

## Millennial Experience with Mobile Banking and Artificial Intelligence (AI)-enabled Mobile Banking: Evidence from Islamic Banks

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### ABSTRACT

This study examines the factors that influence the attitudes and perceptions of the millennial generation towards the use of mobile banking services and AI-enabled mobile banking services. The research questionnaire was distributed using Google Form to customers using Islamic banking mobile banking services in three cities in Aceh Province, Indonesia, namely Banda Aceh, Langsa, and Lhokseumawe with a total sample of 204 Muslim millennial generation respondents. Partial least square was used to test technology-based differential effects (attitudes towards AI, relative advantage, trust, and security of mobile banking) and non-technology based (need for service, quality of service) as well as factors of religiosity on the use of mobile banking services and AI-enabled mobile banking service. This study results in the findings that the construct of trust, attitudes towards AI, religiosity, and relative advantage are the main determinants of mobile banking adoption intentions. It also shows the gap between millennial generation customers in trust levels, attitudes towards AI, religiosity, and perceived relative advantage between the two dependent variables. Finally, the trust construct has the greatest impact on the use of mobile banking and AI-enabled mobile banking services.

### KEYWORDS

Millennial  
Mobile banking  
Artificial intelligence  
Islamic bank

## INTRODUCTION

The Islamic economy has considerable potential in Indonesia, which is known as one of the countries with the largest Muslim majority in the world or often referred to as The Biggest Moslem Population. One of these potentials lies in the Islamic Banking Industry, which has a great opportunity to attract the interest of the Muslim community to meet the needs of banking services in accordance with the guidance of their religion (Amin, Isa, & Fontaine, 2013). Although Islamic banking operates on the

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principle of sharing benefits and risks, it is a dynamic industry in most of the predominantly Muslim countries (Abou-Youssef, Kortam, Abou-Aish, & El-Bassiouny, 2015). The current existence of Islamic banks is considered less popular and less experienced than conventional banking (Souiden & Rani, 2015), as evidenced by the share of the Islamic banking market which is only 5.96% of the market share of the National Banking market (OJK, 2018). This is evidence that Islamic banks are still facing tough challenges in attracting Muslim and non-Muslim customers. Therefore, it is important for Islamic banks to build and develop service technology that is more friendly and accessible in order to increase customer loyalty and market opportunities (Suhartanto, Dean, Ismail, & Sundari, 2019).

To improve services, Islamic banking has now adopted technology-based services, including ATM, phone banking, internet banking, and most recently mobile banking. Through the mobile banking service platform, customers can get real-time information from their accounts and can make transactions from anywhere and anytime. The availability of this online platform has created online banking services that can be accessed via smartphones (Appiah, 2019). According to Lee (2017), the presence of this technology has enabled customers to access banking services without the need to interact directly with bank employees, and this is a basic shift in the Banking Industry. Currently, banks are starting to offer mobile banking services that use AI and algorithm-based service interactions (Iberahim, 2016). An example of this service is chatbots that are integrated with an AI system. Chatbots are designed to interact and assist customers in completing their routine transactions by simulating conversations, either in an auditory or textual format (Korzeniowski, 2017). On the other hand, the increasing number of banks offering similar services has created fierce competition, so a strategy to encourage consumers to adopt the services is very important for every bank (Hwang, 2019). More specifically, this problem is considered important for Islamic banks, which are newcomers and are considered less experienced than conventional banks (Nizar, 2015). This research focuses on the millennial generation or Y generation consumers for several reasons. First, this generation currently numbers around 100 million (BPS, 2018) in Indonesia, so they will become the majority of consumers compared to other generations. Second, in addition to the large number, this generation in the next 5 to 10 years will have a higher level of income than other generations, making it a potential and profitable market (Payne, James, & Victor, 2018). Third, previous research has shown that digital native (millennial) consumers are more likely to be early adopters of technology (Kumar, 2008), and prefer to use mobile banking platforms to meet their banking needs (Statista, 2016). Therefore, they are almost certain to use mobile banking more than traditional banking services. The ability of Islamic banks to attract this market will have the potential to improve their business performance (Fusva et al., 2020).

## MODEL AND RESEARCH HYPOTHESES

### Millennial and Technology

At present, 38% of Indonesia's population is dominated by the millennial generation (Statistik, 2018). Financial Times reports show that this generation accounts for nearly 25% of the world's total population. Compared to the previous generation, millennials have more income that makes them the most dominant consumer group (Tilford, 2018).

Millennials are those who were born between 1981 and 2000. They are a generation that makes information technology a lifestyle and has a high dependence on various digital technology developments (Hasanuddin, 2017). This dependence encourages them to use mobile banking

services. Mobile banking itself is defined as a service platform provided by a bank or financial institution that allows customers to interact with bank features and services via a smartphone without the need to interact directly with bank employees (Curran, 2003).

Millennial Muslims are often referred to as generation M, Muslim Hipsters, or Global Urban Muslims (GUMmies) (Janmohamed, 2016). This generation has grown into a profitable consumer group because they are the economically productive age group (Suhartanto, Dean, Leo, & Triyuni, 2019). Besides, Millennials are known for their trendsetting orientation, high consumption levels, and, as their most prominent character, very knowledgeable about technology (Marmaya, Zakaria, & Desa, 2019). Muslim millennials are also unique from other millennials as they believe that religion and modernity are complementary (Janmohamed, 2016).

### **Need for Service**

The need for services refers to the perception of an individual's need to interact with bank employees at any point along the customer's path to transact. Past research has shown that the need for human interaction varies in strength between users and nonusers of self-service technology (SST). (Dabholkar and Bagozzi, 2002). Dabholkar (1999) suggests that people with a higher need to interact with bank employees' direct services (not users of SST) are not motivated to use self-service technology, such as mobile banking. In general, it can be seen that the need for services coupled with the perception of independent service technology attributes (trust, risk, accuracy) is the main determinant of whether consumers will use self-service technology or not (Lee, 2017).

H<sub>1a</sub>: Need for service negatively impacts mobile banking usage

H<sub>1b</sub>: Need for service negatively impacts the usage of AI-enabled mobile banking

### **Quality of Service**

In general, service quality is oriented towards customer perceptions of interpersonal interactions with bank employees. Strongly influenced by interactions between people (Dabholkar, 1999), customers form major judgments and attitudes towards overall service quality. The self-service technology literature suggests that customers who experience high social and personal experiences may not see the benefit of switching to SST (Curran, 2003). Therefore, if a customer feels that he or she is receiving a higher quality of service from direct interaction with bank employees, the customer may not be motivated to use mobile banking and AI services. However, digital native groups have limited interpersonal interactions with bank employees, so they tend to seek mobile banking services. Digital native groups are also accustomed to using smartphones to maintain their relationship (Kumar, 2008). Digital natives may have negative attitudes towards interpersonal interactions with bank employees (Laskowski-White, 2015). Based on the things described above, the hypotheses are:

H<sub>2a</sub>: Service quality negatively impacts mobile banking usage

H<sub>2b</sub>: Service quality negatively impacts the usage of AI-enabled mobile banking

### **Attitudes toward Artificial Intelligence**

Attitudes, norms, and subjective beliefs have been shown to predict behavioral intentions (Fishbein, 1975). As previously mentioned, no generation has accepted the presence of technology in their daily lives as demonstrated by digital natives. Digital natives are used to and expect cloud-based services

and can find information quickly (Lewin, 2018). AI-enabled services can expand digital native expectations to be able to independently process real-time information related to their financial activities (Lewin, 2018). Research shows that digital natives enjoy the use of new technologies (Smith, 2015). As a result, digital natives tend to have positive attitudes toward AI-enabled mobile banking. Based on the theory that has been described, the hypotheses proposed are as follows:

H<sub>3a</sub>: Attitudes toward artificial intelligence positively impact mobile banking usage

H<sub>3b</sub>: Attitudes toward artificial intelligence positively impact the usage of AI-enabled mobile banking

### **Relative Advantage**

Relative advantage is one of the most studied dimensions of innovation diffusion in the literature on mobile banking services (Püschel, 2010) because its ability to predict the adoption and use of mobile banking services is considered very good. Researchers observe that the greater the relative advantage, the greater the potential use of mobile banking services (Püschel, 2010). Kolodinsky (2004) argues that when customers see or experience advantages and benefits (e.g. time savings, convenience, and accuracy), mobile banking services will become the preferred banking method. Based on the literature study described above, the hypotheses are:

H<sub>4a</sub>: The relative advantage positively impacts mobile banking usage

H<sub>4b</sub>: The relative advantage positively impacts the usage of AI-enabled mobile banking

### **Security in Specific Mobile Banking Activities**

According to Yousafzai (2010), security perception refers to customers' reactions to perceived and actual online security threats, such as having their personal information hacked. In general, research on mobile banking services has consistently shown that decreased security in mobile banking services can lead to lower trust and ultimately, decreased intention to use these banking services (Yousafzai, 2010).

Laukkanen (2007) argues that consumers' perceived value on security can be observed at different levels of abstraction. As an illustration, customers may have different security beliefs among various mobile banking activities that can be carried out in an application. Digital natives can feel a greater risk when using applications to transfer funds than checking account balances (Grabner-Kraeuter, 2002). Each specific type of mobile banking activity can be considered by digital natives to have a different level of environmental control against security threats. Thus, a higher positive perception of security in various activities can lead to greater confidence in the relationship between digital natives and banks (Yousafzai, 2010), which results in increased activity to increase bank mobility. The hypotheses proposed are:

H<sub>5a</sub>: Security in mobile banking positively impacts mobile banking usage

H<sub>5b</sub>: Security in mobile banking positively impacts the usage of AI-enabled mobile banking

### **Perceived Trust**

Trust is a complex and multidimensional thing (McKnight, 2002) that is most relevant in the context of an unpredictable and risky environment (Grabner-Kraeuter, 2002). The mobile banking researchers then broaden the premise of Grabner-Kraeuter (2002), that trust can reduce uncertainty

and complexity in e-channel transactions. Zhou (2011) concludes that the assessment of customer confidence in the context of safety and security reduces uncertainty, which in turn promotes the use of mobile banking. Research shows that initial trust requires more monitoring of bank actions by customers. However, as customers become more familiar with the features of mobile banking service applications, confidence in bank competencies may increase and, customers may be more willing to share personal information, and this is a very important behavior for e-commerce adoption (McKnight, 2002). Thus, over time, the perceived trust can function to improve user behavior in mobile banking and AI-enabled mobile banking services in the future. Based on this, the hypotheses proposed are:

H<sub>6a</sub>: Trust positively impacts mobile banking usage

H<sub>6b</sub>: Trust positively impacts the usage of AI-enabled mobile banking

### Religiosity

According to Suhartanto (2019), religiosity refers to a person's level of devotion, belief, and respect for God. In other words, Religiosity is a personal belief and commitment to obey the Rules of Allah SWT. This commitment also affects one's daily behavior, such as in consuming products and services. The Religiosity-Intention Model assumes that religiosity is an important driver of customer satisfaction and behavioral intentions towards a product or service (Hidayat, 2015).

According to this model, religiosity has a significant impact on individual attitudes, values, and behavior. A person's beliefs shape their awareness and interaction with the world around them (Suhartanto, 2019). Hidayat (2015) states that religiosity is the main determinant of the use of Islamic banking services. Thus, religiosity has an impact on attitudes, awareness, interactions, and ultimately buying behavior. It can be said that religiosity is a vital factor in influencing the consumption of a product or service. The hypotheses proposed are as follows:

H<sub>7a</sub>: Religiosity positively impacts mobile banking usage

H<sub>7b</sub>: Religiosity positively impacts the usage of AI-enabled mobile banking

The hypothesized relationships between the variables are depicted in Figure 1.

### RESEARCH METHOD

This study used five indicators of the of service scale, nine indicators of service quality scale, five indicators of attitude scale towards artificial intelligence, six indicators of relative advantage scale, five indicators of mobile banking security scale, five indicators of trust scale for mobile banking services, two scale indicators of the use of mobile banking services, and seven indicators of the use of AI-enabled mobile banking services. These items were obtained from previous research conducted by Payne et al. (2018). The three items used on the religiosity scale were obtained from the research of (Mahudin, 2016), four items from the study of (Suhartanto, 2019), and the remaining three items were obtained from the research conducted by Hidayat (2015).

This research used an exploratory and descriptive approach. Respondents in this study were 204 millennial generation digital natives' customers who have used Islamic bank mobile banking services. Questionnaires were distributed using the Google Form platform. The research was

conducted in three cities in Aceh Province, namely: Banda Aceh City, Langsa City, and Lhokseumawe City. All variables in this study were measured using a Likert scale.

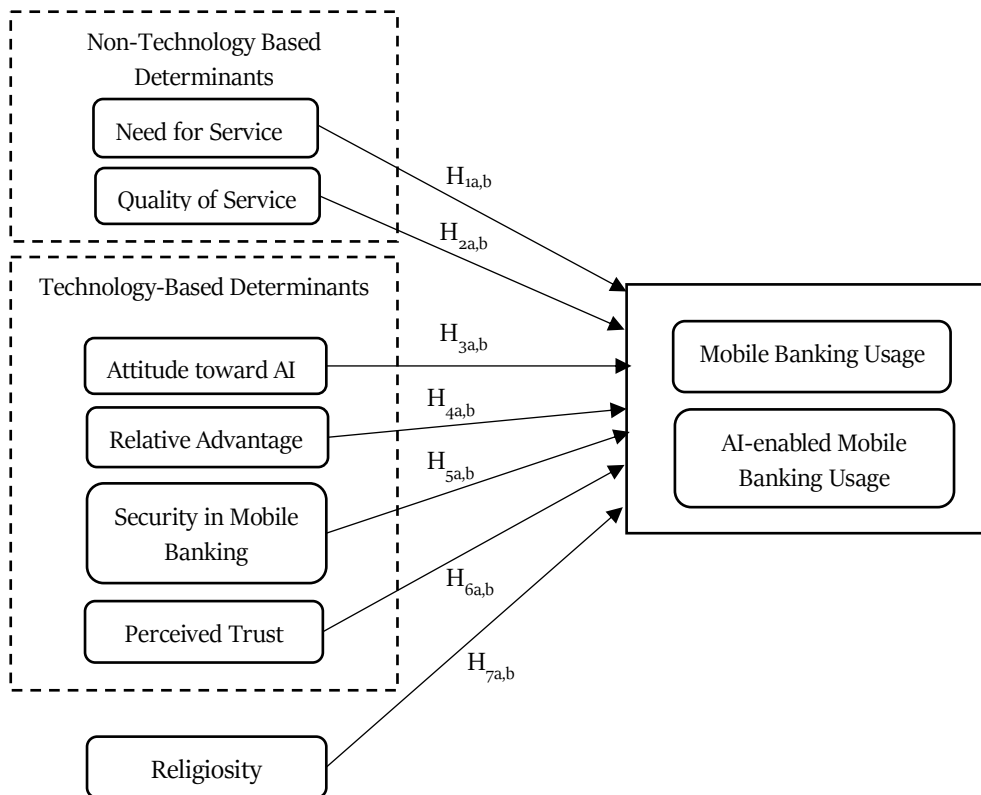


Figure 1. Conceptual research

This study applied variance based Partial Least Square (PLS) to validate the proposed research model. With the PLS technique, it is possible for researchers to assess latent constructs that use data with medium or small sample size, and are not normally distributed (Ghozali, 2014). PLS analysis consists of two sub-models, namely the measurement model which is often called the outer model, and the structural model or often called the inner model. The tool used to process research data was the warp-PLS application.

## RESULTS

Table 1 shows that the number of respondents used was 204 millennial generation respondents, of whom 103 were male and the remaining 101 were female respondents.

### Measurement Model

To test the measurement model, this research uses three criteria; convergent validity (AVE) > 0.50 and loadings > 0.60), discriminant validity (CR > 0.60), and composite reliability (CR, CA > 0.60) (Ghozali, 2014). Based on the data processing that has been done, it is known that the values are (AVE > 0.50 and loadings > 0.60), (CR > 0.60), which explain that convergent validity, discriminant

validity, and reliability have been fulfilled. Meanwhile, the evaluation of the structural model uses criteria (APC and ARS  $R^2 < 0.05$ ), (AVIF  $< 5$ ) (Kurniawan, 2011). From the data processing, it was found that the values (APC = 0.138,  $P = 0.003$ ), (ARS  $R^2 = 0.561$ ,  $P = < 0.001$ ) and (AVIF = 3.351,  $< 5$ ). Based on the criteria mentioned above, the fit model has been fulfilled (See tables 2 and 3).

Table 1. The respondent demographic characteristics

Information	Total	Percentage
Gender:		
Male	103	50.49%
Female	101	49.51%
Age (year):		
25-39	204	100 %
Profession:		
Student	46	22.55%
Government employees	61	29.90%
Private Employees / Entrepreneurs	89	43.62%
Others	8	3.9%
Highest education level:		
<Senior high school	12	5.88%
Senior high school	38	18.62%
Bachelor / Diploma	129	63.24%
Postgraduate	25	3.92%

Table 2. Measurement model indicators

Constructs and Indicators	Loading*	CA	CR	AVE
Need for Service (NFS)		0.895	0.922	0.704
Sharia bank employees provide personal service	0.824			
Sharia bank employees call name	0.821			
Sharia bank employees serve in friendly manners	0.875			
Friendly Sharia bank employees	0.839			
Customers receive personal attentions	0.836			
Quality of Service (QOS)		0.923	0.937	0.623
Sharia banks provide good services	0.776			
Employees serve well through socializations	0.840			
Employees serve well through personal contact	0.680			
Employees serve well with special cares	0.682			
Employees serve well through the calling of name	0.777			
Sharia bank employees serve friendly	0.845			
Sharia bank employees serve quickly	0.808			
Employees pay attention to every complaint well	0.850			
The bank uses modern equipment in customer services	0.823			
Attitudes toward AI (ATA)		0.846	0.891	0.621
Use of AI service technology	0.726			
Important AI service technology	0.777			
Can use AI service technology	0.826			
AI service technology is not difficult	0.776			
Customers use AI service technology	0.830			

Note: \*) All Sig.  $p < 0.01$

Table 2. Measurement model indicators (continued)

Constructs and Indicators	Loading*	CA	CR	AVE
Relative Advantage (RA)		0.867	0.900	0.600
Access to various banking services	0.747			
Mobile banking provides the required information	0.766			
Mobile banking has great control over personal finances	0.783			
Mobile banking provides conveniences	0.787			
Mobile banking is important for customer account access	0.784			
Access mobile banking services at any time	0.781			
Security in specific mobile banking activities (SIM)		0.852	0.895	0.630
Safely check account balance	0.811			
Safely manage accounts	0.832			
Safely performs transfers	0.751			
It is safe to make check deposits	0.740			
Safely pay bills	0.829			
Trust (TIM)		0.875	0.909	0.667
Financial information in mobile banking is protected	0.802			
Mobile banking is safe	0.852			
Mobile banking is difficult to hack	0.754			
Financial data in mobile banking is kept confidential	0.823			
Overall, mobile banking can be trusted	0.850			
Religiosity (REL)		0.911	0.926	0.557
Always perform the obligatory prayers 5 times a day	0.742			
Always fast during the month of Ramadan	0.799			
Always pay Zakat	0.738			
Always try to avoid sin	0.660			
Teaches about all the Greatness of Allah SWT	0.825			
Always keep yourself from illicit income	0.736			
Always read the Al-Qur'an regularly	0.693			
Fight for worldly and afterlife affairs	0.768			
Avoiding unkind behavior	0.754			
Must be humbles	0.736			
Mobile Banking Usage (MU)		0.789	0.904	0.825
Often use mobile banking services	0.909			
The possibility of using mobile banking	0.909			
AI-enabled Mobile Banking Usage (AMU)		0.926	0.941	0.694
The AMU service is convenient for paying bills	0.790			
The AMU service is convenient for discussing accounts	0.834			
The AMU service is convenient for managing accounts	0.810			
The AMU service is convenient for paying deposits	0.862			
Convenient AMU service for personalized investment advice	0.828			
Convenient AMU service for personal expense advice	0.830			
The AMU services are convenient to use	0.874			

Note: \*) All Sig.  $p < 0.01$



Table 3. Hypothesis results

Path (Hypothesis)	$\beta$	p-value
Need for service $\rightarrow$ Mobile banking usage ( $H_{1a}$ )	0.021	0.383
Need for service $\rightarrow$ AI-enabled Mobile banking usage ( $H_{1b}$ )	0.070	0.155
Quality of service $\rightarrow$ Mobile banking usage ( $H_{2a}$ )	-0.118	0.042
Quality of service $\rightarrow$ AI-enabled Mobile banking usage ( $H_{2b}$ )	0.164	0.008
Attitudes toward AI $\rightarrow$ Mobile banking usage ( $H_{3a}$ )	0.282	<0.001
Attitudes toward AI $\rightarrow$ AI-enabled Mobile banking usage ( $H_{3b}$ )	0.239	<0.001
Relative advantage $\rightarrow$ Mobile banking usage ( $H_{4a}$ )	0.145	0.017
Relative advantage $\rightarrow$ AI-enabled Mobile banking usage ( $H_{4b}$ )	-0.033	0.317
Mobile banking security (SIM) $\rightarrow$ Mobile banking usage ( $H_{5a}$ )	0.188	0.003
Mobile banking security (SIM) $\rightarrow$ AI-enabled Mobile banking usage ( $H_{5b}$ )	0.046	0.256
Security trust $\rightarrow$ Mobile banking usage ( $H_{6a}$ )	0.155	0.012
Security trust $\rightarrow$ AI-enabled Mobile banking usage ( $H_{6b}$ )	0.437	<0.001
Religiosity $\rightarrow$ Mobile banking usage ( $H_{7a}$ )	0.149	0.015
Religiosity $\rightarrow$ AI-enabled Mobile banking usage ( $H_{7b}$ )	0.183	0.004

The results of hypothesis testing state that the need for services has no effect on the use of mobile banking ( $\beta = 0.021$ , p value = 0.383) and AI-enabled mobile banking ( $\beta = 0.070$ , p value = 0.376). Quality of service has a negative effect on the use of mobile banking ( $\beta = -0.118$ , p value = 0.042) and AI-enabled mobile banking ( $\beta = 0.164$ , p value = 0.008). Attitudes towards AI have a positive effect on the use of mobile banking ( $\beta = 0.282$ , p value <0.001) and AI-enabled mobile banking ( $\beta = 0.239$ , p value <0.001). Relative advantage has a positive effect on the use of mobile banking ( $\beta = 0.145$ , p value = 0.017), but has no effect on the use of AI-enabled mobile banking ( $\beta = -0.033$ , p value = 0.317). Mobile banking security has a positive effect on the use of mobile banking ( $\beta = 0.188$ , p value = 0.003) but has no effect on the use of AI-enabled mobile banking ( $\beta = 0.046$ , p value = 0.256). Trust in mobile banking services has a positive effect on the use of mobile banking ( $\beta = 0.155$ , p-value = 0.012) and AI-enabled mobile banking ( $\beta = 0.437$ , p value <0.001). Finally, the construct of religiosity has a positive effect on the use of mobile banking ( $\beta = 0.149$ , p-value = 0.015) and AI-enabled mobile banking ( $\beta = 0.183$ , p-value = 0.004). Overall, variations in independent construct changes can explain the mobile banking service usage model of 49% and 70% for the AI-enabled mobile banking service usage model (See Figure 2).

## DISCUSSION

The results of data processing show that the constructs of attitude, trust, and religiosity are the main determinants that influence the millennial generation to use the two service models offered by Islamic banks. The digital native attitude that is accustomed to using technology seems to be the main factor in their siding with mobile banking services. It can be said that the comfort they feel when interacting with technology has encouraged their attitude to use the service. This is consistent with research from Smith (2015) and Lewin (2018).

Trust can show that there is a good system in a service offered by banks to their customers. This research reveals that the trust construct is one that has a positive impact on the use of mobile banking services as well as AI-enabled mobile banking services. This finding is in accordance with the findings of Payne et al. (2018). Researchers argue that the increase in the perceived trust will be able to improve the behavior of the millennial generation to use mobile banking and AI-enabled services in the future, and will be a very positive thing for the Banking Industry that provides similar services.

Religiosity has become a special advantage for Islamic Banking. The results obtained reveal that the construct of Religiosity affects millennial generation customers to use mobile banking services and AI-enabled mobile banking services. Religiosity itself refers to a person's level of devotion, belief, and respect for God (Suhartanto, 2019). Therefore, this commitment also affects their daily behavior, such as in consuming products and services. This is in accordance with the results of research conducted by Hidayat (2015). It can be concluded that Religiosity is a vital factor in influencing the consumption of products or services, and has an impact on attitudes, awareness, interactions, and ultimately purchasing behavior.

The relative advantage influences millennial generation customers to use mobile banking services. This finding is in accordance with research conducted by Payne et al. (2018). The relative advantage construct has consistently been a strong predictor of technology adoption and has also shown that millennial consumers perceive mobile banking as a service that offers some forms of relative advantage to their benefit. The relative advantage felt by millennial consumers is mainly found in terms of the convenience of services that can be accessed anywhere and anytime. These findings are also consistent with the research conducted by Kolodinsky (2004) which states that when customers see or experience advantages and benefits (for example time savings, convenience and accuracy), mobile banking services will become the preferred banking method. Another fact obtained from this construct is that the relative advantage is the construct that has the fourth-highest impact on the use of mobile banking services. Uniquely, the relative advantage construct has no effect on the model of using AI-enabled mobile banking services. This phenomenon can occur because the AI-enabled mobile banking services offered by banks are still unfamiliar to customers and are much more complex than the use of ordinary mobile banking services.

Security is a very vital point for the continued use of these online-based services. Technology-based service security issues will always be a major and sensitive concern for users. Previous studies have consistently shown that a decrease in the level of security in mobile banking services will lead to lower trust and ultimately, a decrease in the intention to use these banking channels (Kumari, 2016). In this study, researchers found that the security construct influences millennial generation customers to use mobile banking services but does not affect the use of AI-enabled mobile banking services. Thus, this finding is in accordance with the findings of previous research by Payne et al. (2018).

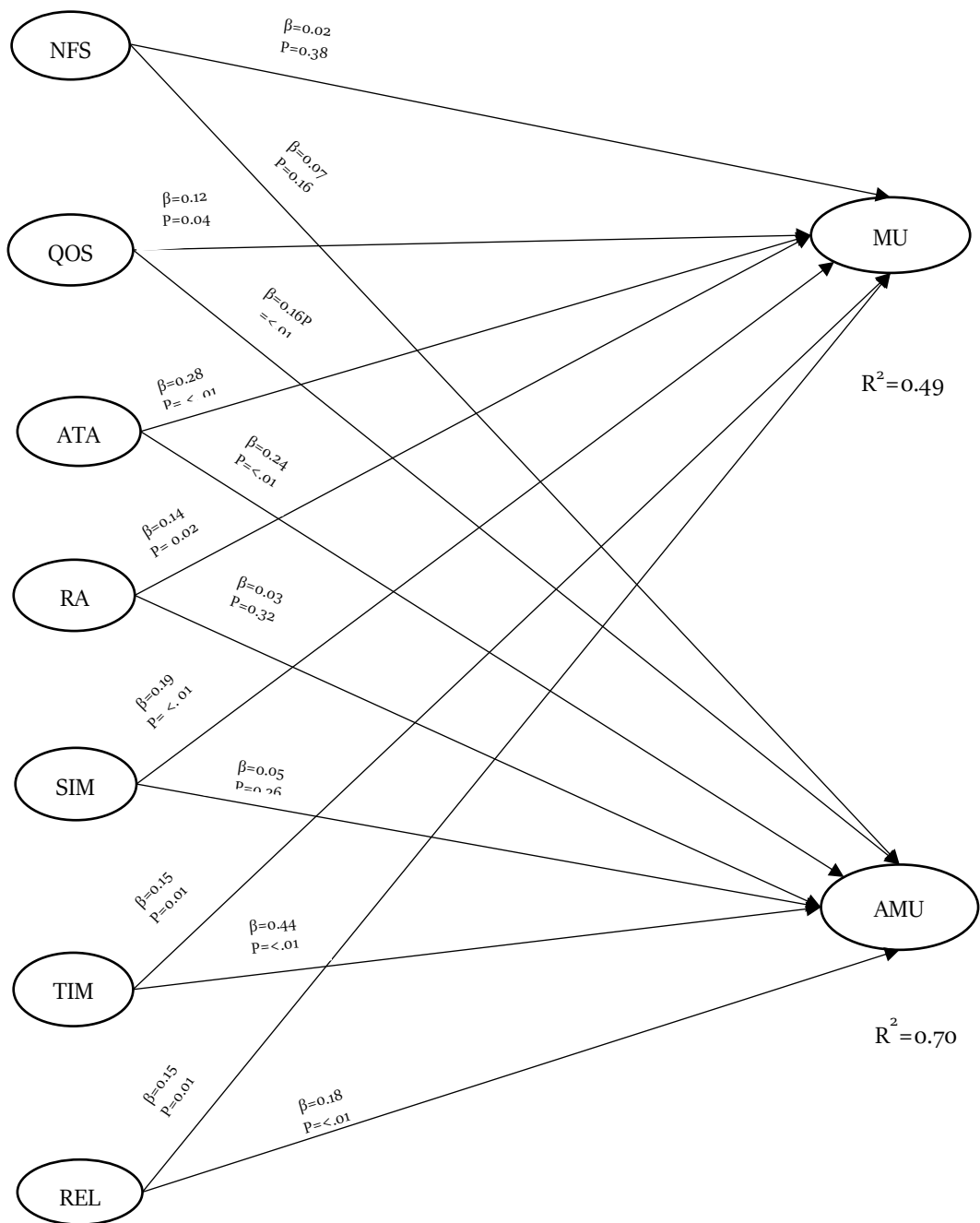


Figure 2. Summarized result

Quality of service has a negative effect on the use of mobile banking services. This suggests that mobile banking technology developed by Islamic banking is able to replace the interpersonal relationships between customers and bank employees. This finding is in line with the direction of the hypothesis and previous research conducted by Payne et al. (2018). Different things occur in the use of AI-enabled mobile banking services, where service quality has a positive effect on AI-enabled

mobile banking services. This finding explains that the technology services provided by Islamic Banking in mobile banking based on AI are considered incapable of fulfilling a more personalized service quality by millennial generation digital native customers. It seems that improving the quality of service on artificial intelligence-based mobile technology is needed.

The construct of the need for service (more personal service requirements) does not affect the mobile banking and the AI-enabled mobile banking service usage model. Currently, mobile banking services provide various important features (chat, call center, online assistance, and other related communication technologies) and it seems that personal services are the main ones for millennial generation consumers in the future. This finding is in line with findings in research conducted by Payne et al. (2018) and Dabholkar (1999). However, mobile banking technology and mobile banking AI-enabled services offered by banks in their current capacity may still be improved to meet the needs of their customers (millennials). This finding also shows that millennial consumers tend to have a low level of need for direct interaction with Islamic bank employees. This generation (millennial) prefers to interact with SST in fulfilling their activities or financial needs. Further research is needed to understand how and under what circumstances the needs of consumers for services can be met when AI technology is used.

## MANAGERIAL IMPLICATION

From a managerial perspective, customer trust in online services in today's digital era is closely related to the level of security offered. We suggest that to increase customer trust, banks need to make periodic improvements and enhancements to security in mobile banking and AI services. Furthermore, Islamic banks must focus on increasing the excellence of mobile banking services (anytime and anywhere). Currently, it seems that the use of mobile banking is still not optimal. Although digital natives are quite active in the activity of transferring money between accounts and checking their account balances. In the future, AI technology in mobile banking will become increasingly complex. To use AI services, customers will need a deeper level of understanding of how the service system operates. Literacy efforts to introduce and encourage customers to use mobile banking and AI service channels need to be further enhanced. Given that currently, Indonesian people, in general, are still lagging in the introduction and use of technology as a tool to gain profit and efficiency in various activities.

## LIMITATION AND FUTURE RESEARCH

This research only uses a sample of the millennial generation and collected from Aceh region, thus the result of this study bears limitation for the generalization of the findings. Future research needs to expand the testing models and also add other age groups, such as generation Z, baby boomers, generation x, and alpha, which then differentiate each effect of the independent variables on mobile banking and AI-enabled mobile banking. The addition of the generation group is considered important because the model will produce more interesting findings and can further explain the different effects of mobile banking and AI-enabled mobile banking. Last, testing the model in other regions or other countries where Islamic banks available will contribute to understanding customers' experience with mobile banking and AI-enabled mobile banking.

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