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The influence of islamic banking digital service quality on intention to continue using islamic banking: a case of Indonesia

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Abstract

Research aims: Technological advances impact every aspect of daily life, including in Islamic banking. To keep its customers, the Islamic banking industry continues improving the quality of its digital services. Using the DBSQual model, this research aims to examine the quality of Islamic banking digital services, which encompasses seven dimensions: application architecture, application efficiency, responsiveness, user-friendliness, security, reliability, and personalization, towards the intention to continue using Islamic banking.

Design/Methodology/Approach: The population of this research was Islamic bank customers in Indonesia. The sample was then selected based on the criteria of Islamic bank customers using mobile banking services. Data collection was carried out by distributing questionnaires developed from previous research. To validate the questionnaire, consultations were conducted with four survey accounting experts. Also, a pilot study was performed. Hypothesis testing was then done using the Structural Equation Modelling technique based on Partial Least Square (PLS-SEM).

Research findings: The results demonstrated that three dimensions of digital service quality significantly influenced the intention to continue using Islamic banks, namely application efficiency, security, and reliability. Meanwhile, the dimensions of application architecture and responsiveness had no effect.

Theoretical contribution/Originality: This study covers the gap related to empirical studies that examine the role of digital service quality development on intentions to continue using Islamic banking services.

Keywords: Islamic Banking; Digital Service Quality; Intention; Islamic Banks



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Introduction

In many Islamic countries, such as Indonesia, the rise of Islamic banks has not been able to overcome the monopoly of conventional banks' market share. Nevertheless, the Islamic banking business continues to develop and exhibits positive and innovative tendencies (Al-Awlaqi & Aamer, 2022). According to data from the Financial Services Authority (2020), Islamic banking assets reached IDR 545.39 trillion, an increase of 9.22% year over year as of June 2020, even though its market share is still far below that of conventional banks, which was only 6.18%.

Because of the development of society's needs due to technological advances, the banking industry must be able to provide fast and simple services that customers can control directly. Banks must offer end-to-end digital services in this regard. This denotes that customer and back office services must run quickly, and the payment collection system must be done digitally (Yolanda et al., 2022). These demands make the banking sector one of the business sectors that must undergo digital transformation to survive in intense competition and adapt to the shift in consumer behavior towards digital. If Indonesian banks do not immediately use technology optimally, they risk losing 30% of all their customers (Yolanda et al., 2022).

According to a survey conducted by the Islamic Financial Service Board (IFSB) in 2020, the primary motivation for many Islamic banks worldwide to promote service digitization is the desire to increase customer value and happiness (IFSB, 2020). In the period of the fourth industrial revolution, consumers and potential consumers tend to choose digital services because they are known to be fast and effective; therefore, digitizing services becomes a strategy to gain a competitive advantage (Knudsen et al., 2021).

The rise of digital services in Islamic banking is an interesting topic for further research, especially regarding its impact on the behavior of Islamic bank customers. Yolanda et al. (2022) found that the quality of digital services and financial technology significantly influences customer satisfaction. Muzdalipah and Mahmudi (2023) also revealed that mobile banking service capabilities, ease of use, and customer reliability attract consumers interested in using mobile banking as a medium for conducting Islamic banking transactions, especially among millennials. Research related to digital banking was also conducted by Sicillia and Yazid (2020), who uncovered that digital banking and service quality variables positively and significantly affect customer satisfaction. Similar results were obtained by Pranantha (2021). In addition, Akbar et al. (2022) noted that efficiency, convenience, and information security affect the interest in using fintech applications. Meanwhile, Septiana's (2023) research unveiled that digital banking variables, assurance, reliability, empathy, and responsiveness significantly and positively affect customer retention in Islamic banks.

Although previous research on Islamic banking customer behavior has been carried out, most previous research has only focused on testing the quality of digital services on banking customer satisfaction in general. Moreover, testing the determinants of customer intentions to stay with Islamic banks, primarily through digital service quality factors tested per dimension, is still lacking. Mir et al. (2022) then promote the new concept of digital service quality consisting of seven dimensions: (1) website architecture, (2) user-friendliness, (3) website efficiency, (4) reliability, (5) responsiveness, (6) security, and (7) personalization. Because this study focuses on digital mobile banking services, the term website was changed to application. Mir et al. (2022) also argue that all DBSQual dimensions are essential determinants of e-customer satisfaction in India. With adequate customer satisfaction, banks will gain business, seize opportunities, and position themselves at a competitive advantage by developing new strategies, policies, and practices.

By testing digital service quality per dimension, this research intends to bring novelty to the literature of Islamic banking studies in Indonesia. In addition, some previous studies on digital service quality have been associated with satisfaction issues, while this study focuses on the intention to continue using Islamic banks. This is motivated by increasingly advanced digital services and Fintech, so this has the potential to become a competitor to Islamic banks. The development of digital service quality services for Islamic banks, in fact, aims to keep people using Islamic banks' services in the future.

Based on the above discussion, this study explicitly examines empirically the effect of digital service quality of Islamic banks consisting of seven dimensions: (1) application architecture, (2) application efficiency, (3) reliability, (4) responsiveness, and (5) security, on the intention to use Islamic banks on an ongoing basis. However, the authors eliminated two dimensions due to the following reasons. The authors excluded the personalization dimension because digital service applications, particularly mobile banking, are designed for general customers rather than specific groups. As a result, the personalization aspect is deemed less relevant in the context of this study. For user-friendliness, the authors eliminated it since the data did not meet the validity and reliability requirements. Essentially, this research provides a practical contribution for the Islamic bank authorities to consider the seven dimensions of the quality of Islamic banking digital services so that the value offered by Islamic banking can fulfill the desires of its customers. Theoretically, this research adds to the literature related to the role of digital services in Islamic banking on the intention to continue using Islamic bank services examined from the DBSQual framework.

Literature Review and Hypotheses Development

Islamic Banking Adoption and Banking Digitalization

The adoption of Islamic banking is rising among Muslim and non-Muslim countries globally (Junaidi et al., 2021; Charag et al., 2019; Bananuka et al., 2020; Bananuka et al., 2019). This is because of the main principles of Islamic Banking, which include the prohibition of *riba* (interest), avoidance of *alqimar/maysir* (gambling) and *gharar* (uncertainty), as well as investment in halal business and trade promotion (Junaidi et al., 2021; Junaidi, 2021; Charag et al., 2019; Ali et al., 2018).

Adoption is defined as how well consumers receive a product or service and their likelihood of continuing to use it in the future (Anthony Mariadas & Murthy, 2017). The easier customers find digital banking, the more likely they will adopt it. Thus, Internet service quality is valuable in e-banking research (Yap et al., 2010). Service quality has become a critical area of interest among marketing researchers because it influences organizational performance (Al-dweeri et al., 2019; Kim and Lennon, 2017).

The interaction between enterprise services and customers has also changed due to technological innovation and the explosive expansion of Internet-based services. User assessments of these services are diverse (Jyoti and Kesharwani, 2020). The

measurement scales created in previous literature to measure service quality may not be suitable for measuring digital service quality. Fundamentally, traditional and digital service delivery are vastly different (Ho and Lin, 2010). Customer interactions and online experiences are called electronic or digital service quality.

Furthermore, no unanimous definition of digital service quality is widely accepted among researchers, and it varies from one study to another (Aldweeri et al., 2019). According to Mir et al. (2022), the diversity of plausible explanations requires more investigation in this area, so they offer the DBSQual model to measure the quality of banking digital services. There are seven dimensions with 24 items in the instrument developed to measure the quality of digital banking services. These seven dimensions are named (1) application architecture, (2) user-friendliness, (3) application efficiency, (4) reliability, (5) responsiveness, (6) security, and (7) personalization. The results revealed that the seven dimensions are distinct and have adequate reliability and validity. Each dimension has a significant relationship with the overall DBSQual.

Theoretical Foundation

Like most other research, this research aims to examine the phenomenon of Islamic bank acceptance from the perspective of the Theory of Planned Behavior (TPB). Ajzen created this theory as an extension of the Theory of Reasoned Action (TRA) (Ajzen, 1991). According to the TPB, actions are motivated by intentions, which are influenced by three factors: attitudes, subjective norms, and perceived behavioral control (Ajzen, 2020). The extent to which a person has a favorable or unfavorable opinion about a particular action is referred to as attitude towards the behavior.

Therefore, each person will behave if they see their behavior as profitable or if it will benefit them. The second element is the social element known as subjective norms, which refers to the existence of social pressure that individuals obtain and use as a consideration in deciding whether to carry out an activity. When people receive encouragement from their environment to behave in a certain way, subjective standards are beneficial. As a result, other people's reactions to other behaviors can help or hinder others from engaging in a behavior. The idea of the control that can be exerted over certain behaviors is a third factor. This element relates to how easy or difficult it is considered to carry out the behavior. A person's behavior can be supported by stimuli that encourage behavior (Ajzen, 1991; Ajzen 2020).

If related to the TPB above, one of the factors influencing attitudes and perceived behavioral control is the quality of digital services, which has the dimensions of application architecture, application efficiency, and data security dimensions. The quality of digital services provides convenience and benefits for acting in the digital era, where digital services are essential in all areas of life, especially in business.

Departing from the theoretical framework developed above, several hypotheses are formulated as follows:

Application Architecture

The term application architecture alludes to the design of an application or where the components that make up a system are placed and how they communicate (Wahono, 2008). The purpose of application architecture is to define the main types of applications and data needed to manage and support enterprise business functions (Betri et al., 2017). Hence, this application architecture makes it easier for customers and banks to communicate via digital services (m-banking applications). Improving the quality of m-banking application design can improve banking performance, so design and content must be carefully arranged in m-banking applications, and a good and balanced set of graphic choices can also attract consumer attention to the m-banking brand (Arcand et al., 2017). Application architecture is a key driver of DBSQual, indicating that a website's layout and aesthetic appeal impact how digital banking users perceive it (Mir et al., 2022).

H₁: Application architecture is positively related to the intention to use Islamic banking continuously.

Application Efficiency

According to the Great Dictionary of the Indonesian Language, efficiency is the right way to act and complete something correctly and appropriately without wasting resources, such as time, money, or energy (Akbar et al., 2022). Significantly increased efficiency of banks and other financial institutions' services to small and micro businesses and private companies is contributed to by digital technology. Financial technology applications are in high demand as banks and other financial institutions seek to reduce costs associated with customer acquisition and risk management, increase efficiency, and improve the user experience for a broader range of customers (Wang et al., 2021). The more efficient the application used, the more it will influence customers' interest in continuing to use Islamic banking on an ongoing basis. This is consistent with research conducted by Akbar et al. (2022), which asserted that the more efficiency in fintech applications is improved, the more it can attract consumers to use fintech applications.

H₂: Application efficiency is positively related to the intention to use Islamic banking continuously.

Security

According to Atzeni et al. (2017), security is a process that defines security requirements, creates rules to ensure those requirements, and develops methods to implement those policies. Apart from being a software design and development concern, security is also seen as a critical component of Internet and mobile banking (Arcand et al., 2017). According to research by Ramadhan et al. (2016), students' interest in using electronic money is influenced positively and significantly by their views

on security and danger. The security component benefits users' attitudes toward using e-money, according to Sari's (2019) research.

H₃: Security is positively related to the intention to use Islamic banks continuously.

Reliability

Reliability is the ability to fulfill promises quickly, accurately, and satisfactorily. This denotes that the bank provides services that meet customer expectations (Marlina & Bimo, 2018). Reliability also refers to a company's capacity to provide services as promised, reliably, accurately and consistently uphold the same level of service quality within a certain period. By ensuring the delivery of promised services, reliability can enhance its reputation among customers—for example, timely account updates and error-free transactions (Parasuraman et al., 1988). Reliability is vital to DBSQual (Mir et al., 2022). Reliability alludes to a company's initial commitment to keeping accurate records and providing quality online banking services. Customers are more likely to be satisfied with banks that effectively handle their concerns, prioritize security, safeguard their data, and warn them about online fraud when making transactions (Mir et al., 2022). In Wirawan and Ratna Juwita (2017) research, variables derived from service quality and reliability positively affected customer retention at the Andre Palembang photo studio.

H₄: Reliability is positively related to the intention to use Islamic banks continuously.

Responsiveness

Responsiveness is the desire of bank employees to help customers and provide responsive services or the encouragement of bank employees to overcome customer problems when using services (Marlina & Bimo, 2018). A company's responsiveness reflects its commitment to providing fast and high-quality services to customers (Idrees & Xinpeng, 2017). Every consumer will feel comfortable getting service with a good and fast response, so responsiveness is vital. To make a good impression on the business, employees must be motivated to be responsive, more than only helping customers. This is also done to maintain long-term ties with customers (Septiana, 2023). In Septiana's (2023) research, responsiveness positively and significantly affected customer retention at Bank Syariah KCP Sukoharjo.

H₅: Responsiveness is positively related to the intention to use Islamic banking sustainably.

Based on the theoretical framework and hypotheses developed, this research formulates a research model presented in Figure 1.

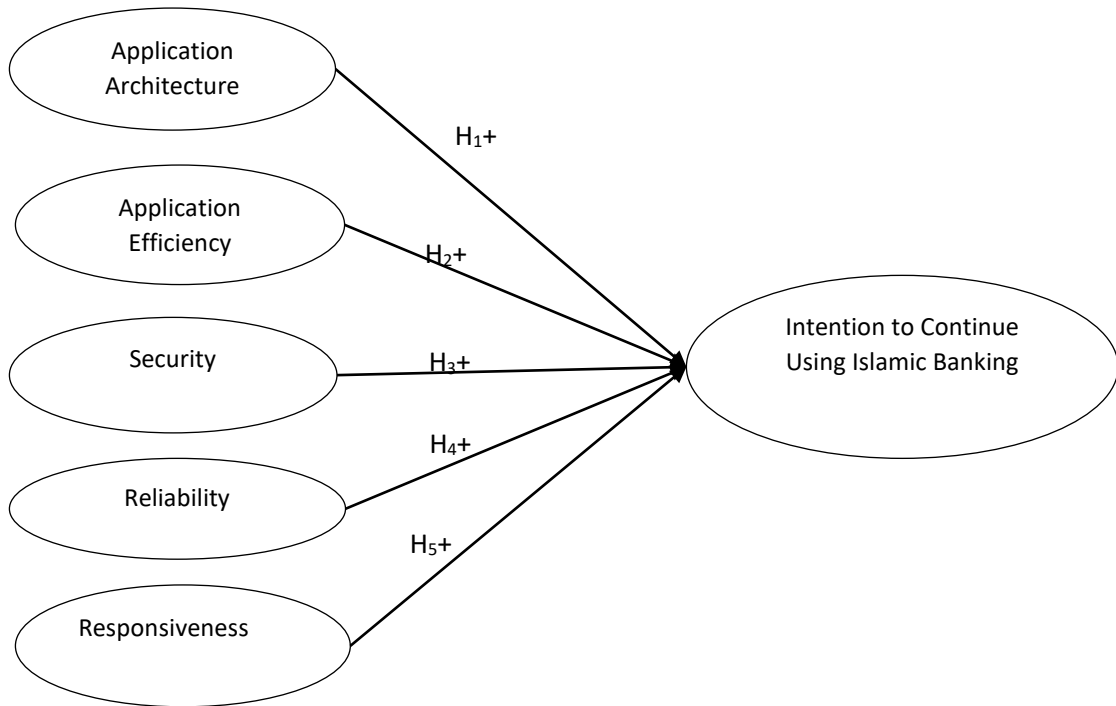


Figure 1 Research Model

Research Method

Design, Population, and Sample

This research adopted a survey method with statistical hypothesis testing. The research stages are presented as follows: 1) Development of a research model; 2) Questionnaire development; 3) Consultation and validation of the questionnaire with several experts, 4) Pilot test of the questionnaire; 5) Final revision of the questionnaire according to the pilot study respondents' suggestions; 6) Field survey; 7) Data processing and analysis; 8) Interpretation of research results; 9) Discussion analysis and conclusions; 10) Reporting. This survey covered the entire population of Indonesian Islamic bank customers. A non-probability sampling technique, namely sampling based on objectives, was used to determine the research sample. Hence, the sample was selected based on the criteria of those who had used mobile banking services. All questionnaire questions were designed to be answered by the sample, especially those related to variables influencing the quality of digital services (Sekaran & Bougie, 2016).

Faul et al. (2007) and Memon et al. (2020) argue that G*power analysis is recommended for determining the minimum sample size because this research employed non-probability sampling techniques. Based on a power analysis using 0.80 as the confidence value and five predictors as the research model developed, the sample size for this study should be at least 92. However, for the research findings to be strong and persuasive, more samples than the minimum number would be sought.

Variable Measurement and Questionnaire Development

One independent variable—quality of Islamic banking digital services—and one dependent variable—intention to use Islamic banking sustainably—were used in this research. The measure referred to Mindra et al. (2022) for the variable of intention to continue using Islamic banks, while the quality of digital services was adopted from Mir et al. (2022) study, consisting of seven dimensions with 24 items in the instrument developed to measure the quality of digital banking services. These seven dimensions are (1) application architecture, (2) user-friendliness, (3) application efficiency, (4) reliability, (5) responsiveness, (6) security, and (7) personalization. Nevertheless, the authors considered not using the personalization dimension since digital service applications, especially mobile banking, were developed with a design aimed at general customers, not for specific groups. Thus, the personalization aspect is considered less relevant in the context of this study. Additionally, the authors dropped user-friendliness since the data did not meet validity and reliability requirements.

Several recommendations from Cooper and Schindler (2014) were considered when creating the research questionnaire. Specifically, the reasons why the variables and dimensions to be asked about were analyzed were explained in more detail. To ensure the questionnaire could capture the research objectives, the characteristics (indicators) of the variables studied were also discussed. All questionnaire factors were rated on a 1 to 5 Likert scale, with 1 indicating strong disagreement and 5 representing strong agreement. This range was employed because it is the most frequently used measure in survey studies in Indonesia. In this approach, potential respondents are expected to have knowledge and not be confused when responding to questions. Apart from paying attention to the suggestions of Cooper and Schindler (2014), other survey experts' recommendations (Ali et al., 2015; Lewis et al., 2005) were taken into account when creating the questionnaire.

Five experts were involved to validate the questionnaire in this research prior to its distribution. This test was carried out by giving a questionnaire to experts to check the validity of the questions or items contained in it. The experts assessed whether the question or item was appropriate to the construct or variable they wanted to measure. Here, multiple experts are used for situations that require expert judgment by resolving, validating, interpreting, and integrating available data and the consequences of each decision, determining the current state, and providing the elements needed for a sound decision-making process (Lewis et al., 2005).

Demographic data of the sample and respondents are displayed in Table 1. The remaining 280 responses (data) originating from various provinces, ages, genders, education, madrasahs, banks, and years they started using mobile banking were included for data analysis after inappropriate respondents were removed.

Table 1 Sample and Respondent Demographics

Item	Category	Frequency	%
Province	Aceh	3	1.1
	Riau	5	1.8
	Riau Islands	3	1.1
	Bangka Belitung	4	1.4
	Bengkulu	1	.4
	Lampung	8	2.9
	South Sumatra	13	4.6
	North Sumatra	4	1.4
	West Sumatra	13	4.6
	Banten	5	1.8
	DKI Jakarta	6	2.1
	West Java	31	11.1
	DI Yogyakarta	66	23.6
	Central Java	31	11.1
	East Java	10	3.6
	Bali	1	.4
	West Nusa Tenggara	3	1.1
	East Kalimantan	8	2.9
	South Kalimantan	49	17.5
	Central Kalimantan	4	1.4
	West Kalimantan	2	.7
	Gorontalo	1	.4
	West Sulawesi	1	.4
	South Sulawesi	2	.7
	Central Sulawesi	1	.4
	Ambon	1	.4
	North Maluku	2	.7
	Papua	1	.4
West Papua	1	.4	
Age	Less than 20 years	82	29.3
	21-30 years	97	34.6
	31-40 years	48	17.1
	41-50 years	32	11.4
	51-60 years	21	7.5
Gender	Woman	168	60.0
	Man	112	40.0
Education	Senior high school	62	22.1
	Bachelor's degree	130	46.4
	Master's degree	66	23.6
	Doctoral Degree	22	7.9
Madrasah	Yes	146	52.1
	No	134	47.9
Bank	BSI	244	87.1
	BPD	8	2.9
	MUAMALAT	17	6.1
	PERMATA SYARIAH	1	.4
	MAYBANK	1	.4
	BCA SYARIAH	1	.4
	BANK SUMSEL BABEL	5	1.8

Table 1 Sample and Respondent Demographics (cont')

Item	Category	Frequency	%
	JAGO SYARIAH	1	.4
	DANAMON SYARIAH	1	.4
	ALADIN SYARIAH	1	.4
Starting year	Less than one year	65	23.2
	1-5 years	146	52.1
	6-10 years	33	11.8
	More than ten years	36	12.9

Data Analysis

Data analysis was performed to provide respondents with demographic information, descriptive statistics, and hypothesis-testing findings. Microsoft Excel was used to examine statistical and descriptive demographic data. Meanwhile, the Variant-based Partial Least Square-Structural Equation Modelling (PLS-SEM) method was applied to test the hypothesis. PLS can carry out structural model testing (hypothesis testing) and measurement model testing (instrument validity and reliability testing) simultaneously (Hair et al., 2014).

The nonparametric structure of the Likert scale and the possibility of high multicollinearity components make PLS suitable for use in this research (Sholihin & Ratmono, 2021). PLS is well suited for this investigation because it requires a limited sample size, few data assumptions, and hypotheses with a weak theoretical basis (Chin et al., 2003). PLS is also preferred over covariance-based approaches (CB-SEM) since it works best when predictions about the dependent variable are made rather than the model (Iqbal et al., 2019). Even when the data do not follow the assumptions of multivariate normality, some experts argue that PLS is more accurate than CB-SEM, especially for better revealing the strength and direction of hypothesized relationships (Akbar et al., 2012). In addition, the PLS test would use a high-level construction approach because the two variables in this study were constructed from various dimensions (Hair et al., 2014).

Result and Discussion

Bias Checking

Survey data is data that respondents self-report. Therefore, there is the potential for common method variance (CMV) bias. To rule out potential bias, Harman's one-factor test was performed before evaluating the data (Sofyani et al., 2023). According to Podsakoff et al. (2003), common method bias is problematic if one latent component accounts for most of the variance explained or the score exceeds 50%. Unrotated factor analysis revealed that the first component constituted only 33.35% of the variation based on the CMV test findings. Consequently, CMV did not raise serious concerns in the current research results.

To determine how well the findings on the use of measures reflect the theories surrounding the tests created, construct validity testing must be carried out (Sekaran & Bougie, 2016). As a general rule of thumb, the authors looked at the loading and cross-loading scores and chose 0.5 (Hair et al., 2014). According to Table 2, all the items measuring specific constructs had high and low construct loadings for other constructs (Hair et al., 2014). This supports construct validity. However, it is essential to note that the “user friendliness” construct could not be used in this research because none of its indicators met the qualifications. Therefore, the authors eliminated this dimension in further analysis.

Table 2 Cross Loading

Indicator	SBA	DSQ	APEF	SECUR	RELI	RESPON
APEF1	0.491	0.729	0.934	0.395	0.675	0.479
APEF2	0.383	0.740	0.889	0.396	0.596	0.561
DSQ2	0.472	0.901	0.695	0.395	0.588	0.518
DSQ3	0.348	0.871	0.662	0.334	0.613	0.502
DSQ4	0.416	0.908	0.792	0.409	0.647	0.566
RELI1	0.363	0.445	0.456	0.436	0.712	0.488
RELI2	0.410	0.676	0.675	0.490	0.897	0.611
RELI3	0.422	0.601	0.620	0.464	0.897	0.568
RELI4	0.417	0.614	0.632	0.458	0.902	0.549
RESPON1	0.239	0.396	0.384	0.458	0.417	0.751
RESPON2	0.357	0.555	0.517	0.422	0.594	0.844
RESPON3	0.282	0.397	0.371	0.477	0.455	0.711
RESPON4	0.255	0.443	0.438	0.525	0.503	0.761
SBA1	0.733	0.304	0.319	0.196	0.315	0.220
SBA2	0.895	0.418	0.480	0.307	0.462	0.333
SBA3	0.920	0.456	0.466	0.345	0.461	0.333
SBA4	0.850	0.385	0.384	0.407	0.341	0.344
SBA5	0.720	0.350	0.331	0.280	0.351	0.311
SECUR1	0.340	0.481	0.472	0.917	0.553	0.669
SECUR2	0.354	0.309	0.327	0.924	0.444	0.448

SBA: Intention to Continue Using Islamic banking; DSQ: Application Architecture; APEF: Application Efficiency; SECUR: Security; RELI: Reliability; RESPON: Responsiveness

Next, the authors evaluated convergent validity, which refers to the level of agreement between several items used to measure the same idea. The authors tested it using factor loading and average variance extracted (AVE) (Hair et al., 2014). According to Table 3, all loadings exceeded the recommended score of 0.5 (Hair et al., 2014). In addition, it can be shown that each item had an AVE score higher than 0.5, as required by general rules (Barclay et al., 1995; Fornell and Larcker, 1981).

Table 3 Loading and AVE

Indicator	Question	Loading
<i>Application Architecture; AVE = 0.798</i>		
DSQ2	The Islamic banking mobile application is easy to use.	0.901
DSQ3	The Islamic banking mobile application can be accessed smoothly.	0.871
DSQ4	I am satisfied with the features of the Islamic banking mobile application.	0.908
<i>Application Efficiency; AVE = 0.831</i>		
APEF1	Islamic banking mobile applications speed up transaction completion.	0.934
APEF2	The Islamic banking mobile app provides the features I need.	0.889
<i>Security; AVE = 0.847</i>		
SECUR1	Islamic banking mobile app protects my personal information.	0.917
SECUR2	The Islamic banking application does not share my personal information with other sites/parties.	0.924
<i>Reliability; AVE = 0.732</i>		
RELI1	Transactions with the Islamic bank’s mobile banking application rarely experience errors, such as wrong transfers, wrong payment amounts, and others.	0.712
RELI2	Islamic banks provide online services satisfactorily.	0.897
RELI3	Islamic bank online services are timely.	0.897
RELI4	Islamic bank online services are fast.	0.902
<i>Responsiveness; AVE = 0.590</i>		
RESPON1	The Islamic bank told me immediately what to do if my transaction was not processed.	0.751
RESPON2	Islamic banks handle problems quickly.	0.844
RESPON3	The Islamic bank will return the nominal amount to my account if there is a failure in the money transfer process to another account.	0.711
RESPON4	Islamic banks always provide notifications of essential transactions that occur.	0.761
<i>Intention to Continue Using Islamic banking; AVE = 0.685</i>		
SBA1	I personally use Islamic banks as my first choice.	0.733
SBA2	I feel that using an Islamic bank is a good idea.	0.895
SBA3	I will continue to use Islamic banks in the future.	0.920
SBA4	I would recommend Islamic banks to others.	0.850
SBA5	I believe that Islamic banking is the solution to today's financial problems and should be available to everyone regardless of religion and race.	0.720

Following that, the authors evaluated the discriminant validity of the measures by looking at correlations between measures of potentially overlapping constructs (the degree to which items differentiate between constructs or measure different concepts). This criterion was also fulfilled, as observed in Table 3, where the correlation value between constructs and constructs was higher than other constructs (Gefen and Straub, 2005). Aside from that, the cross-loading test findings, which showed that each indication had a higher loading than the loading with other indicators, were also used to conclude that discriminant validity was met.

In addition, the inter-item consistency of our measurement items was evaluated using Cronbach's alpha and composite reliability ratings. Table 4 summarizes that each alpha

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score was more than 0.6, as Chin et al. (2003) determined. In addition, according to Fornell and Larcker (1981), a composite reliability value of 0.70 or higher is considered acceptable. As a result, it was determined that the measures were reliable.

Table 4 Reliability and Discriminant Validity Test Results

Construct	Cronbach's Alpha	Composite reliability	1	2	3	4	5	6
Intention to Continue Using Islamic Banking	0.882	0.901	0.828					
Application Architecture	0.875	0.892	0.467	0.893				
Application Efficiency	0.799	0.834	0.485	0.803	0.911			
Security	0.820	0.821	0.377	0.427	0.433	0.921		
Reliability	0.874	0.881	0.472	0.687	0.701	0.540	0.856	
Responsiveness	0.769	0.789	0.376	0.592	0.563	0.604	0.649	0.768

Because the measurement model assessment requirements had been met, it could be concluded that the research instruments and data were valid and reliable and could be trusted to be used in testing structural models.

Structural Model Assessment

Table 5 presents the results of testing the structural model, revealing the relationship between variables. The adjusted R² of the research model was at a medium level; in other words, the ability of exogenous variables to explain endogenous variables was 27.8%, whereas other variables outside the model explained the rest.

Table 5 Hypothesis Test Results

Hypothesis	Code	Coef.	SD	T value	P values	Conclusion
Application Architecture → Intention to Continue Using Islamic Banking	H ₁	0.133	0.118	1.126	1.130	Unsupported
Application Efficiency → Intention to Continue Using Islamic Banking	H ₂	0.208	0.119	1.752	0.040	Supported
Security → Intention to Continue Using Islamic Banking	H ₃	0.151	0.082	1.835	0.033	Supported
Reliability → Intention to Continue Using Islamic Banking	H ₄	0.166	0.096	1.739	0.041	Supported
Responsiveness → Intention to Continue Using Islamic Banking	H ₅	-0.020	0.082	0.238	0.406	Unsupported
Adjusted R ² = 0.278 (Moderate)						
SRMR = 0.063						
NFI = 0.801						

Although not a primary concern of PLS, model fit in PLS analysis is often questioned. Therefore, the authors present the results of the model fit test using SRMR. These results indicated that the model was fit because the SRMR value was below 0.10.

Judging from the model fit assessment, which used the NFI value, the proposed model was also considered quite good because the value presented (0.801) was close to 1.

Discussion

From the dimensions of digital service quality, three dimensions were found to influence the intention to continue using Islamic banks significantly: application efficiency, security, and reliability. The results align with Mir et al. (2022). They confirmed that application efficiency is a principal factor in DBSQual measurements. Internet banking users expect to complete their online banking transactions quickly. They experience smooth navigation on the bank application. Due to digitalization, online banking users get several alternative site choices, so the main factor of digital banking depends on its smooth functioning. The results also reinforce Akbar et al.'s (2022) research that efficiency, convenience, and information security influence interest in using fintech applications.

The findings are also confirmed by Septiana (2023) that the variables of digital banking, assurance, reliability, empathy, and responsiveness positively and significantly affected customer retention at Bank Syariah Indonesia KCP Sukoharjo. In addition, Muzdalipah and Mahmudi (2023) argue that the capabilities of mobile banking services, as well as placing ease of use and reliability of customers appropriately, thus attracted interest in using mobile banking as a medium for carrying out Islamic banking transactions, especially among the millennial generation.

Further, Mir et al. (2022) highlighted that reliability and security are also important factors of DBSQual. Reliability means an initial commitment to maintaining accurate records and performing online banking services correctly. Banks that handle their customers' problems efficiently focus on security, protect their information, and alert them about online fraud during transactions and have the power to persuade their customers (Mir et al., 2022). Internet customer security and privacy are the most important future challenges that banking organizations will face (Yiu et al., 2007) since there is a growing understanding that the Internet is worrying and unsafe (Gorman, 2007). As such, banking companies must protect online banking systems' security features, i.e., digital certification and authentication, firewalls, encryption biometrics, filtering routers, callback modems, and others. In this way, customers' intentions to stay with Islamic banking services will be maintained.

Nevertheless, in this study, the application architecture and responsiveness dimensions did not significantly affect the intention to continue using Islamic banks. This differs from what was suggested by Mir et al. (2022). This could be due to the perception that customers do not really care about the design appearance of the applications presented. Most customers may be more concerned with other, more valuable aspects of digital Islamic banking service applications. It also might be because the application architecture offered by several digital banking services generally displays a relatively similar design appearance. Therefore, customers become indifferent regarding

application architecture issues, so this dimension did not influence customers' intentions regarding Islamic banking.

Furthermore, the responsiveness dimension did not influence customers' intention to continue using Islamic banks. It might cause customers not to focus on how quickly a problem is responded to but on how effectively the resolution is carried out. The authors suspect that responsiveness will only play a role in the intention to continue using Islamic banks if the effectiveness of problem-solving accompanies it. From various experiences in the field, it was reported that many banks provide true responsiveness in services. However, sometimes, service problems are simply an obligation to meet customer service demands. Many customer problems, such as burglary or hacking, are not resolved satisfactorily. Apart from the debate about whether banks should be responsible, at least this certainly reduces positive perceptions from customers. This is where the effectiveness of problem-solving becomes a crucial issue, and suggestions for further research can place the effectiveness of problem-solving as a mediator.

Theoretically, the findings of this research align with the Theory of Planned Behavior (TPB), namely that Islamic bank customers' intentions are motivated by three factors: attitude, subjective norms, and perceived behavioral control (Ajzen, 2020). Everyone will behave if they see their behavior as profitable or if it will benefit them. Stimuli that encourage behavior can support a person's behavior (Ajzen, 1991, 2020). Thus, the convenience customers obtain regarding digital banking services makes it more likely that they will use it sustainably (Yap et al., 2010). On the other hand, application architecture and responsiveness dimensions did not support this TPB view. From this, it can be concluded that application architecture and responsiveness in Islamic banks cannot yet be perceived as something that triggers convenience, thereby increasing the perception of behavioral control, or perhaps it has not been responded to positively by customers, so it cannot yet be a driver of intention to continue using Islamic banks. From these findings, a potential variable is proposed, namely the effectiveness of problem-solving, which can be tested for its role as a mediator in future research.

Conclusion

This research examined the role of the quality of Islamic banks' digital services on the intention to use Islamic banks sustainably. The results revealed that three dimensions significantly influenced the intention to continue using Islamic banks: application efficiency, security, and reliability. In contrast, the dimensions of application architecture and responsiveness were concluded to have no effect. This research provides a practical contribution for Islamic banking authorities to consider critical dimensions of the quality of digital Islamic banking services so that the value offered by Islamic banking can fulfill the desires of its customers; consequently, they will continue to use Islamic banking services. Theoretically, this study adds to the literature regarding the role of digital services in Islamic banking on the intention to continue using Islamic banks.

This research has several limitations. First, this research did not obtain a proportional sample between provinces in Indonesia. Therefore, generalizing the results needs to be done carefully. Based on this limitation, further research is recommended to examine related topics in other areas, especially in Indonesia. Future studies are also recommended to use a qualitative approach to explore how the relationship between the quality of digital services offered by Islamic banks influences the intention to use Islamic banks on an ongoing basis.

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-t](https://doi.org/10.1016/0749-5978(91)90020-t)
- Ajzen, I. (2020). The theory of planned behavior: Frequently asked questions. *Human Behavior and Emerging Technologies*, 2(4), 314–324. <https://doi.org/10.1002/hbe2.195>
- Akbar, F., Sakum, S., & Hidayat, S. (2022). Pengaruh Efisiensi, Kemudahan, dan Keamanan Informasi Terhadap Minat Menggunakan Aplikasi Fintech. *Jurnal Ekonomi Syariah Pelita Bangsa*, 7(2), 196 - 204. <https://journal.lppmpelitabangsa.id/index.php/jespb/article/view/597>
- Akbar, R., Pilcher, R., & Perrin, B. (2012). Performance measurement in Indonesia: the case of local government. *Pacific Accounting Review*, 24(3), 262–291. <https://doi.org/10.1108/01140581211283878>
- Al-Awlaqi, M. A., & Aamer, A. M. (2022). Islamic financial literacy and Islamic banks selection: an exploratory study using multiple correspondence analysis on banks' small business customers. *International Journal of Emerging Markets*, 18(12), 6285–6299. <https://doi.org/10.1108/ijoen-09-2021-1354>
- Al-dweeri, R.M., Moreno, A.R., Montes, F.J.L., Obeidat, Z.M. & Al-dwairi, M.K. (2019). The effect of e-service quality on Jordanian student's e-loyalty: an empirical study in online retailing. *Industrial Management and Data Systems*, 119(4), 902-923. <https://doi.org/10.1108/IMDS-12-2017-0598>
- Ali, S., Green, P., & Robb, A. (2015). Information technology investment governance: What is it and does it matter? *International Journal of Accounting Information Systems*, 18, 1–25. <https://doi.org/10.1016/j.accinf.2015.04.002>
- Anthony Mariadas, P., & Murthy, U. (2017). Factors Influencing the Adoption of Islamic Banking in Malaysia. *International Journal of Business and Management*, 12(11), 187. <https://doi.org/10.5539/ijbm.v12n11p187>
- Arcand, M., PromTep, S., Brun, I., & Rajaobelina, L. (2017). Mobile banking service quality and customer relationships. *International Journal of Bank Marketing*, 35(7), 1068–1089. <https://doi.org/10.1108/ijbm-10-2015-0150>
- Atzeni, A., Faily, S., & Galloni, R. (2018). Usable Security. *Encyclopedia of Information Science and Technology, Fourth Edition*, 5004–5013. <https://doi.org/10.4018/978-1-5225-2255-3.ch433>
- Bananuka, J., Kasera, M., Najjemba, G. M., Musimenta, D., Ssekiziyivu, B., & Kimuli, S. N. L. (2019). Attitude: mediator of subjective norm, religiosity and intention to adopt Islamic banking. *Journal of Islamic Marketing*, 11(1), 81–96. <https://doi.org/10.1108/jima-02-2018-0025>
- Bananuka, J., Mukyala, V., Tumwebaze, Z., Ssekakubo, J., Kasera, M., & Najjuma, M. S. (2020). The intention to adopt Islamic financing in emerging economies: evidence

- from Uganda. *Journal of Islamic Accounting and Business Research*, 11(3), 610–628.
<https://doi.org/10.1108/jiabr-07-2017-0108>
- Barclay, D., Higgins, C. & Thompson, R. (1995). The Partial Least Squares (PLS) Approach to Causal Modeling: Personal Computer Adoption and Use as an Illustration. *Technology Studies*, 2(2), 285-309.
<https://www.researchgate.net/publication/242663837>
- Betri, T. J., Utami, E., & Al Fatta, H. (2017). Perancangan Arsitektur Aplikasi Learning Management System di Universitas Slamet Riyadi. *Indonesian Journal of Applied Informatics*, 2(1), 17. <https://doi.org/10.20961/ijai.v2i1.16606>
- Charag, A. H., Fazili, A. I., & Bashir, I. (2019). Determinants of consumer's readiness to adopt Islamic banking in Kashmir. *Journal of Islamic Marketing*, 11(5), 1125–1154.
<https://doi.org/10.1108/jima-10-2018-0182>
- Chin, W. W., Marcolin, B. L., & Newsted, P. R. (2003). A Partial Least Squares Latent Variable Modeling Approach for Measuring Interaction Effects: Results from a Monte Carlo Simulation Study and an Electronic-Mail Emotion/Adoption Study. *Information Systems Research*, 14(2), 189–217. <https://doi.org/10.1287/isre.14.2.189.16018>
- Cooper, D. R., & Schindler, P. S. (2014). *Business Research Methods. 12th Edition*. McGraw Hill International Edition, New York.
- Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39(2), 175–191. <https://doi.org/10.3758/bf03193146>
- Fornell, C. & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(February), 39-50. <https://doi.org/10.2307/3151312>
- Gefen, D., & Straub, D. (2005). A Practical Guide to Factorial Validity Using PLS-Graph: Tutorial and Annotated Example. *Communications of the Association for Information Systems*, 16, 5. <https://doi.org/10.17705/1CAIS.01605>
- Gorman, G.E. (2007). Who am I, and where's my money? Issues in online security. *Online Information Review*, 31(5), 561-565. <https://doi.org/10.1108/14684520710832298>
- Hair Jr, J. F., Sarstedt, M., Hopkins, L., & G. Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS-SEM). *European Business Review*, 26(2), 106–121.
<https://doi.org/10.1108/eb-10-2013-0128>
- Ho, C.T.B. & Lin, W.C. (2010). Measuring the service quality of internet banking: scale development and validation. *European Business Review*, 22(1), 5-24.
<https://doi.org/10.1108/09555341011008981>
- Idrees, Z., & Xiping, X. (2017). Impact of Banking Relationship Characteristic on Service Quality Dimensions and Customer Retention. *International Journal of Academic Research in Economics and Management Sciences*, 6(1). <https://doi.org/10.6007/ijarems/v6-i1/2623>
- IFSB. (2020). International Financial Service Board Working Paper Series.
<https://www.ifs.org/>
- Iqbal, M. Z., Akbar, S., Budhwar, P., & Shah, S. Z. A. (2019). Effectiveness of performance appraisal: Evidence on the utilization criteria. *Journal of Business Research*, 101, 285–299.
<https://doi.org/10.1016/j.jbusres.2019.04.035>
- Junaidi, J. (2021). The awareness and attitude of Muslim consumer preference: the role of religiosity. *Journal of Islamic Accounting and Business Research*, 12(6), 919–938.
<https://doi.org/10.1108/jiabr-08-2020-0250>
- Junaidi, J., Anwar, S. M., Alam, R., Lantara, N. F., & Wicaksono, R. (2022). Determinants to adopt conventional and Islamic banking: evidence from Indonesia. *Journal of Islamic Marketing*, 14(3), 892–909. <https://doi.org/10.1108/jima-03-2021-0067>

- Jyoti & Kesharwani, S. (2020). E-service quality in banking Industry – a review. *Global Journal of Enterprise Information System*, 12(2), 111-118.
- Kim, J.H. & Lennon, S.J. (2017). Descriptive content analysis on e-service research. *International Journal of Service Science, Management, Engineering, and Technology*, 8(1), 18-31.
- Knudsen, E. S., Lien, L. B., Timmermans, B., Belik, I., & Pandey, S. (2021). Stability in turbulent times? The effect of digitalization on the sustainability of competitive advantage. *Journal of Business Research*, 128, 360–369.
<https://doi.org/10.1016/j.jbusres.2021.02.008>
- Lewis, B. R., Templeton, G. F., & Byrd, T. A. (2005). A methodology for construct development in MIS research. *European Journal of Information Systems*, 14(4), 388–400.
<https://doi.org/10.1057/palgrave.ejis.3000552>
- Marlina, A., & Bimo, W. A. (2018). Digitalisasasi Bank Terhadap Peningkatan Pelayanan dan Kepuasan Nasabah Bank. *Inovator*, 7(1), 14.
<https://doi.org/10.32832/inovator.v7i1.1458>
- Mindra, R., Bananuka, J., Kaawaase, T., Namaganda, R., & Teko, J. (2022). Attitude and Islamic banking adoption: moderating effects of pricing of conventional bank products and social influence. *Journal of Islamic Accounting and Business Research*, 13(3), 534–567. <https://doi.org/10.1108/jiabr-02-2021-0068>
- Mir, R. A., Rameez, R., & Tahir, N. (2022). Measuring Internet banking service quality: an empirical evidence. *The TQM Journal*, 35(2), 492–518. <https://doi.org/10.1108/tqm-11-2021-0335>
- Muzdalipah, M. M., & Mahmudi, M. (2023). Digitalisasi Perbankan Syariah: Penggunaan BSI Mobile di Era Generasi Milenial di Kota Yogyakarta. *Equilibrium : Jurnal Ilmiah Ekonomi, Manajemen dan Akuntansi*, 12(1), 12.
<https://doi.org/10.35906/equili.v12i1.1241>
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12–40. <https://psycnet.apa.org/record/1989-10632-001>
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y. & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of applied psychology*, 88(5), 879-903.
<https://psycnet.apa.org/doi/10.1037/0021-9010.88.5.879>
- Pranantha, E. Y. (2021). Pengaruh Kualitas Layanan dan Fitur Produk BSI Mobile Terhadap Kepuasan Nasabah Bank Syariah Indonesia di Kabupaten Sleman. *Undergraduate Thesis*. Universitas Islam Indonesia.
- Ramadhan, A. F., Prasetyo, A.B., & Irvana, L. (2016). Persepsi Mahasiswa dalam Menggunakan E-Money. *Jurnal Dinamika Ekonomi dan Bisnis*, 3(2), 131-145.
<https://doi.org/10.34001/jdeb.v13i2.470>
- Sample Size for Survey Research: Review and Recommendations. *Journal of Applied Structural Equation Modeling*, 4(2), 1–20. [https://doi.org/10.47263/jasem.4\(2\)01](https://doi.org/10.47263/jasem.4(2)01)
- Sari, I. (2019). Pengaruh Kemudahan, Manfaat Penggunaan Teknologi, Fitur Layanan Dan Keamanan, Terhadap Minat Menggunakan E- Money, Dengan Sikap Penggunaan Sebagai Variabel Intervening. Skripsi: IAIN Salatiga. <http://e-repository.perpus.uinsalatiga.ac.id/id/eprint/5989>
- Sekaran, U., & Bougie, R. (2016). *Research Methods for Business: A Skill-Building Approach*. 7th Edition. Wiley & Sons, West Sussex.
- Septiana, S. N. (2023). Pengaruh Digital Banking dan Kualitas Pelayanan Terhadap Customer Retention Pada Bank Syariah Indonesia (BSI) KCP Sukoharjo. *Undergraduate Thesis*. UIN Raden Mas Said Surakarta.

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- Sholihin, M., & Ratmono, D. (2021). *Analisis SEM-PLS dengan WarpPLS 7.0 untuk hubungan nonlinier dalam penelitian sosial dan bisnis*. Yogyakarta: Penerbit Andi.
- Sicillia, M., & Yazid, A. (2020). Analisis Dampak Digital Banking Dan Kualitas Pelayanan Terhadap Kepuasan Nasabah Pada Sebuah Bank Swasta. *Jurnal Pemasaran Kompetitif*, 3(2), 79. <https://doi.org/10.32493/jpkpk.v3i2.4520>
- Sofyani, H., Yaya, R. & Saleh, Z. (2023). Transparency and community trust in village government: Does corruption perception matter?. *Financial Accountability & Management*, 39(2), 355-374. <https://doi.org/10.1111/faam.12351>
- Wahono, R. S. (2008). *Definisi dan Komponen E-Learning*. Jakarta: Gramedia.
- Wang, Y., Xiuping, S., & Zhang, Q. (2021). Can fintech improve the efficiency of commercial banks? —An analysis based on big data. *Research in International Business and Finance*, 55, 101338. <https://doi.org/10.1016/j.ribaf.2020.101338>
- Wirawan, N. A., & Ratna Juwita (2017). Pengaruh Service Quality (Tangible, Reliability, Responsiveness, Assurance, Empathy) Terhadap Customer Retention (Studi Kasus Andre Foto Studio Palembang).
- Yap, B.K., Wong, D.H., Loh, C. & Bak, R. (2010). Offline and online banking – where to draw the line when building trust in e-banking?. *International Journal of Bank Marketing*, 28(1), 27-46. <https://doi.org/10.1108/02652321011013571>
- Yiu, C.S., Grant, K. & Edgar, D. (2007). Factors affecting the adoption of internet Banking in Hong Kong – implications for the banking sector. *International Journal of Information Management*, 27, 336-351. <https://doi.org/10.1016/j.ijinfomgt.2007.03.002>
- Yolanda, V., Mas'ud, R., & Hasanah, S. M. (2022). Pengaruh Teknologi Keuangan dan Kualitas Layanan Digital Terhadap Kepuasan Nasabah pada Bank Syariah Indonesia KCP Masbagik. *Iqtishaduna*, 13(1), 63–83. <https://doi.org/10.20414/iqtishaduna.v13i1.5373>
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Conflicts of Interest

The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results.

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