the UTAUT model by incorporating one trust-based variable and two resource-based variables, which included perceived self-efficacy, financial costs, credibility on behavioral intentions to apply mobile banking to 441 respondents. In addition, Palau-Saumell et al. (2019), who conducted a study on the adoption of Mobile Applications using the UTAUT 2 theory, claimed that a significant and positive relationship between perceived credibility and one's behavioral intentions was identified. Thus, this is why researchers further discuss the UTAUT 2 theory with the addition of one construction of perceived credibility in relation to the technology usage through mobile banking applications at Sharia banks.

## 2. HYPOTHESES DEVELOPMENT

### Performance Expectancy

The first factor in UTAUT is performance expectancy, where a customer is convinced that the technology application will raise performance in dealing with their life's business (Venkatesh et al., 2003). This factor is derived from perceived usefulness (TAM/TAM2), relative advantage (IDT), extrinsic motivation (MM), job-fit (MPCU), and outcome expectations (SCT). Tai and Ku (2013) claimed that the generating performance expectancy is perceived usefulness, extrinsic motivation, job-fit, relative advantage, and outcome expectations. Payne et al. (2018) also proved in their study that mobile banking is considered, by users, to offer a high relative advantage as well as to be the most dominant predictor of mobile banking adoption. In another study, Yang and Forney (2013) suggested that the availability of efficient and effective information through personalization and flexible settings in mobile applications can increase an individual's positive attitude towards his performance achievement. Huang (2012) found that perceived usefulness increases users among young people to use information systems as evidenced by a positive relationship from perceived benefits on attitudes towards the use of information systems. This statement was strengthened by another study revealing that perceived ease of use as well as perceived usefulness played the most factors, which gave a positive impact on influencing the intention to use internet banking (Anouze and Alamro, 2020). Adapted from these statements, we proposed the following hypothesis:

$H_1$: Performance expectancy has a significant positive effect on one's intention to open an account through mobile banking.

### Effort Expectancy

In the UTAUT theory proposed by Venkatesh et al. (2003), effort expectancy is determined as the ease level of the technology employment driven by existing models, among others, perceived ease of use (TAM/TAM2), complexity (MPCU), and ease of use (LOT). Based on his study on mobile banking adoption, Yu (2012) said that many researchers favored perceived ease of use as a clincher that affects people to use mobile banking in the studies that the researchers conducted for the adoption of mobile banking. Davis (1989) claimed that the fundamental determinants of user acceptance are perceived usefulness and perceived ease of use. Referring to Mha (2015), perceived ease of use is a strong predictor that affects consumers to utilize mobile banking. Effort expectancy makes a significant factor as an advantage that mobile banking applications offer to consumers because the application is easy to operate, emphasizes user-friendliness, and enables

inclusive navigation facilities that can influence consumers' usage intentions (Farah et al., 2018). Thus, we conducted one hypothesis:

$H_2$: Effort expectancy has a significant positive effect on one's intention to open an account through mobile banking.

**Social Influence**

According to Venkatesh et al. (2003), social influence is defined as how an individual is aware that those important people realize that they should acquire new technology. In UTAUT theory, they proposed that behavioral intention is directly determined by the social influence which was expressed as subjective norms in TRA, TAM2, TPB/DTPB, and C-TAM-TPB, social factors in MPCU, and image in IDT. Sripalawat et al. (2011), in an examination of mobile banking, revealed that subjective norms constitute the most affecting factor in its influence on one to accept mobile banking. Yu (2012) suggested that social influence significantly influences consumer intentions to adopt mobile banking in the same study. On the other hand, Dasgupta et al. (2011) stated that perceived image has the greatest impact on user behavioral intentions in using mobile banking. Several other studies discovered that social influence is a positive predictor of behavioral intention to incorporate technology (Tak and Panwar, 2017; Farah et al., 2018; Palau-Saumell et al., 2019). Through the literature, we conducted a hypothesis:

$H_3$: Social influence significantly affects one's intention to open an account through mobile banking.

**Facilitating Conditions**

They were facilitating Conditions in UTAUT theory capture three constructs: perceived behavioral control (TPB/DTPB, CT AM-TPB), facilitation conditions (MPCU), and compatibility (LOT). Further, they are defined as the extent to which an individual recognizes that the organizational and technical infrastructure exists to sustain technology application (Venkatesh et al., 2012). According to Yang and Forney (2013), facilitating conditions and knowledge of the use of functions and features in mobile applications provided customers with ease in accessing cellular services and reduced technological infrastructure barriers enabling increased customer performance in their activities using mobile devices. Yu (2012) found that facilitating conditions in mobile banking affected certain circles, while Rahi et al. (2019), who researched internet banking adoption, proved that facilitation conditions strongly affected user intentions. The other studies discovered that facilitating conditions are a positive and significant factor influencing the adoption of mobile banking (Tak and Panwar, 2017; Palau-Saumell et al., 2019; Raza et al., 2019). Out of these statements, we still included facilitating conditions in the hypothesis:

$H_4$: Facilitating conditions have a significant positive effect on one's intention to open an account through mobile banking

**Hedonic Motivation**

In the UTAUT extension theory, referring to Brown and Venkatesh (2005), the definition of hedonic motivation is the pleasure or pleasure stemming from using technology, proving to play an essential role in determining the acceptance and implementation of information systems. Farah et al. (2018) revealed that hedonic motivation caused a significant positive effect on behavioral intentions in acquiring and accepting mobile banking. According to these studies, Raza et al. (2019), who conducted research related to mobile banking, saw that hedonic motivation is a positive and significant factor for one's intention to accept mobile banking. Alongside, Venkatesh et al.

(2012) stated that as user experience increased in using technology, the importance of the role of hedonic motivation would decrease. Nevertheless, Alalwan et al. (2015) claimed that hedonic motivation could be encouraged by adding new, more creative elements in the use of technology. Referring to Arcand et al. (2017), hedonic dimensions important to consumers include enjoyment and sociality related to mobile devices. As a result, we made a hypothesis:

$H_5$: Hedonic motivation significantly affects one's intention to open an account through mobile banking.

**Habit**

Habit is the extent to which individuals commit a consistent behavior through learning to utilize innovation (Limayem et al., 2007). Then, Venkatesh et al. (2012) included habits based on the construction of perceptions reflecting the results of previous experiences, allowing different levels of habits automatically as the chronology of time in technology use. Alalwan et al. (2015) revealed that habit is a factor that significantly affects the use of a new system. This is also reinforced by Tak and Panwar (2017), who inferred that habit is the most intense predictor of intention to involve mobile applications in the technology application. Moreover, a study led by Farah et al. (2018) on technology adoption demonstrated that habits are proven to have an obvious negative impact on cellular use where consumers feel unsure in accepting technology that was not part of their old habits. Moorthy et al. (2017) noticed that habits are part of the traditional barrier as one of the six significant barriers in determining a person's intention to adopt the technology. According to this, we entered a hypothesis:

$H_6$: Habit has a significant negative effect on one's intention to open an account through mobile banking.

**Perceived Value**

Venkatesh et al. (2012) proposed price value as an item that influenced behavioral intentions by extending UTAUT theory, where cost structure and price were considered factors that significantly influenced technology adoption. The research conducted by the authors related to mobile banking, which was a free application that almost all services it offered relied solely on internet quota. This is parallel with a study done by Farah et al. (2018), where price elasticity was replaced by perceived value which combined monetary and non-monetary values to obtain a more appropriate study. Referring to Chen and Chang (2012), perceived value is the overall evaluation made by a user on the net advantages of a product or service based on user ratings which have a key role in maintaining long-term relationships and user purchase intentions.

Farah et al. (2018) suggested that perceived value included the user's personal opinion on the utilitarian and hedonic benefits of the application, which incorporated functionality, enjoyment, interactivity, accessibility, service quality, and overall usability; therefore, high perceived value increased the chances for users to get post-use fulfillment. In a study done by Dasgupta et al. (2011), it was shown that perceived value significantly impacted the behavioral intention of one to adopt mobile banking usage. Consumers would tend to use mobile banking if it offered a solid performance-to-price advantage (Moorthy et al., 2017). As a result, we proposed a hypothesis:

$H_7$: Perceived value significantly affects one's intention to open an account through mobile banking.

**Perceived Credibility**

In developing the hypothesis made by the authors, this study wanted to determine what factors influenced the acceptance and employment of technology, especially in mobile banking applications. The addition of this construction referred to previous research conducted by Yu (2012), which suggested the importance of perceived credibility as a representation of privacy, individual security, risk, and trust concerns on mobile banking adoption. In general, users will pay more attention to adopting online technology, data security risks, and privacy violations so that consumers are resistant to innovation (Sripalawat et al., 2011). Al-Jabri (2015) concluded that intentions to use mobile banking are negatively and significantly affected by perceived risk, implying that one's behavioral intention to use technology is influenced by perceived credibility. Dasgupta et al. (2011) stated that one crucial factor for consumers to take technology is perceived credibility. Consistent with this research, Palau-Saumell et al. (2019) found that perceived credibility is a positive and significant predictor of behavioral intention to adopt mobile banking. Hence, we hypothesized:

$H_8$: Perceived credibility significantly affects one's intention to open an account through mobile banking.

**Age**

Demographic effects have been suggested in several studies on the acceptance and use of new systems. In study UTAUT 1, the moderating effect and relationship of age between the independent construct and behavioral intention were the dependent constructs (Venkatesh et al., 2003). The two studies found that performance expectancy performed a stronger effect on behavioral intentions for young users, while for older users, the effect on behavioral intentions is affected by the effort expectancy and social influence, and the effect grew stronger for older users in the relationship between facilitating conditions and technology use. Venkatesh et al. (2012) found that the effect of facilitating conditions was stronger on older users in behavioral intentions, hedonic motivation had the greatest influence on young users in behavioral intentions, habit and price value showed a substantial effect on older users on behavioral intentions, and the habit effect made a noteworthy effect on older users in technology use. Yu (2012) found that research in the electronic banking segment did not produce a consistent demographic of technology innovation adopters in terms of age, income, education, social status, and occupation. The results showed that age significantly moderated effort expectancy as the effect on older respondents and social influence on young respondents (Yu, 2012). Kwateng et al. (2019) revealed that age significantly moderates the effect of effort expectancy on teenage respondents (under 20 years) and older respondents (31 to 40 years), the effect of habit on respondents aged 20 to 30 years and older respondents, hedonic motivation for teenage respondents, the effect of perceived value and performance expectancy on younger respondents, the effect of social influence and facilitation conditions on older respondents. Indeed, other studies related to UTAUT found no obvious relationship with the moderating effect of age on adopting mobile banking (Palau-Saumell et al., 2019; Oliveira et al., 2014). However, we would ascertain age as the moderating effect with the hypothesis:

$H_9$: The effect of performance expectancy on one's intention is moderated by age in opening an account through mobile banking.

$H_{10}$: The effect of effort expectancy on one's intention is moderated by age in opening an account through mobile banking.

$H_{11}$: The effect of social influence on one's intention is moderated by age in opening an account through mobile banking.
$H_{12}$: The effect of facilitating on one's intention is moderated by age in opening an account through mobile banking.
$H_{13}$: Age in opening an account through mobile banking moderates the effect of hedonic motivation on one's intention.
$H_{14}$: The effect of habit on one's intention is moderated by age in opening an account through mobile banking.
$H_{15}$: The effect of perceived value on one's intention is moderated by age in opening an account through mobile banking.
$H_{16}$: The effect of perceived credibility on one's intention is moderated by age in opening an account through mobile banking.

**Gender**

In the UTAUT 1 and UTAUT 2 studies, Venkatesh et al. (2003 and 2012) conducted an examination of the moderating effect and gender relationship between the independent construct and behavioral intention, which is the dependent construct. This study revealed that a more intense effect on behavioral intentions for males was caused by performance expectancy, social influence, and effort expectancy had a stronger effect on females, while a greater effect on behavioral intentions for females was due to facilitating conditions, hedonic motivation showed a significant influence on a male in behavioral intentions, price value had a significant impact on a female in behavioral intentions, and a male had the largest influence on habit in behavioral intentions to apply technology. According to previous research, Yu (2012) found that gender did not notably curb perceived effort, social influence, and credibility on behavioral intentions, while gender moderated the effect of performance expectancy and perceived financial costs on behavior. Detailed statistics revealed that performance expectancy is perceived more by males than females in adopting mobile banking, and males had more attention to perceived financial costs than females. The results of another study found that females felt higher trust, price value, effort expectancy, and facilitating conditions than males on behavioral intentions, while males paid more attention to habit and performance expectancy factors than females in adopting technology (Kwateng et al., 2019). On the contrary, other studies revealed an insignificant relationship between the effects of gender moderation on behavioral intentions to adopt mobile banking (Oliveira et al., 2014; Palau-Saumell et al., 2019). Nonetheless, researchers decided to ascertain gender as a moderation effect. We made the hypothesis:

$H_{17}$: The effect of performance expectancy on one's intention is moderated by gender in opening an account through mobile banking.
$H_{18}$: The effect of effort expectancy on one's intention is moderated by gender in opening an account through mobile banking.
$H_{19}$: The effect of social influence on one's intention is moderated by gender in opening an account through mobile banking.
$H_{20}$: The effect of facilitating conditions on one's intention is moderated by gender in opening an account through mobile banking.
$H_{21}$: The effect of hedonic motivation on one's intention is moderated by gender in opening an account through mobile banking.
$H_{22}$: The effect of habit on one's intention is moderated by gender in opening an account through mobile banking.
$H_{23}$: The effect of perceived value on one's intention is moderated by gender in opening an account through mobile banking.

$H_{24}$: The effect of perceived credibility on one's intention is moderated by gender in opening an account through mobile banking.

This study did not include the element of experience as in UTAUT 2. This was because this research was not periodic in nature, hence, the researchers could not capture data based on different time periods as conceptualized in UTAUT theory. The conceptual framework is shown in figure 1 modeled by the researchers to intensively scrutinize the effect moderation of age and gender on performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, habit, perceived value, and perceived credibility on intention to adopt mobile banking.

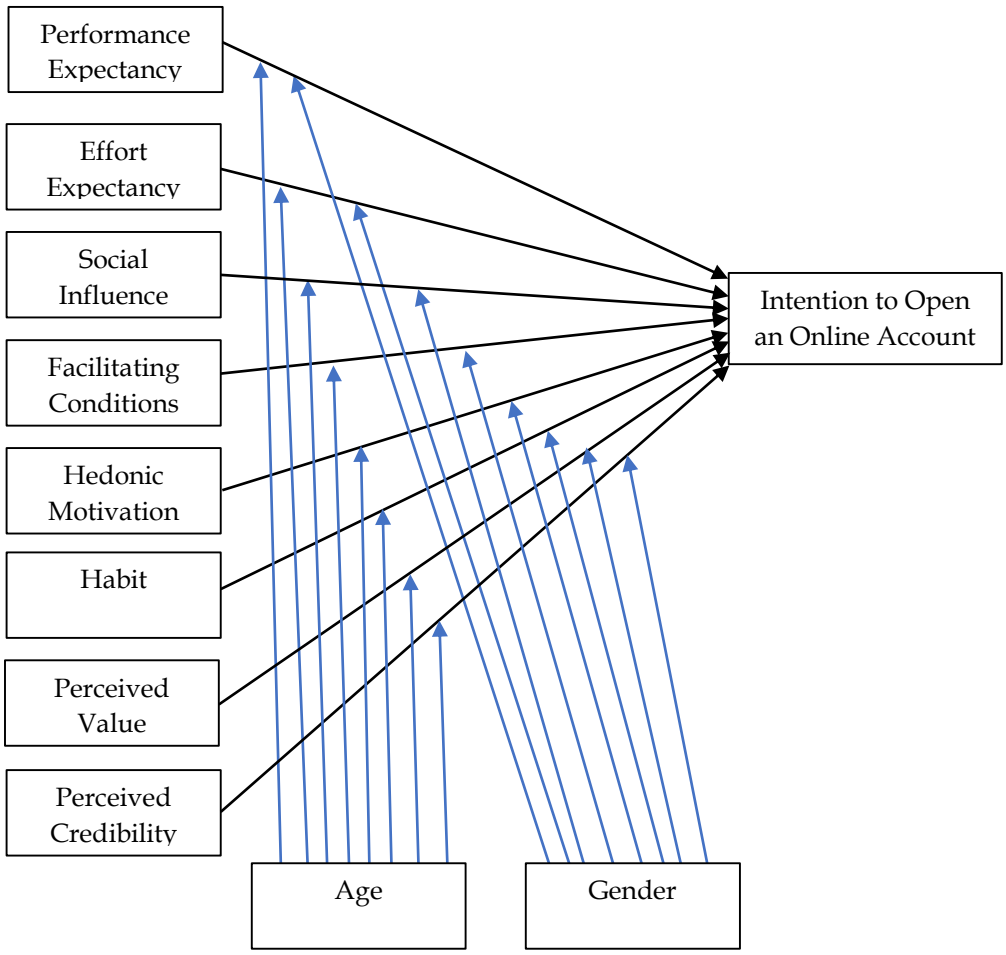



***Figure 1.*** Conceptual Framework

## 3. METHOD, DATA, AND ANALYSIS

The analysis conducted by researchers using the UTAUT 2 method was to determine the relationship between performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, habit, perceived value, and perceived credibility moderated by age and gender as a variable in behavioral intentions to acquire mobile banking. A quantitative approach is used to measure this study using a Likert Scale technique ranging from 1 for statements of disagreement to 4 statements of agreement on

the stimulus object ranging from "strongly disagree" to "strongly agree" by a series of statements (Malhotra, 2010). Variables for performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, and habit used question items adapted from UTAUT 1 and UTAUT 2 theory. The perceived credibility factor consisted of 4 items adapted from Yu (2012), while the perceived value factor was customized from Farah et al. (2018).

Data sampling was taken on a smartphone and mobile banking users for digital financial transaction services owned by Bank Syariah Indonesia (BSI), which is BSI mobile. BSI is the largest sharia bank which merges BSM, BNIS, and BRIS. We were interested in making further discussion regarding consumer behavioral intentions towards digital sharia banking services, especially for BSI. Furthermore, BSI has an online account opening gap of forty percent compared to the manual opening. The criteria for the sample were smartphone and mobile banking users who had not used BSI mobile. We conducted an online survey through google form starting from August to September 2021. This questionnaire contained 35 statements followed by 30 sample questionnaires using SPSS for windows to measure the validity and reliability of the survey results. Then, we interpreted after it was believed that the 30 questionnaire samples were eligible for further research.

The data analysis method that we applied was Structural Equation Modeling (SEM). We used the Path analysis technique through the SEM Pls program. The sample size generally ranged from 200 to 400, depending on the measurable variables for each construct. Referring to Malhotra (2010), the number of samples taken for problem-solving research is a minimum of 200.

## 4. RESULTS

### Respondent Demographics

The survey was conducted to 305 respondents from smartphone users, consisting of mobile banking users of other banks and who had never used mobile banking of different ages. Table 1 shows that respondents consist of 85.90% of mobile banking users of other banks, 2.30% of Sharia bank mobile banking users, 1.31% of both users, and 10.49% of non-mobile banking users. Based on age, the majority of respondents, aged 25 to 40 years, were 44.26% and the minority, aged more than 55 years, was 1.64%. Based on gender, 53.11% were females, and the rest were male. On the education side, the majority of respondents, numbering 65.25%, were respondents with undergraduate education, while the minority of respondents with elementary education and junior high school education level was 0.33%, respectively. In the occupational category, the majority of respondents were private employees with 35.08%. Meanwhile, the minority respondents were army or police with 0.33%. Based on the number of bank accounts owned, as many as 65.57% were respondents who had more than one bank account, 33.11% were respondents who had one account, and the minority of respondents who did not have bank accounts were 1.31% yet.

***Table 1.*** Profile of Respondents based on Demographic Characteristics.

| No | Characteristics | Frequency | % |
|---|---|---|---|
| 1 | *Category* | | |
| | The m-banking user of conventional bank | 262 | 85,90 |
| | The m-banking user of sharia bank m-banking | 7 | 2,30 |
| | The user of m-banking conventional banks and sharia banks | 4 | 1,31 |
| | Not an m-banking user | 32 | 10,49 |

| No | Characteristics | Frequency | % |
|---|---|---|---|
| 2 | *Age* | | |
| | < 25 y. o. | 113 | 37,05 |
| | 25-40 y. o. | 135 | 44,26 |
| | 41-55 y. o. | 52 | 17,05 |
| | >55 y. o. | 5 | 1,64 |
| 3 | *Gender* | | |
| | Female | 162 | 53,11 |
| | Male | 143 | 46,89 |
| 4 | *Education* | | |
| | Diploma | 30 | 9,84 |
| | Doctor | 2 | 0,66 |
| | Post graduated | 35 | 11,48 |
| | Under graduated | 199 | 65,25 |
| | Senior High School | 37 | 12,13 |
| | Junior High School | 1 | 0,33 |
| | Elementary School | 1 | 0,33 |
| 5 | *Occupation* | | |
| | Housewife | 18 | 5,90 |
| | Entrepreneur | 20 | 6,56 |
| | Government employees or BUMN | 80 | 26,23 |
| | Private employees | 107 | 35,08 |
| | College student | 79 | 25,90 |
| | Army or Police | 1 | 0,33 |
| 6 | *Bank account ownership* | | 10 |
| | 1 bank account | 101 | 33,11 |
| | More than 1 Bank account | 200 | 65,57 |
| | Don't have a bank account | 4 | 1,31 |

**Measurement Model Test**

Following the method in SEM, this section assessed the outer model. There are convergent validity, discriminant validity, and reliability testing. The SEM method shows how the constructs in UTAUT theory affect the use intention for mobile banking. The measurement model used was the development of the structural model conducted by previous researchers by Venkatesh et al. (2012) in UTAUT 2. The first stage was to assess the convergent validity criteria. A good validity on reflective latent is possessed by an indicator when its loading factor value is greater than 0,70, while models in the development stage could still maintain the loading factor of 0.50 to 0.60. To measure convergent validity is done in two steps;

1) The construct used in the study is valid if the average variance extracted (AVE) value is more than 0.5, as stated by Kline (1998) and Hair et al. (1998), cited in Farah et al. (2018).
2) A reliable construct has Cronbach's Alpha and Composite Reliability greater than 0.70, and vice versa if Cronbach's Alpha and Composite Reliability are lower than 0.70, hence a construct is not reliable (Ghozali, 2014).

Table 2 shows that based on the loading factor, all constructs were more than 0.7. Based on the AVE test, all constructs had a value of more than 0.5. Then, there was more than 0.70 for the value of Cronbach's alpha and composite reliability. This indicates that latent constructs had valid values and good reliability.

***Table 2.*** Convergent Validity test and reliability test

| Measurement | *Loading Factor* | Cronbach's alpha (α) | *Composite Reliability* (CR) | AVE | Criteria |
|---|---|---|---|---|---|
| BI | | 0.925 | 0.952 | 0.870 | |
| BI1 | 0.920 | | | | Valid |
| BI2 | 0.941 | | | | Valid |
| BI3 | 0.937 | | | | Valid |
| EE | | 0.930 | 0.950 | 0.827 | |
| EE1 | 0.880 | | | | Valid |
| EE2 | 0.922 | | | | Valid |
| EE3 | 0.896 | | | | Valid |
| EE4 | 0.939 | | | | Valid |
| FC | | 0.872 | 0.907 | 0.661 | |
| FC1 | 0.803 | | | | Valid |
| FC2 | 0.819 | | | | Valid |
| FC3 | 0.857 | | | | Valid |
| FC4 | 0.797 | | | | Valid |
| FC5 | 0.787 | | | | Valid |
| HT | | 0.910 | 0.943 | 0.846 | |
| HT1 | 0.901 | | | | Valid |
| HT2 | 0.939 | | | | Valid |
| HT3 | 0.919 | | | | Valid |
| HM | | 0.917 | 0.948 | 0.858 | |
| HM1 | 0.937 | | | | Valid |
| HM2 | 0.946 | | | | Valid |
| HM3 | 0.894 | | | | Valid |
| PC | | 0.952 | 0.965 | 0.875 | |
| PC1 | 0.923 | | | | Valid |
| PC2 | 0.939 | | | | Valid |
| PC3 | 0.942 | | | | Valid |
| PC4 | 0.938 | | | | Valid |
| PE | | 0.870 | 0.911 | 0.720 | |
| PE1 | 0.832 | | | | Valid |
| PE2 | 0.894 | | | | Valid |
| PE3 | 0.813 | | | | Valid |
| PE4 | 0.853 | | | | Valid |
| PV | | 0.892 | 0.921 | 0.701 | |
| PV1 | 0.785 | | | | Valid |
| PV2 | 0.860 | | | | Valid |

| Measurement | *Loading Factor* | Cronbach's alpha (α) | *Composite Reliability* (CR) | AVE | Criteria |
|---|---|---|---|---|---|
| BI | | 0.925 | 0.952 | 0.870 | |
| PV3 | 0.854 | | | | Valid |
| PV4 | 0.791 | | | | Valid |
| PV5 | 0.890 | | | | Valid |
| SI | | 0.871 | 0.914 | 0.727 | |
| SI1 | 0.896 | | | | Valid |
| SI2 | 0.905 | | | | Valid |
| SI3 | 0.883 | | | | Valid |
| SI4 | 0.712 | | | | Valid |

**Noted:** BI (behavioral intention); EE (effort expectancy); FC (facilitating condition); HT (habit); HM (hedonic motivation); PC (perceived credibility); PE (performance expectancy); PV (perceived credibility); and SI (social influence)

According to Farah et al. (2018), The Fornell and Larcker approach (1981) can be used to measure Discriminant Validity. If the correlation value between the indicator and other constructs is lower than the indicator's correlation value to the construct, the constructs are a good category. The value of the square root of AVE greater than the correlation between latent constructs indicates that the latent construct has good discriminant validity in the model.

Table 3 shows that there was a latent construct that had a higher correlation with other variables when compared to the square root value of AVE. This indicates that there were still latent constructs that had discriminant validity based on the Fornell-Larcker criteria that were not good. The final results of convergent validity and discriminant validity signified that the indicators and latent constructs were still in a good category to form the model.

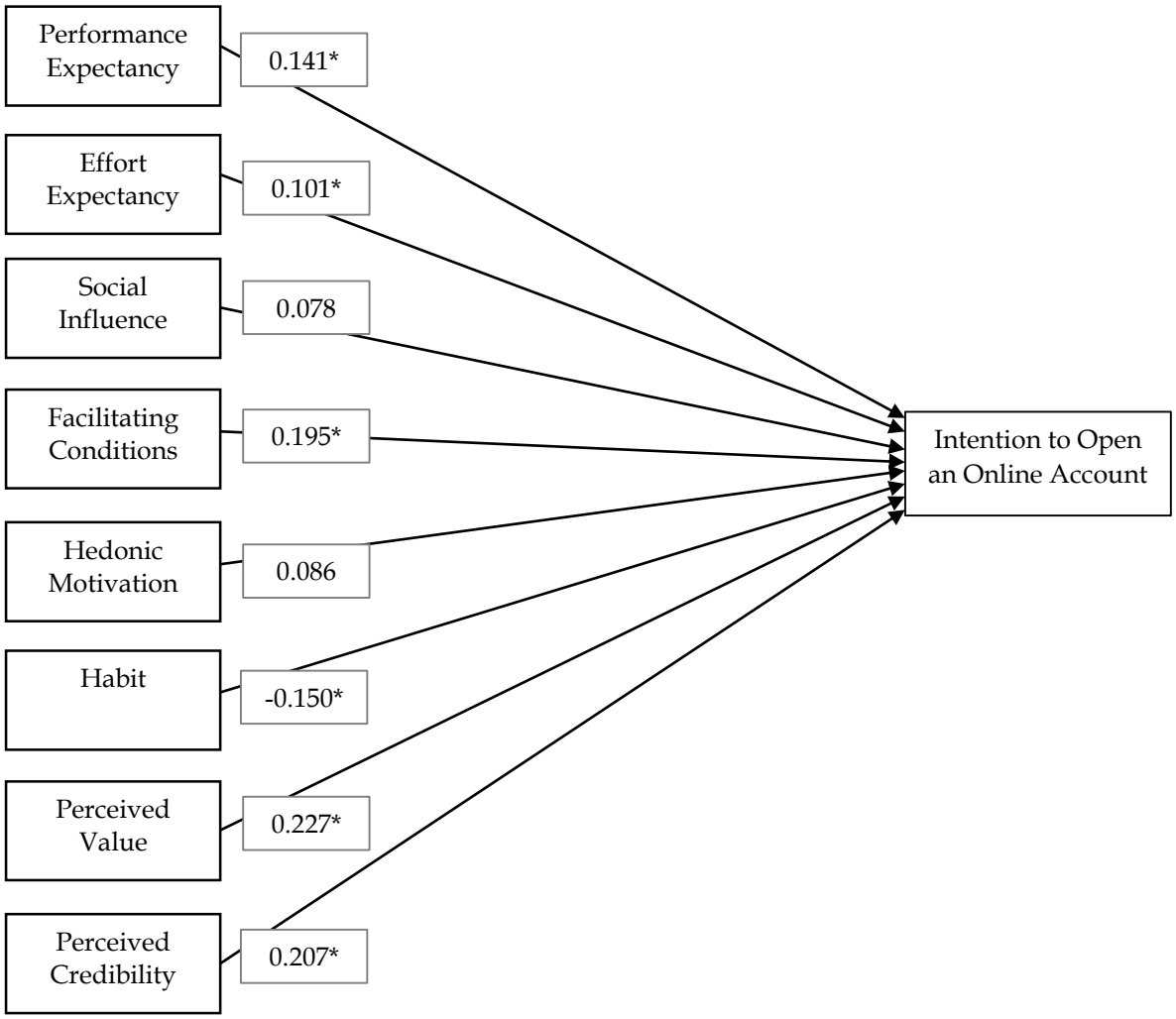
***Table 3.*** Test Value of Fornell-Larcker Criterion Discriminant Validity

| | BI | EE | FC | HT | HM | PC | PE | PV | SI |
|---|---|---|---|---|---|---|---|---|---|
| **BI** | 0.932 | | | | | | | | |
| **EE** | 0.618 | 0.910 | | | | | | | |
| **FC** | 0.671 | 0.640 | 0.813 | | | | | | |
| **HT** | 0.483 | 0.523 | 0.566 | 0.920 | | | | | |
| **HM** | 0.605 | 0.569 | 0.688 | 0.501 | 0.926 | | | | |
| **PC** | 0.692 | 0.620 | 0.655 | 0.489 | 0.615 | 0.935 | | | |
| **PE** | 0.673 | 0.701 | 0.693 | 0.556 | 0.653 | 0.675 | 0.848 | | |
| **PV** | 0.668 | 0.615 | 0.676 | 0.746 | 0.619 | 0.667 | 0.674 | 0.837 | |
| **SI** | 0.509 | 0.445 | 0.559 | 0.659 | 0.488 | 0.497 | 0.512 | 0.632 | 0.853 |

**Structural Model Test**

The relationship among variables according to UTAUT 2 theory was drawn by employing the Structural model test. We use smartPLS according to the SEM method to measure how each variable in the UTAUT 2 model calculates the weight of the significant

value among the variables tested. The calculating of path coefficient, t-value, and p-value executed hypothesis testing in this study. Assessing predictions and significance in hypothesis testing can be seen from the t-value, where the value must be greater than the t-table, which was 1.64 for one-tailed and 1.96 for two-tailed (Abdillah & Hartono, 2015). In this study, we used the one-tailed method to explicitly state the results of the hypothesis, whether negative or positive, to determine the direction of the coefficients. Then, the criteria for testing done were, if the t-statistic value was greater than 1.64, or the p-value was less than 0.05, then $H_1$ to $H_{24}$ was accepted and vice versa. The analysis of the calculation of the structural model is shown in Figure 2 and then summarized in Table 4.




Noted: 0.141* indicate the path coefficient is 0.141, *p*-value < 0.05, the path is significant

***Figure* 2.** Structural Equation Model Path Coefficient

The test result in table 4 (figure 2) show that a notable relationship was detected between performance expectancy and behavioral intention (ß = 0.141, $t$ = 2.191, $p$ < 0.05). Hence, $H_1$ was accepted. There are a positive and significant relationship from effort

expectancy on behavioral intention (ß = 0.101, $t$ = 1.676, $p$ < 0.05). This finding confirms $H_2$. While an insignificant relationship occurred in social influence (ß = 0.078, $t$ = 1.281, $p$ = 0.100) on behavioral intention, which means that $H_3$ were rejected.

Then, a positive and significant relationship occurred between facilitating conditions and behavioral intention (ß = 0.195, $t$ = 3.046, $p$ < 0.05). Hence, $H_4$ was accepted. Meanwhile, there was an insignificant relationship on behavioral intention from hedonic motivation (ß = 0.086, $t$ = 1.390, $p$ = 0.082). Thus, $H_5$ was rejected.

The relationship of habit and behavioral intention variable had a negative and significant (ß = -0.150, $t$ = 2.449, $p$ < 0.05). Then, the test results in perceived value (ß = 0.227, $t$ = 3.144, $p$ < 0.05) and perceived credibility (ß = 0.207, $t$ = 3.161, $p$ < 0.05) occurred again the relationship of a positive and significant. Hence, $H_6$, $H_7$ and $H_8$ were accepted respectively.

Regarding the effect moderation of age and gender on eight variables on behavioral intention, table 4 shows the result of effect for performance expectancy (PE), effort expectancy (EE), social influence (SI), facilitating conditions (FC), hedonic motivation (HM), habit (HT), perceived value (PV), perceived credibility (PC), age, gender, eight variables (PE, EE, SI, FC, HM, HT, PV, PC) moderated by age, and eight variables (PE, EE, SI, FC, HM, HT, PV, PC) moderated by gender to behavioral intentions. There was no significant relationship between age (ß = 0.001, $t$ = 0.023, $p$ = 0.491), and gender (ß = -0.017, $t$ = 0.465, $p$ = 0.321) on behavioral intentions. The results of effect for age moderation at all variables (PE, EE, SI, FC, HM, HT, PV, PC) had an insignificant relationship to behavioral intention. Each value of the variables moderated by age on behavioral intentions was PE (ß = -0.039, $t$ = 0.445, $p$ = 0.328), EE (ß = 0.098, $t$ = 1.402, $p$ = 0.080), SI (ß = 0.111, $t$ = 1.558, $p$ = 0.060), FC (ß = -0.091, $t$ = 0.802, $p$ = 0.211), HM (ß = -0.074, $t$ = 0.989, $p$ = 0.161), HT (ß = 0.112, $t$ = 1.362 , $p$ = 0.087), PV (ß = -0.111, $t$ = 1.193, $p$ = 0.117) and PC (ß = -0.046, $t$ = 0.600, $p$ = 0.274). Thus, $H_9$, $H_{10}$, $H_{11}$, $H_{12}$, $H_{13}$, $H_{14}$, $H_{15}$, $H_{16}$ were rejected, respectively. There was also an insignificant relationship for all variables (PE, EE, SI, FC, HM, HT, PV, PC) moderated by gender. As for each value of the variables moderated by gender on behavioral intentions, that was PE (ß = -0.007, t = 0.098, p = 0.461), EE (ß = -0.007, $t$ = 0.111, $p$ = 0.456), SI (ß = 0.027, $t$ = 0.428, $p$ = 0.334), FC (ß = -0.074, $t$ = 0.945, $p$ = 0.172), HM (ß = -0.018, t = 0.268, p = 0.394), HT (ß = -0.047 , t = 0.708, p = 0.240), PV (ß = 0.036, $t$ = 0.410, $p$ = 0.341) and PC (ß = 0.016, $t$ = 0.227, $p$ = 0.410). Thus $H_{17}$, $H_{18}$, $H_{19}$, $H_{20}$, $H_{21}$, $H_{22}$, $H_{23}$, and $H_{24}$ were not supported, respectively.

***Table 4.*** Structural Model Analysis

| Influence | Path Coefficient (ß) | T-value | P-value | Results |
|---|---|---|---|---|
| PE -> BI | 0.141 | 2.191 | 0.014 | $H_1$ (Accepted) |
| EE -> BI | 0.101 | 1.676 | 0.047 | $H_2$ (Accepted) |
| SI -> BI | 0.078 | 1.281 | 0.100 | $H_3$ (Rejected) |
| FC -> BI | 0.195 | 3.046 | 0.001 | $H_4$ (Accepted) |
| HM -> BI | 0.086 | 1.390 | 0.082 | $H_5$ (Rejected) |
| HT -> BI | -0.150 | 2.449 | 0.007 | $H_6$ (Accepted) |
| PV -> BI | 0.227 | 3.144 | 0.001 | $H_7$ (Accepted) |
| PC -> BI | 0.207 | 3.161 | 0.001 | $H_8$ (Accepted) |
| Age -> BI | 0.001 | 0.023 | 0.491 | - |

| Influence | Path Coefficient (ß) | T-value | P-value | Results |
|---|---|---|---|---|
| Gender -> BI | -0.017 | 0.465 | 0.321 | - |
| PE*Age -> BI | -0.039 | 0.445 | 0.328 | $H_9$ (Rejected) |
| EE*Age -> BI | 0.098 | 1.402 | 0.080 | $H_{10}$ (Rejected) |
| SI*Age -> BI | 0.111 | 1.558 | 0.060 | $H_{11}$ (Rejected) |
| FC*Age -> BI | -0.091 | 0.802 | 0.211 | $H_{12}$ (Rejected) |
| HM*Age -> BI | -0.074 | 0.989 | 0.161 | $H_{13}$ (Rejected) |
| HT*Age -> BI | 0.112 | 1.362 | 0.087 | $H_{14}$ (Rejected) |
| PV*Age -> BI | -0.111 | 1.193 | 0.117 | $H_{15}$ (Rejected) |
| PC*Age -> BI | -0.046 | 0.600 | 0.274 | $H_{16}$ (Rejected) |
| PE*Gender -> BI | -0.007 | 0.098 | 0.461 | $H_{17}$ (Rejected) |
| EE*Gender -> BI | -0.007 | 0.111 | 0.456 | $H_{18}$ (Rejected) |
| SI*Gender -> BI | 0.027 | 0.428 | 0.334 | $H_{19}$ (Rejected) |
| FC*Gender -> BI | -0.074 | 0.945 | 0.172 | $H_{20}$ (Rejected) |
| HM*Gender -> BI | -0.018 | 0.268 | 0.394 | $H_{21}$ (Rejected) |
| HT*Gender -> BI | -0.047 | 0.708 | 0.240 | $H_{22}$ (Rejected) |
| PV*Gender -> BI | 0.036 | 0.410 | 0.341 | $H_{23}$ (Rejected) |
| PC*Gender -> BI | 0.016 | 0.227 | 0.410 | $H_{24}$ (Rejected) |

## 5. DISCUSSION

This study analyzed the influencing factors behind the taking up of mobile banking based on UTAUT theory by Venkatesh et al. (2003), and its development is UTAUT 2 theory. Our study shows that the framework built-in UTAUT 2 has a significant effect on increasing understanding of significant phenomena (Goodhue 2007, cited in Farah et al. 2018), including understanding in adopting mobile banking.

According to the results of the analysis we have done through SEM Pls, the hypothesis for $H_1$ was supported. We concluded that performance expectancy had a positive and significant effect on the use intentions of a consumer on BSI mobile. This proves that consumers believe that mobile banking performance positively affects consumer intentions to apply mobile banking (Yu, 2012, Farah et al., 2018). These outputs were congruent with other technology-adoption studies showing a positive and significant relationship from performance expectancy on intention to adopt, among others, mobile banking adoption in sharia banks (Raza et al., 2019), adoption of mobile health applications (Semiz and Semiz, 2017), adoption of internet banking (Rahi et al., 2019), and adoption of mobile social e-commerce (Huang et al., 2021). Bank managers need to apply the performance and quality improvement of mobile banking in order to retain more users and attract potential mobile banking users so that, in the end, this service will improve individual performance (Tam and Oliveira 2017). These results also pointed out that performance expectancy is the predictor for consumers to use BSI mobile.

Our results presented that effort expectancy held a positive and significant effect on intention to open account on BSI mobile (Venkatesh et al., 2003). Thus, the analysis results

for $H_2$ were accepted. These results were consistent with prior studies regarding the relationship between effort expectancy and behavioral intention. The factor of effort expectancy exhibits a significant effect on performance expectancy and also indicates the factor of the ease-of-use on behavioral intentions and actual behavior in the use of mobile banking (Fedorko et al., 2021). A central role is played by perceived ease of use in consumers' intentions to apply BSI mobile services; therefore, banks are suggested to make mobile banking services easier to use (Anouze and Alamro, 2020). A positive and significant relationship also occurred in research on the adoption of mobile banking (Bankole et al., 2011; Farah et al., 2018), adoption of e-banking (AbuShanab and Pearson, 2007; Rahi and Ghani, 2018; Rahi et al., 2019), adoption of mobile health applications (Semiz and Semiz 2017), internet banking and commerce (Mha, 2015), and restaurants mobile apps (Palau-Saumell et al., 2019). These results indicated that respondents considered BSI's mobile banking easy to understand and easy to use and provided benefits because it could increase their efficiency in conducting financial transactions at the bank (Tak and Panwar, 2017). Therefore, BSI needs to make simple and easy-to-understand steps in designing mobile banking so users can easily process transactions in use and not waste time learning BSI mobile (Sripalawat et al., 2011).

Basically, social influence is proven to be the most generating factor on behavioral intention (Venkatesh et al., 2003). According to our examination, $H_3$ was not supported. We found numerous results regarding the effect of social influence on behavioral intention. Positive and prominent results were found in research on the adoption of mobile banking (Ahmed et al., 2017; Farah et al., 2018), information technology adoption (Yu, 2012), internet banking adoption (Rahi et al., 2019; AbuShanab and Pearson, 2007), adoption of mobile restaurant applications (Palau-Saumell et al., 2019) and adoption of mobile applications for shopping (Yang, 2010; Yang and Forney, 2013; Tak and Panwar, 2017). Indeed, the results were found in the research of mobile banking adoption (Bankole et al., 2011; Sarfaraz, 2017; Raza et al., 2019; Kwateng et al., 2019) and e-commerce adoption (Cabrera-Sánchez et al., 2020; Huang et al., 2021). Meanwhile, trust in banks comes from social influences, making customers adopt mobile banking (Chaouali and Hedhli, 2019). Referring to Elhajjar and Ouaida (2019), an insignificant relationship may occur because consumers do not recognize the availability of mobile banking owned by Sharia banks and refuse to accept the use of Sharia bank mobile banking in their banking experience. Thus, BSI needs to intensify social influence in terms of awareness to raise consumer acceptance of mobile banking (Huang et al., 2021).

Facilitating conditions will function more like perceived behavioral control and influence behavioral intentions and actual behavior (Venkatesh et al., 2012). The examination results of the $H_4$ were accepted, which is aligned with earlier studies related to mobile banking adoption. Two direct determinants in influencing the actual adoption behavior of consumers are eventuated with facilitating conditions and behavioral intention (Yu, 2012). Confirming results were also evident in the study on mobile shopping service adoption (Yang, 2010), adoption of mobile health applications (Semiz and Semiz 2017), mobile banking adoption (Ahmed et al., 2017; Raza et al., 2019), and e-banking adoption (Rahi et al., 2019). Hence, the essential factors for the acceptance of this technology are consumer perceptions of the support and resources available in the use of mobile banking (Palau-Saumell et al., 2019).

Referring to Farah et al. (2018), hedonic motivation was the most prominent predictor of adoption intentions related to m-banking services. However, the results of our

examination of $H_5$ were not supported. The researchers found several results on hedonic motivation's effect on behavioral intentions. Other studies that empirically found that hedonic motivation influenced behavioral intention significantly were related to the internet banking adoption (Alalwan et al., 2015; Salimon et al., 2017), the adoption of mobile applications for shopping (Tak and Panwar, 2017), the adoption of mobile applications for restaurants (Palau-Saumell et al., 2019), and adoption of mobile banking applications (Raza et al., 2019; Kwateng et al., 2019). Different results were discovered in the study by Wang et al. (2017) regarding the personal service e-balance adoption, which found that hedonic motivation was not correlated with behavior. According to the respondents in this study, this is because Indonesian people and the environment have their own characteristics and specificities (Wang et al., 2017).

Referring to Venkatesh et al. (2012), the influencing behavioral intentions is concluded to be a habit. Our results from examining hypothesis $H_6$ were supported where, in adopting mobile banking, behavioral intentions are impacted negatively and significantly by habit. Consumers tend to be hesitant to accept new technology because deep-rooted habits cause entry barriers for banks to offer mobile banking (Farah et al., 2018). This result showed that habits were one of the barriers to consumer behavioral intentions to accept new technologies (Moorthy et al., 2017). On the other hand, Chemingui and Hajer (2013) revealed that the main hurdles for consumers to acquire mobile banking are the traditional barriers as they are not used to using technology. Alalwan et al. (2015) inferred that the habitual behavior of users in adopting technology does facilitate their actual behavior to technology and motivates them to take such a system up in the future. Our respondents were dominated by conventional bank mobile banking users who had not used sharia bank mobile banking. Hence, BSI must make numerous efforts to attract the attention of consumers to adopt BSI mobile services.

Based on the results of our examination, $H_7$ was supported. Perceived value and behavioral intentions shared a positive and significant relationship, which is supported by a study on the relationship. These results were supported by research related to perceived value and behavioral intention relationships in mobile banking adoption (Dasgupta et al., 2011; Farah et al., 2018). This happens because consumer acceptance to adopt mobile banking will take place if a bank can meet their perception of performance-to-price value compared to services offered by other banks (Moorthy et al., 2017). Ubiquitous banking service is provided mobile banking offering available portion for any time and everywhere, thus possibly providing the greatest perceived value for consumers (Farah et al., 2018). According to Kwateng et al. (2019), banks could encourage users to leverage their needs' advantages through mobile banking services. This is in keeping with BSI mobile, offering a number of values to consumers in addition to serving the needs of financial transactions. Furthermore, it also offers religious services in mobile banking applications such as zakat, *infaq, shodakoh*, waqf, and other Sharia services.

The same results also occurred in our hypothesis for $H_8$, which was supported. We found that perceived credibility was the strongest positive predictor of m-banking use intention with a t-value of 3.161 (Dasgupta et al., 2011; Palau-Saumell et al., 2012). A distinct construct consists of perceived credibility is that combines self-perceptions of the features and capabilities of application security, trustworthiness, and privacy (Luarn and Lin, 2005; Amin et al., 2008; cited in Farah et al., 2018). Moreover, perceived credibility is an essential predictor for consumers in adopting mobile banking because it includes privacy and

security (McGovern et al., 2019). Thus, managers must improve security features to raise user trust and attract consumer intentions to adopt BSI mobile (Rahi and Ghani, 2018).

Based on our study, $H_9$, $H_{10}$, $H_{11}$, $H_{12}$, $H_{13}$, $H_{14}$, $H_{15}$, and $H_{16}$ were rejected. Our study found that age and all independent variables that were moderated by age did not have a significant relationship with behavioral intentions. This was because most of the respondents were under the age of 40. This study conforms with previous studies discovering that moderators such as age were not used because the majority of respondents were under 40 years old (Tak and Panwar, 2017). Furthermore, Oliveira et al. (2014) and Palau-Saumell et al. (2019) have investigated the effect of age moderation on the UTAUT study, which did not find a significant relationship in adopting mobile banking.

Finally, based on our analysis, $H_{17}$, $H_{18}$, $H_{19}$, $H_{20}$, $H_{21}$, $H_{22}$, $H_{23}$, and $H_{24}$ were not supported. Our findings showed that gender and the independent variables which were moderated by gender also did not have a significant relationship with behavioral intentions. This finding was consistent with other studies which as Oliveira et al. (2014) and Palau-Saumell et al. (2019) using UTAUT, where no effect of gender moderation on behavioral intentions to apply mobile banking was found. This indicated that consumers followed the developments of banking technology because several other researchers had examined distinguish in gender in banking technology usage (AbuShanab and Pearson, 2007; Riquelme and Rios, 2010; Glavee-Geo et al., 2017). Hence, the assumptions concerning gender and age in banking technology usage have changed in line with the incessant digitalization of banking.

## 6. CONCLUSION, LIMITATIONS, AND SUGGESTIONS

### Conclusion

Our study examined consumer behavioral intentions in adopting mobile banking using the constructs or variables of the UTAUT model 2. Perceived credibility, which was a factor added to UTAUT 2 theory, is an important factor that has the most positive and prominent effect on individual behavioral intentions to adopt mobile banking. Furthermore, other factors in UTAUT 2 that had a significant effect on consumer behavioral intentions to apply mobile banking are performance expectancy, effort expectancy, facilitating conditions, habit, and perceived value (non-monetary value from price value). A positive and significant relationship that occurred on perceived value to consumer behavioral intentions indicates that an individual looks further at the value and benefits provided when adopting technology than price sensitivity because it offers a more precise examination (Farah et al. 2018). Besides, there are factors that do not significantly influence behavioral intentions in adopting mobile banking: social influence and hedonic motivation. This indicates that the condition of the Indonesian people who have characteristics and specificity have a different understanding of adopting mobile banking. Thus, this research offers a number of intentions that banks can apply, especially Sharia banking, in conducting their strategies.

This research subscribes to knowledge on the impact of UTAUT theory on consumer intention to adopt technology developed by banking. These factors influence the behavioral intention to put on mobile banking in Indonesia, classified as a developing country. This study can be a guide and alternative solution for banks in Indonesia that are not focused on offering prices to consumers by looking further into the consumers' minds in adopting mobile banking and the next technology that banking might do in the future. Managers can

manage marketing strategies by building consumer awareness of the importance of service performance in mobile banking applications as well as simplifying the user interface to attract consumers who consider the importance of performance and effort expectancy factors.

This study also shows that facilitating conditions are also important factors in determining consumer behavioral intentions. In this regard, banks have to ensure that the targeted consumer environment uses the services offered. The suggested business implications are to increase the use of social media most widely used by target consumers (Yu, 2012). This strategy needs to be coupled with mobile banking facilities offered in terms of technology and features and various services needed to make consumer financial transactions. This is an important factor in influencing consumer behavioral intentions when it comes to opening accounts and using various services offered by banks. This is also a consideration for consumers to start adopting technology when making financial transactions by leaving conventional banking transactions. BSI needs to raise consumer awareness to use BSI mobile through promotions and gimmicks such as incentives for customers who can act as referrals for family, friends, and co-workers to use BSI mobile (Farah et al., 2018). Hence, BSI must also build a trend on mobile banking by using more campaigns through celebrities and influencers (Sripalawat et al., 2011). This takes place as the perceived efficacy of users and the dissemination of valuable information from users can result in effective communication with consumers (Kaur and Kumar, 2020). Furthermore, banks should emphasize the value and benefit those consumers will receive when using mobile banking. BSI needs to focus on the value offered in order to differentiate it from its competitors so that it can appeal to consumers to use BSI mobile in their daily lives. Thus, BSI needs to promote the benefits of making transactions using BSI mobile conveniently anytime and anywhere (Sripalawat et al., 2011).

Furthermore, this research also shows that the effect of perceived credibility is a very important factor for consumers in adopting mobile banking. These results indicated that respondents thought security, privacy, and confidentiality were essential when conducting financial transactions, considering that mobile banking transactions occur through high-risk wireless cellular networks. This is an important factor in influencing consumer behavioral intentions to start opening accounts and using various services offered by banks. Consumers will open an account at a bank by considering the quality of Sharia banking services and their belief that Sharia banks will provide the best, stable and secure service (Suhartanto, 2019). Thus, BSI must reassure users of their concerns by providing security guarantees for banking transactions made online through mobile banking with a safe and reliable system (Al-Jabri, 2015).

Finally, the moderating factors of age and gender show an insignificant relationship with behavioral intentions in using mobile banking either. Our respondents were dominated by smartphone users whose ages were lower than 40 years, dominated by females. Thus, our theoretical contribution is to enrich studies related to mobile banking adoption that has been done by previous investigators and confirm the main items that affect behavioral intentions in adopting mobile banking. The business implications that BSI can execute are implementing the same digital service strategy for all ages and genders.

**Limitation and suggestions**

Just as in previous studies, we also have limitations to guide future research. First, we only did this research on digital services owned by BSI, which was the BSI mobile application. The analysis results of research related to mobile banking adoption may be

different if it is run for industrial banks or other banks. Therefore, the strategy that we proposed is not necessarily one of the other banks. Second, this study is different from the original UTAUT 2 theory measured reactions and motives at a single point in time. Third, this study found that perceived credibility, which is an additional construct, needs to be considered for inclusion in UTAUT theory. This is consistent with the previous research related to mobile adoption conducted by Yu (2012). Fourth, along with this rapid technology development, research on the adoption of mobile banking is needed. Thus, this research can be a beginning for subsequent research related to the adoption of mobile banking in Indonesia. We propose to conduct further research that addresses this issue more comprehensively using the UTAUT theory, such as using age as a moderator with respondents from different generations. We also recommend re-examining the variables whose results are not significant in this study. This is aimed at enriching the results of research carried out on mobile banking adoption using UTAUT 2.

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