Check for updates

Assessing the Relationship between Customer Satisfaction and Digital Service Retention:
Evidence from Indonesian Islamic Banking

Muhammad Alfarizi[1]

Corresponding email: muhammad.alfarizi@binus.ac.id

Abstract

The Indonesian Islamic banking sector has been transformed by integrating technology in banking services to satisfy customers for retention and market share post-COVID-19. This study, therefore, investigates the impact of Islamic banking digital service quality in Indonesia on customer satisfaction and retention post-COVID-19. This study applied the construction of an electronic service quality model (E-S-Qual) and a banking service quality model (BSQ) focusing on digital services in Islamic commercial banks in Indonesia after the COVID-19 pandemic. This study also used an explanatory method by collecting survey data from customers of Islamic banks in Indonesia. PLS-SEM analysis tool with SmartPLS tool version 4 was utilized to search for prove the research hypothesis.this study uncovered the effect of ease of use, efficiency, interoperability, privacy security, responsiveness, reliability, service cost, and service portfolio on ISBC customer satisfaction. In addition, among the significance of ISBC customer satisfaction on customer retention intention, there was a mediating effect of Islamic financial literacy. Islamic banks, consequently, must maintain a digital service system to meet customers' financial needs through quality control of system infrastructure and continuous network maintenance. Moreover, the demand for strategies to strengthen new digital services through adding features and promoting the advantages of digital financial services is needed to gain market share in the Indonesian financial market.

[1] Management Department, Binus Online Learning, Bina Nusantara University, Indonesia

I. Introduction

The coronavirus outbreak in 2020 captured the world's attention and much of the policy debate. The apparent effect of COVID-19 has been to greatly impact the world economy and social relations. However, the COVID-19 pandemic has also become a catalyst for digital transformation, aiding the process of banking and capital transfers.

In this regard, Islamic banking has been adversely affected by this prolonged pandemic. This moment is the chance for Islamic financial and others sectors to contribute to the community's economy (Jawad & Christian, 2019; Anwar, Junaidi, Salju, Wicaksono, & Mispiyanti, 2020). Evidence was brought through the issuance of Financial Services Authority Regulation (POJK) No.11/POJK.03/2020 concerning Credit/Financing Relaxation for those who had difficulty due to COVID-19 Pandemic. The POJK statement asserts that this issue can stabilize banking and maintain the financial system so that these policies impact banking performance. However, the Islamic banking industry deteriorated before the conventional banking industry (Alexakis, Izzeldin, Johnes, & Pappas, 2019; Alsharif, Nassir, Kamarudin, & Zariyawati, 2019).

The contemporary Islamic finance sector also provides usable during the COVID-19 pandemic period, and they must continue to control the financial sector in facing the risks by using innovative strategies of the finance sector in unstable conditions (Rahmayati, 2021). If Islamic banks want to get out of a slump, they should not be able to use old methods or ways to market their products and services. One strategy that Islamic banks can carry out is transforming banking services based on digital services (Zouari & Abdelhedi, 2021a).

One of the goals of providing digital services in this bank is to enhance customer satisfaction. Customer satisfaction is crucial in all commercial setting and the banking sector is no exception. (Ajmal, Raza, Khan, & Fatima, 2018). Customers will readily switch to other banks if they do not receive the service they expect, requiring the banking industry to be innovative in creating competitive advantages amid intense competition for customers and maintain their satisfaction and loyalty (Bankuoru Egala, Boateng, & Aboagye Mensah, 2021a; Zhao, Tsai, & Wang, 2019). Therefore, banks must focus on building customer excellence that can provide value and customer satisfaction, strengthening customer loyalty and maintain the bank's sustainability. (Riyadi, 2021). Nevertheless, the challenge for Islamic banks in developing digital banking is customer reluctance to adopt new technology due to bad experiences (Cajetan I. Mbama & Ezepue, 2018a). In addition, Islamic banks must be prepared to adapt marketing and management models in the digital transformation process even if they are holding a new **Costumer Service** online machine (Kaur, Ali, Hassan, & Al-Emran, 2021). It is an effort to

maximize services through digital technology, which can become the primary alternative for customers as users of Islamic bank digital services in the modern era.

The transformation of Islamic banking to digital technology must still be brought readily into effect, even though there are various future risks associated with transitioning to new technology that the industry will face. Previous literature has summarized the effort of the coronavirus pandemic in changes in the structure of the world's Islamic banking services (Abbas A & Ayu Frihatni A, 2020; Cahyono, Rani, & Mardianto, 2021; Hassan, Rabbani, Asad, & Ali, 2020; Mansour, Ajmi, & Saci, 2022; Rabbani, Asad, et al., 2021; Rabbani, Bashar, et al., 2021). Customers are currently highly dependent on digital banking services, especially in a situation where the potential for transmission of the COVID-19 virus still exists (Banna, Hassan, Ahmad, & Alam, 2022; Ghani, Ali, Musa, & Omonov, 2022). The preliminary study results also revealed that there had been much research on the effect of post-COVID-19 Islamic banking digital services on customer satisfaction (Fida, Ahmed, Al-Balushi, & Singh, 2020; Thaker, Amin, & Pitchay, 2019; Zouari & Abdelhedi, 2021b).

Nonetheless, very little research has explored further the impact on customer retention intentions. Most previous studies directly targeted the consequences of customer-looks technological standards in retention intentions. While customer satisfaction can help customer retention, market presence and positive corporate image are key to commercial sustainably. In their study, Bankuoru, Boateng & Mensah (2021) have attempted to answer the impact of customer satisfaction customer retention, specifically for Fully Digital Service Banks, which cannot be equated with conventional banks with digital services (Bankuoru Egala, Boateng, & Aboagye Mensah, 2021). In addition, no direct studies highlighted the role of customers' understanding of Islamic finance as the basis for their retention intentions in Islamic banking.

As a result, this study is a bridge for studying Islamic finance in digital services and the implications of Islamic banking digital services for fulfilling customers and retaining their custom.

Research Question

The research, thus, attempts to answer to the research question, "What are the latent factors in Islamic banking digital services that affect customer satisfaction and retention?" Further, this research investigates the impact of the quality of Islamic banking digital services post-COVID-19 in Indonesia on customer satisfaction and retention. This study applied the construction of the electronic service quality (E-S-Qual) model (Parasuraman, Zeithaml, & Malhotra, 2005a) and the banking service quality (BSQ) model (Bahia &

Nantel, 2000a) by focusing on digital services at Islamic banks in Indonesia after the COVID-19 pandemic. The merger of E-S-Qual and BSQ constructions is expected to encourage a more comprehensive understanding of the quality-of-service information systems and financial banking services and become another novelty of this research. The integration of the two constructs is also based on the opinion that relying on a single theory limits the research field and the knowledge gained to one side. This study is hoped to shape the theoretical, managerial, and public policy implications in encouraging the growth of the Islamic banking business in Indonesia sustainably through the development of a customer-friendly service digitization strategy and become a means of achieving competitive advantage in the face of strong competition in the Indonesian and global banking sectors.

II. Literature Review

2.1. Digital Banking Services

Technological developments over recent years and the COVID-19 pandemic have significantly advanced banking services' digital transformation much more than previously (Malar, Arvidsson, & Holmstrom, 2019). The situation will bring about further change with the increase in the volume of digital bank service transactions, either through M-Payments, Digital Banking Applications, Internet Banking, or E-Money (Rashid H, 2020). In this case, digital financial services are the logical choice needed to improve the operations and cost efficiency of banks, particualry amoing the so-called millennials cohort of customers (Windasari, Kusumawati, Larasati, & Amelia, 2022). The effectiveness and efficiency of digital banking services are felt to provide many benefits and aid the millennial generation in meeting financial transaction needs, such as online shopping, credit purchases, and interbank transfers (Ghani et al., 2022). The digitalization of services can also help to close the service gap between banks and the community, more efficient, faster, and cost-effective, which is highly favored by the millennial generation (Ji, Wang, Xu, & Li, 2021).

During the COVID-19 pandemic, Indonesian financial services' trend in the use of digital transactions experienced a significant increase of four-fold (320%) in March 2020 and almost a six-fold increase (480%) in April 2020. Bank Indonesia and the Financial Services Authority have issued several regulations regarding digital financial services to increase financial literacy and inclusion in Indonesia (Hapsari, Maroni, Satria, & Ariyani, 2019). Apart from enhanced convenience providing online and mobile banking servicesand, despite the challenge of transformation and transition, digital technology simplifies transactions for users when accessing digital Islamic banking services (Aisyah, 2018).

2.2. Electronic Service Quality

In examining the development of technology in a service company, Parasuraman (2005) created a unique SERVQUAL framework for digital services with the name E-S-QUAL model with several dimensions: ease of use, efficiency, interoperability, privacy security, responsiveness, and reliability (Parasuraman, Zeithaml, & Malhotra, 2005b). This model is also supported by Dalbehera (2020) in its evaluative literature review that the E-S-Qual model has been able to measure the quality of digital services (Dalbehera, 2020). Many empirical studies have also adopted E-S-QUAL in evaluating customer satisfaction with a digital banking service (Ahmed, Romeika, Kauliene, Streimikis, & Dapkus, 2020; Dalbehera, 2020; Ya', Tijjani, Babangida, & Yahaya, 2022; Ya'u Ibrahim et al., 2022; Yusfiarto, 2021). The latest study has demonstrated that the E-S-Qual dimension variable affected satisfaction with digital account creation services through the CS online engine (Murthy, 2022).

2.3. Financial Banking Service Quality

Financial Banking Service Quality (FBSQ) model is intended to evaluate the quality of Islamic banking financial services (Bahia & Nantel, 2000b). This model also extends SERVQUAL by offering better evaluation results of banking services due to different perception scales and expectations. Specifically, the FBSQ model is designed to observe the quality of banking services. Latest researchers have used FBSQ to compare the service quality of Islamic banks in Malaysia and Saudi Arabia and found facts about the effect of costs to achieve service and consistency of banking financial service profiles (Baber, 2019; Saad & Alshehri, 2021).

2.4. Islamic Financial Literacy

Islamic financial literacy is defined as a person's expertise in utilizing financial knowledge, skills, and behaviors when managing finances under Islamic guidance (Setiawati, Nidar, Anwar, & Masyita, 2018). This financial literacy is also seen asunderstanding Islamic finance by being familiar with Islamic financial products and services, and knowing the differences between Islamic and conventional banks. This can influence individual behavior to decide matters relating to the economy based on sharia principles (Saifurrahman & Kassim, 2021).In addition, Islamic finance has the principle of trust in Allah's commands, without usury, investing only in lawful things. Also, it has no gharar and no maysir (Narastri & Kafabih, 2020).

2.5. Hypotheses Development

This study integrated the ES-QUAL (Electronic Service Quality) by Parasuraman et al. (2005) with Dalbehera's (2020) support and FBSQ (Financial Banking Service Quality) models by Bahia & Nantel (2000) with eight variables: ease of use, efficiency, interoperability, privacy/security, responsiveness from ES-QUAL and reliability, service portfolios, and service charges from the BSQ model.

First, ease of use is defined as the confidence of an individual that learning, utilizing, and using technology is believed to make banking easier for users (Davis, 1989; Hansen, Saridakis, & Benson, 2018; Tahar, Riyadh, Sofyani, & Purnomo, 2020). If a system is easy to use, it will not require much effort, which is included in the ease of use (Setia & Indra, 2022). Likewise, several previous studies of digital banking services also concluded the effect of the ease and friendliness of using digital services in satisfying customers (Lee & Lee, 2020; Ramesh, Jaunky, Roopchund, & Oodit, 2020). Thus, this research derived the first hypothesis as follows:

H1: Ease of use of Islamic banking digital services significantly influences customer satisfaction.

Efficiency is a comparison between activities and results related to each other (Bhatia, Basu, Mitra, & Dash, 2018). To improve the quality of its business, efficiency can be used as a performance parameter of an institution or organization. Efficiency in banking technology services is a widely used performance parameter as it answers difficulties in calculating bank performance measures. The efficiency level of banking technology integration can be seen from various measures, one of which is user satisfaction (Ramesh et al., 2020). Several previous studies have also shown the effect of efficiency in electronic banking services on satisfaction (Khan & Alhumoudi, 2022; Raza, Umer, Qureshi, & Dahri, 2020). Hence, the researchers formulated the second hypothesis below:

H2: The efficiency of Islamic banking digital services significantly influences customer satisfaction.

Interoperability is the ability of two or more systems or components to share data/information. Compatibility cannot guarantee that each system can take advantage of the other systems' resources (Razis & Mitropoulos, 2022). Previous studies also disclosed interoperability's positive and significant effect on customer satisfaction (Bankuoru Egala et al., 2021b; Razis & Mitropoulos, 2022). As such, this literature analysis puts forward the third hypothesis:

H3: The interoperability of Islamic banking digital services significantly influences customer satisfaction.

Security is the bank's ability to protect customers' personal information and financial data from being stolen and spread (Soomro, Shah, & Ahmed, 2016). Meanwhile, privacy in digital banking transactions is the willingness of consumers to provide their personal information to the digital banking service system (Gurung, 2006). Thus, in several studies, customer privacy security is a crucial factor in customer perceptions of assessing the quality of digital banking service (Li, Lu, Hou, Cui, & Darbandi, 2021; Salem, Baidoun, & Walsh, 2019; Shankar & Jebarajakirthy, 2019). Ali et al. (2021) concluded that the privacy security offered by the mobile banking platform affected customer satisfaction (Ali et al., 2021). Likewise, several previous studies also reported a significant relationship between the privacy security of automated banking services and customer satisfaction (Altobishi, Erboz, & Podruzsik, 2018; Banu, Mohamed, & Parayitam, 2019). Therefore, the researchers hypothesized:

H4: Privacy security of digital banking services significantly influences customer satisfaction.

Responsiveness provides services quickly and responsively (Akram, Nadarajah, Shah, & Milano, 2020). From this level of willingness or concern, to what extent is the company is trying to help its customers will be seen (Aiello et al., 2020)? The research results by Bungatang (2021) and Chen et al. (2021) have proven that responsiveness positively influences customer satisfaction (Bungatang & Reynel, 2021; Chen, Le, & Florence, 2021). In other words, customer satisfaction will increase if the service has good responsiveness (Fauzi & Suryani, 2019; Ramadonna & Aziz, 2019). Based on the explanation above, the following hypothesis can be put forward:

H5: Responsiveness of Islamic banking digital services significantly affects customer satisfaction.

Reliability is the flexibility of the application to carry out its functions according to a predetermined design with minimal risk of failure of service output requests (Rajini, Ramamoorthy, Radha Rammohan, Rajakumar, & Niveditha, 2020). Reliability in the digital banking service system is defined as the ability of the bank's digital services to conduct system functions based on user orders to avoid potential failures (Kaur & Arora, 2021). Khatoon, Zhengliang & Hussain (2020) found that the reliability of a trustworthy remote banking service system encourages perceptions of banking service quality and customer satisfaction (Khatoon, Zhengliang, & Hussain, 2020). In addition, Mbama, Ezepue, Alboul & Beer (2018) stated that the optimistic bank's digital services satisfied customers and would remain loyal to the bank's brand (Cajetan Ikechukwu Mbama, Ezepue, Alboul, & Beer, 2018). This explanation led the researchers to hypothesize:

H6: The reliability of Islamic banking digital services significantly affects customer satisfaction.

A service charge is a fee that is incurred to obtain services, including digital banking services (Broby, 2021). According to Eldeeb, Halim & Kamel (2021) and Stanislawski & Syzmonik (2021), the nominal amount of business or money spent using digital banking services, including the comparison with the benefits obtained, determines using a sustainable service system (ElDeeb, Halim, & Kamel, 2021; Stanisławski & Szymonik, 2021). The hypothesis testing of several previous studies uncovered that service charges significantly affected customer satisfaction due to the desire for a return on effort (Chien & Chi, 2019; Lynn & Brewster, 2018; Nyarku et al., 2018). The researchers, therefore, drew the seventh hypothesis as follows:

H7: Islamic banking digital service charge significantly affects customer satisfaction.

The service portfolio is a description of combined digital products and services consistent with the capabilities of the technology system function (Jovanovic, Sjödin, & Parida, 2021). The competitive power of the digital banking service portfolio has become a new contest in the banking industry. Owusu et al. (2021), in their study of mobile banking services in Ghanaian banking, stated that the service portfolio affected customer satisfaction amid the convergence of customer-oriented quality digital banking service platforms (Owusu, Bekoe, Addo-Yobo, & Otieku, 2021). In his study, Bankuoru (2021) also affirmed the effect of digital bank portfolios on customer satisfaction (Bankuoru Egala, Boateng, & Aboagye Mensah, 2021c). Hence, this study proposed the eighth hypothesis:

**H8: Digital banking services portfolio has a significant effect on customer satisfaction.**

Currently, the banking sector's digital service program for satisfaction is chiefly done by increasing customer retention through efforts to increase happiness and value to specific customers (Li et al., 2021). Rantyanti & Halim (2020) and Rashid, Nurunnabi, Rahman & Masud (2020), in their study, mentioned the impact of bank customer satisfaction in their financial IT innovation service program to increase customer retention intentions and encourage long-term growth in the company's financial performance (Rantyanti & Halim, 2020; Rashid, Nurunnabi, Rahman, & Masud, 2020). In addition, previous studies of banking financial automation services also revealed the effect of satisfaction on customer retention intentions. The above explanation made the researchers hypothesize:

H9: Customer satisfaction significantly affects the retention intention of Islamic bank digital services in Indonesia.

Based on the previous literature review, customer retention intentions are influenced by customer satisfaction with Islamic banks, including their digital services (Zouari & Abdelhedi, 2021c). Furthermore, this Islamic financial literacy as Islamic financial law moderates customer satisfaction on customer retention intentions at Islamic banks (Abror et al., 2020). Nurhayati & Sukesti (2016), in a study of customer loyalty of Islamic banks in Semarang City, asserted that the higher a person's level of Islamic financial literacy, the variable could moderate satisfaction with retention intentions (Nurhayati & Sukesti, 2016). Consequently, the hypothesis proposed is:

H10: Islamic financial literacy becomes a moderator variable between the effects of satisfaction on retention intentions for digital Islamic banks in Indonesia.

Based on the explanation above, the research construct model is formed as depicted in Figure 1.
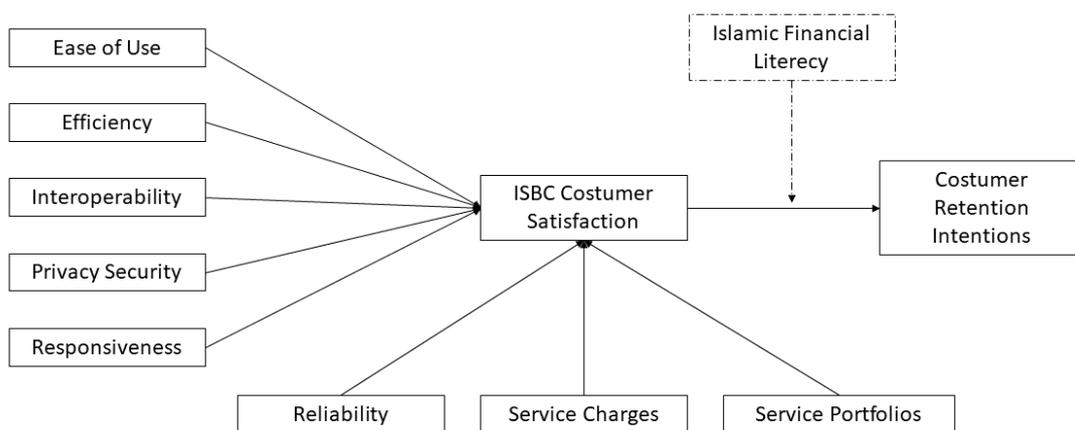
Figure 1. Research Model

Source: (Bahia & Nantel, 2000a; Daradkah, Aldaher, & Shinaq, 2020; Parasuraman et al., 2005a; Rahman, Tajudin, & Tajuddin, 2018)

III. Methodology

This research was conducted using a quantitative approach to examine the constructed model formed to evaluate the use of Islamic banking digital services and determine the factors influencing their use. This research also sought to determine research approach, the methods, techniques, and instruments used are quantitative. Then, the data collection technique to be carried out in this study was a survey method by distributing questionnaires

to Islamic banking customer in Indonesia. The measurements used in this research questionnaire were Likert scale intervals, namely scale 1 (strongly disagree); 2 (disagree); 3 (neutral); 4 (agreed); 5 (strongly agree). In this study, the constructivist study questions were adopted with modifications to suit the research context. Therefore, the measurement items from the constructivist survey were rearranged for the context of the study of acceptance of Islamic banking technology. The measurement items are presented in Table 1.

Table 1. Variable Indicator

Variable Indicator	Statement	Source	Scale
Ease of Use			
EOUS1	Islamic bank digital services are effortless to use.	(Parasuraman et al., 2005a)	Likert
EOUS2	Navigation of Islamic banks' digital services is very friendly for all ages.		
EOUS3	There is a clear instruction guide for using the digital services of Islamic banks.		
EOUS4	Convenience at all times in financial transactions using digital services of Islamic banks		
Efficiency			
EFFI1	Islamic bank digital services make me achieve the desire for financial transactions following Islamic law.	(Parasuraman et al., 2005a)	Likert
EFFI2	Islamic bank digital services make me achieve the desire for financial transactions following Islamic law.		
EFFI3	Islamic bank digital services have successfully met my expectations.		
Interoperability			
INTE1	Digital services of Islamic banks connected to other financial providers	(Parasuraman et al., 2005a)	Likert
INTE2	I can carry out my financial transactions with third-party financial platforms with Islamic bank digital services.		
Privacy Security			
SECUI1	I believe in the strength of the infrastructure of Islamic banks' digital service security system.	(Parasuraman et al., 2005a)	Likert
SECUI2	I believe the provider maintains the security of financial transactions through the digital services of Islamic banks.		
SECUI3	I believe the application provider does not share my data or transactions with unauthorized parties.		
Responsiveness			
RESP1	Islamic bank initiates contact center services to serve digital service problems quickly.	(Parasuraman et al., 2005a)	Likert
RESP2	Digital services provide fast responses in the transaction process according to the network connection.		

Table 1. Variable Indicator (Continue)

Variable Indicator	Statement	Source	Scale
Reliability			
RELI1	Islamic bank digital services serve financial transactions without long waiting times.	(Bahia & Nantel, 2000b)	Likert
RELI2	Islamic bank digital services provide the right digital transaction features following program promotions.		
RELI3	Islamic bank digital services operate 24 hours a day.		
RELI4	Islamic bank digital services maintain error-free predicates.		
Service Charges			
SCHA1	I incur affordable costs in accessing the digital services of Islamic banks.	(Bahia & Nantel, 2000b)	Likert
SCHA2	The cost of using a digital platform for Islamic banks is cheaper.		
SCHA3	Affordable Islamic bank digital subscription fee		
Service Portfolio			
SEPO1	Affordable Islamic bank digital subscription fee	(Bahia & Nantel, 2000b)	Likert
SEPO2	I always get notifications of application updates to get the latest features of Islamic bank digital services.		
ISBC Customer Satisfaction			
ICS1	I am satisfied with the delivery of Islamic banking digital services.	(Bahia & Nantel, 2000b; Parasuraman et al., 2005a)	Likert
ICS2	I am satisfied with the quality of Islamic banking digital services.		
ICS3	Overall, I am satisfied with the Islamic banking digital service during the post-COVID-19 pandemic.		
Islamic Financial Literacy			
IFL1	I know the concept of Islamic finance.	(Daradkah et al., 2020; Rahman et al., 2018)	Likert
IFL2	I understand that the Qur'an, the Hadith of the Prophet Muhammad, and Ijma' ijtihad are the basis of sharia economic law.		
IFL3	I carry out the five pillars of Islam.		
IFL4	I know that one of the Islamic financial institutions is an Islamic bank.		
IFL5	Islamic bank products follow Islamic law.		
IFL6	Islamic bank products are more profitable and blessed.		
IFL7	Islamic bank products are according to my needs.		
IFL8	Islamic bank products provide the convenience of halal financial transactions for Muslims.		
Customer Retention Intention			
CRI1	I will recommend that people around to use Islamic banking digital services.	(Bahia & Nantel, 2000b; Parasuraman et al., 2005a)	Likert
CRI2	I will continue to use Islamic banking digital services.		
CRI3	I continue to use the current Islamic bank brand because it has succeeded in providing quality digital services.		

The questionnaire was distributed online by means of Google Forms. The targets or respondents of the questionnaire were Islamic banking customers in Indonesia. This study used a purposive sampling technique, with the sample criteria being customers who utilized digital services. The determination of

the minimum sample followed the rule of thumb by Hair, Matthews and Sarstedt (2017), stating that the minimum samples are four or five times the number of existing indicators (Hair Jr.Matthews, Matthews, & Sarstedt, 2017).

$$37 x 5 = 185$$

Therefore, the minimum number of participants in the sample that should be achieved in this study was 185. Since this study focused more on explanatory research, quantitative analysis and Partial Least Square Structural Equation Model (PLS-SEM) were used to develop models calculated with the help of SmartPLS 4 software. In this case, the PLS-SEM method has advantages under the research objectives to identify the main determinant variables (Rigdon, Sarstedt, & Ringle, 2017).

IV. Results and Analysis

4.1. Respondent's Profile

This research received a total of 294 respondents during the data collection period from August 2022 to October 2022. Following a data cleansing process, a total of 273 respondents were obtained and for analysis. Regarding gender, most respondents were male. Concerning age, most respondents were over 40 years old, with a percentage of 62%.

Moreover, the areas with the most respondents were on Java Island, as much as 22% (60.26%). Also, there was very little difference from Bali, which was a response rate of 20% In terms of education, most respondents held a master's or Ph.D. Besides, the most respondents' occupations were academics, with a total of 27%, followed by professionals, 23%, and merchants/business people, with not many different numbers at 21%. In addition, Bank BCA Syariah and Bank Syariah Indonesia had the most respondents, 26% and 23%, respectively. The profile of respondents to the survey can be seen in Table 2.

4.2. Outer Model Measurement

Testing the outer model measurement is a latent construction test of reflective and formative indicators of whether it meets the theoretical and retrieval principles. In simple language, it tests the data's validity and reliability. The following four measurement model evaluations or outer models were obtained by running the PLS Algorithm in SmartPLS Version 4. This procedure would simultaneously produce R2 and Path Coefficients values for evaluating the inner model (Purwanto & Sudargini, 2021).

Table 2. Respondent's Profile

Characteristic	Total	Percentage
Gender		
Men	153	56%
Female	120	44%
Age		
18 to 39 years of age	105	38%
40 years of age and aboveabove)	168	62%
Region		
Java	60	22%
Sumatera	47	17%
Kalimantan	39	14%
Bali-Nusa Tenggara	55	20%
Sulawesi	27	10%
Maluku	19	7%
Papua	26	10%
Educational Level		
Junior High School	31	11%
Senior High School	36	13%
Bachelor/Diploma	92	34%
Master/Ph.D.	114	42%
Occupation		
Professional (Lawyer, Doctor, Engineer)	64	23%
Manager/Executive	20	7%
Academician (Lecture-Professor)	73	27%
Student	15	6%
Merchant/Business People	57	21%
Unemployed	36	13%
Others	8	3%
Brand Bank Syariah		
Bank Syariah Indonesia	63	23%
Bank BCA Syariah	71	26%
Bank Muamalat Indonesia	56	21%
Bank Mega Syariah	34	12%
Bank Bukopin Syariah	49	18%

(Number of respondents = 173)

Validity testing was measured through the value of outer loadings with a minimum value of 0.6 and average variance extracted with a minimum value of 0.5 (J. F. Hair, Risher, Sarstedt, & Ringle, 2019). At the same time, the reliability value was seen through the importance of composite reliability and Cronbach's alpha, with a minimum value of 0.7 (J. Hair, Hollingsworth, Randolph, & Chong, 2017). The absolute validity and reliability test results in Table 3 indicate that the model met the minimum standards of AVE, Cronbach's Alpha, and Composite Reliability. In addition, the outer loadings scale value for each variable indicator was above the minimum, so the measurement model was declared reliable and accurate for further testing.

Table 3. PLS Algorithm Results

Construct	Outer Loadings Scale	Cronbach's Alpha	rho_A	Composite Reliability	AVE
Ease of Use	0.747-0.833	0.821	0.882	0.882	0.652
Efficiency	0.898-0.900	0.872	0.863	0.922	0.797
Interoperability	0.860-0.913	0.732	0.836	0.880	0.787
Privacy Security	0.685-0.847	0.702	0.852	0.831	0.623
Responsiveness	0.907-0.930	0.815	0.831	0.915	0.843
Reliability	0.720-0.830	0.798	0.915	0.869	0.625
Service Charges	0.831-0.903	0.850	0.909	0.909	0.769
Service Portfolio	0.797-0.895	0.716	0.882	0.836	0.719
ISBC Customer Satisfaction	0.774-0.839	0.739	0.879	0.852	0.657
Islamic Financial Literacy	0.700-0.786	0.877	0.992	0.903	0.537
Customer Retention Intentions	0.882-0.901	0.872	0.864	0.836	0.797

4.3. Inner Model/Structural

The evaluation aimed to see the direct or indirect effect between variables. The structural model can be evaluated by looking at the R-Square value on the endogenous latent variable and testing the hypothesis by looking at the t-statistic value (J. Hair et al., 2017). Structural Inner Model analysis is performed through the Bootstrapping procedure in the SmartPLS application. This study has passed a procedural analysis of the Structural Inner Model with output evidence in figure 2.

The coefficient of determination (R2) is a way to assess how much an exogenous construct can explain an endogenous construct. The value of the coefficient of determination (R2) is will lie between 0.0 and 1.0. Within these parameters, Chin gives the criteria for R2 values of 0.67, 0.33, and 0.19 as strong, moderate, and weak (J. F. Hair, Risher, Sarstedt, & Ringle, 2019). The R-Square analysis results in Table 4 reveal that exogenous variables influenced ISBC by 97% with a strong category. Meanwhile, customer retention intention was influenced by 77.8% by exogenous variables with a strong category. Islamic financial literacy was affected by 71.7% of exogenous variables with a strong category. As for the predictive relevance (Q2), results demonstrated a value above 0 with a strong category and were concluded to have predictive relevance.

Further, hypothesis testing on SmartPLS was carried out using a sample bootstrapping procedure. The minimum t-statistic value used was a significance level of 5%, and the minimum t-statistic value was 1.96 with a 95% confidence level. The criteria for accepting the hypothesis are also seen

from the p-value of not more than 0.05, according to the role of thumb. Based on the analysis results in Table 5, all hypotheses were accepted.
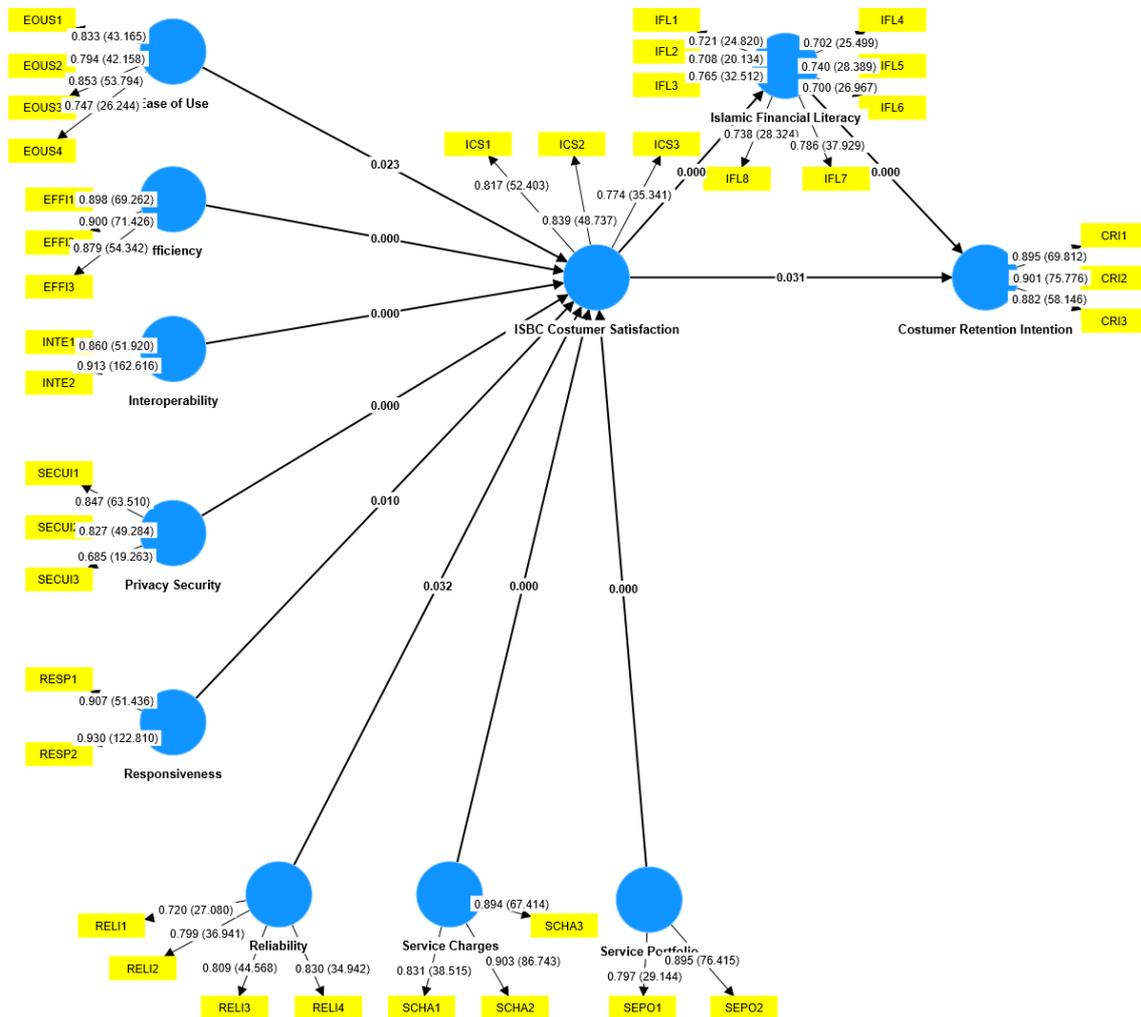

Figure 2. Bootstrapping Output

4.4. Discussion

This study succeeded in proving that all hypotheses were accepted because they were above the minimum t-test and p-value with a positive path coefficient. This study also succeeded in achieving its objective of assessing the impact of Islamic banking digital service quality post-COVID-19 in Indonesia on customer satisfaction and retention. This study accepted the first hypothesis, indicating that ease of use positively and significantly affected user satisfaction, in accordance with the p-value and t-test. In other words, the better the Islamic digital banking service technology provides the convenience felt by its users, the higher the satisfaction felt by its users. This study aligns with several previous studies (Hammoud, Bizri, & el Baba, 2018; Lee & Lee, 2020; Ramesh et al., 2020).

Table 4. Hypothesis Analysis Results

	Hypothesis	T-Test	P-Value	Interpretation	R-Square	Q-Square
H1	Ease of Use → ISBC Customer Satisfaction	2.273	0.023	Accepted	0.970	0.674
H2	Efficiency → ISBC Customer Satisfaction	10.729	0.000	Accepted		
H3	Interoperability → ISBC Customer Satisfaction	30.436	0.000	Accepted		
H4	Privacy Security → ISBC Customer Satisfaction	42.915	0.000	Accepted		
H5	Responsiveness → ISBC Customer Satisfaction	2.561	0.010	Accepted		
H6	Reliability → ISBC Customer Satisfaction	2.151	0.032	Accepted		
H7	Service Charges → ISBC Customer Satisfaction	9.050	0.000	Accepted		
H8	Service Portfolio → ISBC Customer Satisfaction	16.183	0.000	Accepted		
H9	ISBC Customer Satisfaction → Costumer Retention Intention	2.162	0.031	Accepted	0.778	0.491
H10	ISBC Customer Satisfaction ← Islamic Financial Literacy → Costumer Retention Intention	11.866	0.000	Accepted	0.717	0.380

Related to that, customers will feel more satisfied using easy-to-operate digital banking services, so they can continue utilizing this technology. As such, Islamic banking must provide digital services, both applications and websites, which are easy to use (user friendly) and equipped with full features to provide convenience and not make it difficult for customers. It is also strongly recommended that there is a concise and clear transaction guide for the m-banking application to make it easier to use. Systems designed with optimal performance and design are complex in terms of operation will actually hinder usage. Therefore, service providers, namely Islamic banks in Indonesia, can facilitate the BRImo application, by offering a well-designed interface system and a navigation system with a fast response for comfortable operation.

Moreover, this study has also shown the acceptance of the hypothesis, stating the effect of efficiency on customer satisfaction in Islamic banking. It suggests maintaining efficiency, such as complete product information, ease to use, customers who can easily find the product they want, can readily load each page with prompt log-in accessibility, thereby enabling customers to complete transactions with minimal difficulty. Further, the pandemic situation requires the effectiveness of technology in digital transaction processes

because restrictions on activities outside the home. In this case, m-banking customers expect fast and error-free banking services accessible anytime from anywhere through the m-banking platform. Hence, banks must ensure the availability of accurate banking services at all times through the m-banking platform. Banks can also make efforts so that m-banking applications can work also on slow internet connections and not be hampered by an overload of internet traffic.

The PLS-SEM analysis results in this study accepted H3, the effect of interoperability on Islamic banking customer satisfaction. This related customer satisfaction to digital services measured by the ability of systems or components of Islamic digital banking services to share data or process transfers to good third parties companies that partner with banks in transaction processes such as E-Money, FinTech Applications, Virtual Account Institutions etc. This result is consistent with previous studies, which stated that interoperability affected digital service user satisfaction (Bankuoru Egala et al., 2021b; Hobson, Anand, Yang, & Lee, 2011; Razis & Mitropoulos, 2022). In this regard, interoperability is a complex issue in exchanging data between systems with different platforms, as with e-banking. It is not possible to standardize data formats and schemas across all systems, nor is it possible to standardize systems, let alone use the same vendor. One accepted approach is to standardize the structure of the data exchanged, and XML provides the correct answer.

In addition, this study found the effect of privacy and security on customer satisfaction in Islamic banking, which is in line with previous studies (Altobishi et al., 2018; Banu et al., 2019). Here, perceived security is consumers' belief or impression that their personal information will not be seen, stored, and manipulated by other parties during transit and storage, thereby consistently raising their confidence and expectations of good service. This, in turn can enhance customer satisfaction. Gurung et al. (2006) stated that protecting privacy is vital to increase satisfaction. Technically, the perception of security will guarantee integrity, confidentiality, authentication, and no transaction recording (Gurung, 2006). Furthermore, since the COVID-19 pandemic has been a significant shock on the world economy, customers do not want to compound their problems by poor security and privacy protection. Consequently, Indonesian Islamic banks must ensure that the digital banking service system is based on several layers of security, consisting of various parallel solutions and mechanisms to protect banking applications and customer data, providing identification, authentication, and authorization.

The PLS-SEM analysis also showed that H5 support could be interpreted as consumer satisfaction using Islamic bank digital services. It can be said that consumers were satisfied with the service responsiveness provided as

consumer expectations before and after receiving service responsiveness exceeded consumer expectations.

This consumer satisfaction was manifested through:

1) Responsiveness to consumer activity;
2) willingness to respond quickly to requests for consumer assistance through call center applications; and
3) Ease of payment transactions. Consumers then became interested and encouraged to use it again and recommending it to other people as a facility. This study is in line with the results of previous studies (Fauzi & Suryani, 2019; Ramadonna & Aziz, 2019).

Based on the study results, the reliability variable positively and significantly affected consumer satisfaction using Islamic bank digital services. Thus, it can be seen that, because consumer expectations before and after getting reliable services matched or even surpassed those expectations, customers were happy with the reliable services offered by Islamic bank digital services.

This consumer satisfaction was demonstrated by way of:

1) The speed with which the application responds to service requests,
2) Ease of transaction, and
3) There is notification/confirmation of service implementation. It made consumers interested in using it again, and recommended it to people to also use. This result agrees with the previous study (Khatoon et al., 2020; Cajetan I. Mbama & Ezepue, 2018b).

Furthermore, the PLS-SEM test in this study found the effect of service fees and their portfolio (H7-H8) on consumer satisfaction using Islamic bank digital services. These results are consistent with previous studies (Bankuoru Egala et al., 2021b; Chien & Chi, 2019; Lynn & Brewster, 2018; Nyarku et al., 2018; Owusu Kwateng, Osei Atiemo & Appiah, 2019) indicating that prices are increasingly flowing to consumer benefits and savings. , resulting in raised consumer satisfaction with Islamic bank digital services. Price is a key determinant for buyers in choosing services. The similarity of the price given by the company for the effort to get the service will satisfy the customer. According to Nyarku (2018), a certain amount of value or money is needed to get the required chemistry from products and services (Nyarku et al., 2018). In addition, the portfolio features in Islamic bank digital services are attractive and make it easier for customers in the transaction process, which will facilitate the customer transaction process, triggering satisfaction.

The analysis results in this research also revealed the effect of Islamic bank customer satisfaction in digital services on retention intentions, and is in line with previous studies (Rantyanti & Halim, 2020; Rashid et al., 2020). In this

regard, customer satisfaction is a measurement metric businesses use in the perceived customer concept. Therefore, it is vital for customer retention to satisfy the product needs of customers. Since dissatisfied customers can, potentially take little time to switch brands, strengthening digital services' capacity is expected to satisfy customers and increase their retention intentions.

This study also attempted to find the influence of the moderating variable of customers' Islamic financial literacy on the relationship between Islamic bank customer satisfaction in digital services and retention intentions, showing significant results. It indicates that understanding Islamic finance is a consideration in retention intentions after obtaining satisfaction using Islamic bank digital services. This discovery demonstrates the role of Islamic financial law in regulating Muslim society's actions, especially in adopting technology in the transaction process.

Further, for various parties this study provides new insights from theoretical and managerial perspectives. In terms of the academic function, this study adds empirical evidence regarding the effect of Islamic banking digital service quality on satisfaction and retention intentions, in the light of the levels of Islamic financial literacy of respondents.

This study also goes towards filling the void in exploring Islamic bank digital services after the COVID-19 pandemic, and the profound changes to digital transformation that ensued soon after the onset of the COVID-19 outbreak. In managerial terms, strategic demands are in strengthening Islamic bank digital services as a new basis for gaining financial market share in Indonesia.

V. Conclusion and Recommendation

5.1. Conclusion

The people of Indonesia are positively responsive to adopt technological developments and change. As an extension, the financial business sector must be no exception in also adopting technology to strengthen customer loyalty and commercial success. This study has found that Islamic bank customer retention in Indonesia is influenced by customer satisfaction in utilizing digital services, most notably after the COVID-19 pandemic as an era of digital transformation. This study departed from the context of Indonesia as a developing country, which is profoundly thick with the digitalization of all sectors, especially finance.

This study requires further development, especially given the limited research samples of Islamic bank customers in Indonesia. Therefore, it is not fully

generalizable to the situation of world Islamic banking in the post-COVID-19 digital transformation era. Also, an expansion of the research framework with consideration of other theories can produce a more comprehensive analysis, including the use preference elicitation techniques to understand the dimensions of feature future? demand and quality preferred by Islamic bank customers after the COVID-19 pandemic be used in future research.

5.2. Recommendation

This study highlights managerial and public policy implications in Islamic banking digital financial services. A practical and sustainable strategy in digital service integration is needed to provide the best service for customers to get their retention intention. Even though the digitization maintenance process requires capital injection, it can be successfully implemented if carried out continuously and with minimal damage . In addition, it is recommended to retain existing customers to get Word of Mouth (WoM) points. Later, Islamic banks' digital services can increase gain market share and profitability.

Moreover, enhancing 'ease of use' by displaying Islamic bank digital service applications that are efficient for all ages is required to ensure that customers can easily transact by means of digital services. Since Islamic bank digital services are an integration of various financial transaction features with third parties, ensuring a service operating system ready to process transaction data transfers is needed through network infrastructure control. Islamic bank customers are also predicted to have understood Islamic sharia law, and their question is, "are long-distance transactions beneficial or harmful?"

Therefore, the first policy implication for authorized government stakeholders must be improved digital financial literacy and amendemnts to governing sharia law. The evaluation of the features and security attributes of Islamic bank digital services is also required, consisting of the possibilities:

1) Encryption;
2) Set up an account with an id and password; and
3) To ensure accuracy and security, a confirmation of transaction is displayed on completion of the purchase process.

It is also intended to avoid the risk of cybercrime, which would otherwise impact adversely on customers. Islamic bank digital service applications must also have high responsiveness to serve high mobility of customer transactions. These findings will guide Islamic financial institutions in implementing technology to achieve a competitive advantage and influences customer preferences.

References

Abbas A, & Ayu Frihatni A. (2020). The social role of Islamic banks in Indonesia during the pandemic of COVID-19: Reflection of Market Share. *European Journal of Islamic Finance*, (16). https://doi.org/10.13135/2421-2172/4914.

Abror, A., Patrisia, D., Engriani, Y., Evanita, S., Yasri, Y., & Dastgir, S. (2020). Service quality, religiosity, customer satisfaction, customer engagement and Islamic bank's customer loyalty. *Journal of Islamic Marketing*, *11*(6), 1691–1705. https://doi.org/10.1108/JIMA-03-2019-0044.

Ahmed, R. R., Romeika, G., Kauliene, R., Streimikis, J., & Dapkus, R. (2020). ES-QUAL model and customer satisfaction in online banking: Evidence from multivariate analysis techniques. *Oeconomia Copernicana*, *11*(1), 59–93. https://doi.org/10.24136/oc.2020.003.

Aiello, G., Donvito, R., Acuti, D., Grazzini, L., Mazzoli, V., Vannucci, V., & Viglia, G. (2020). Customers' willingness to disclose personal information throughout the customer purchase journey in retailing: The role of perceived warmth. *Journal of Retailing*, *96*(4), 490–506. https://doi.org/10.1016/j.jretai.2020.07.001.

Aisyah, M. (2018). Islamic bank service quality and its impact on Indonesian customers' satisfaction and loyalty. *Al-Iqtishad: Jurnal Ilmu Ekonomi Syariah*, *10*(2). https://doi.org/10.15408/aiq.v10i2.7135.

Ajmal, H., Khan, R. A., & Fatima, M. (2018). Impact of service quality on customer satisfaction in banking industry of Pakistan: A case study of Karachi. *Journal of Social and Administrative sciences*, *5*(3), 219-238.

Akram, U., Nadarajah, M., Shah, R., & Milano, F. (2020). A review on rapid responsive energy storage technologies for frequency regulation in modern power systems. *Renewable and Sustainable Energy Reviews*, *120*, 109626.

Alexakis, C., Izzeldin, M., Johnes, J., & Pappas, V. (2019). Performance and productivity in Islamic and conventional banks: Evidence from the global financial crisis. *Economic Modelling*, *79*, 1–14. https://doi.org/10.1016/j.econmod.2018.09.030.

Ali, B. J., Saleh, P. F., Akoi, S., Abdulrahman, A. A., Muhamed, A. S., Noori, H. N., & Anwar, G. (2021). Impact of service quality on the customer satisfaction: Case study at online meeting platforms. *International Journal of Engineering, Business and Management*, *5*(2), 65–77. https://doi.org/10.22161/ijebm.5.2.6.

Alsharif, M., Nassir, A. M., Kamarudin, F., & Zariyawati, M. A. (2019). The productivity of GCC Islamic and conventional banks after Basel III announcement. *Journal of Islamic Accounting and Business Research*, *10*(5), 770–792. https://doi.org/10.1108/JIABR-04-2017-0050.

Altobishi, T., Erboz, G., & Podruzsik, S. (2018). E-banking effects on customer satisfaction: The survey on clients in Jordan banking sector. *International Journal of Marketing Studies*, *10*(2), 151. https://doi.org/10.5539/ijms.v10n2p151.

Baber, H. (2019). Service quality perception and its impact on customer satisfaction in Islamic banks of Malaysia. *Malaysian Journal of Consumer and Family Economics*, *22*(1).

Bahia, K., & Nantel, J. (2000). A reliable and valid measurement scale for the perceived service quality of banks. *International Journal of Bank Marketing*, *18*(2), 84–91. https://doi.org/10.1108/02652320010322994.

Bankuoru Egala, S., Boateng, D., & Aboagye Mensah, S. (2021). To leave or retain? An interplay between quality digital banking services and customer satisfaction. *International Journal of Bank Marketing*, *39*(7), 1420–1445. https://doi.org/10.1108/IJBM-02-2021-0072.

Banna, H., Hassan, M. K., Ahmad, R., & Alam, M. R. (2022). Islamic banking stability amidst the COVID-19 pandemic: the role of digital financial inclusion. *International Journal of Islamic and Middle Eastern Finance and Management*, *15*(2), 310–330. https://doi.org/10.1108/IMEFM-08-2020-0389.

Banu, A. M., Mohamed, N. S., & Parayitam, S. (2019). Online Banking and Customer Satisfaction: Evidence from India. *Asia-Pacific Journal of Management Research and Innovation*, *15*(1–2), 68–80. https://doi.org/10.1177/2319510x19849730.

Bhatia, V., Basu, S., Mitra, S. K., & Dash, P. (2018). A review of bank efficiency and productivity. *Opsearch*, *55*(3–4), 557–600. https://doi.org/10.1007/s12597-018-0332-2.

Broby, D. (2021). Financial technology and the future of banking. *Financial Innovation*, *7*(1). https://doi.org/10.1186/s40854-021-00264-y.

Bungatang, B., & Reynel, R. (2021). the effect of service quality elements on customer satisfaction. *Golden Ratio of Marketing and Applied Psychology of Business*, *1*(2), 107–118. https://doi.org/10.52970/grmapb.v1i2.102.

Cahyono, E. F., Rani, L. N., & Mardianto, M. F. F. (2021). Determinants of Indonesian conventional and Islamic bank depositor trust during the COVID-19 pandemic. *Journal of Islamic Monetary Economics and Finance*, *7*. https://doi.org/10.21098/jimf.v7i1.1352.

Chen, J. S., Le, T. T. Y., & Florence, D. (2021). Usability and responsiveness of artificial intelligence chatbot on online customer experience in e-retailing. *International Journal of Retail and Distribution Management*, *49*(11), 1512–1531. https://doi.org/10.1108/IJRDM-08-2020-0312.

Chien, L., & Chi, S. (2019). Corporate image as a mediator between service quality and customer satisfaction: Difference across categorized exhibitors. *Heliyon*, *5*, 1307. https://doi.org/10.1016/j.heliyon.2019.

Dalbehera, S. (2020). Measuring service quality in digital library services by the research scholars of SOA University of Odisha using ES-QUAL model. In *International Perspectives on Improving Student Engagement: Advances in Library Practices in Higher Education*. Emerald Publishing Limited.

Daradkah, D., Aldaher, A. A., & Shinaq, H. R. (2020). Islamic financial literacy: Evidence from Jordan. *Transition Studies Review*, *27*(2), 109–123. https://doi.org/10.14665/1614-4007-27-2-009.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly: Management Information Systems*, *13*(3), 319–339. https://doi.org/10.2307/249008.

ElDeeb, M. S., Halim, Y. T., & Kamel, E. M. (2021). The pillars determining financial inclusion among SMEs in Egypt: service awareness, access and usage metrics and macroeconomic policies. *Future Business Journal*, *7*(1). https://doi.org/10.1186/s43093-021-00073-w.

Fauzi, A. A., & Suryani, T. (2019). Measuring the effects of service quality by using CARTER model towards customer satisfaction, trust and loyalty in Indonesian Islamic banking. *Journal of Islamic Marketing*, *10*(1), 269–289. https://doi.org/10.1108/JIMA-04-2017-0048

Fida, B. A., Ahmed, U., Al-Balushi, Y., & Singh, D. (2020). Impact of service quality on customer loyalty and customer satisfaction in Islamic banks in the Sultanate of Oman. *SAGE Open*, *10*(2). https://doi.org/10.1177/2158244020919517.

Ghani, E. K., Ali, M. M., Musa, M. N. R., & Omonov, A. A. (2022). the effect of perceived usefulness, reliability, and COVID-19 Pandemic on digital banking effectiveness: Analysis using technology acceptance model. *Sustainability*, *14*(18), 11248. https://doi.org/10.3390/su141811248.

Gurung, A. (2006). *Empirical investigation of the relationship of privacy, security and trust with behavioral intention to transact in e-commerce*. The University of Texas.

Hair Jr., J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, *1*(2), 107. https://doi.org/10.1504/ijmda.2017.10008574.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

Hair, J., Hollingsworth, C. L., Randolph, A. B., & Chong, A. Y. L. (2017). An updated and expanded assessment of PLS-SEM in information systems

research. *Industrial Management and Data Systems*, *117*(3), 442–458. https://doi.org/10.1108/IMDS-04-2016-0130.

Hammoud, J., Bizri, R. M., & el Baba, I. (2018). The impact of e-banking service quality on customer satisfaction: Evidence from the Lebanese banking sector. *SAGE Open*, *8*(3). https://doi.org/10.1177/2158244018790633.

Hansen, J. M., Saridakis, G., & Benson, V. (2018). Risk, trust, and the interaction of perceived ease of use and behavioral control in predicting consumers' use of social media for transactions. *Computers in Human Behavior*, *80*, 197–206. https://doi.org/10.1016/j.chb.2017.11.010

Hapsari, R. A., Maroni, M., Satria, I., & Ariyani, N. D. (2019). The existence of regulatory sandbox to encourage the growth of financial technology in Indonesia. *FIAT JUSTISIA: Jurnal Ilmu Hukum*, *13*(3), 271. https://doi.org/10.25041/fiatjustisia.v13no3.1739

Hassan, M. K., Rabbani, M. R., Moh'd Ali, M. A., Asad, M., & Ali, M. (2020). Challenges for the Islamic finance and banking in post COVID era and the role of fintech. *Journal of Economic Cooperation & Development*, *41*(3), 93-116.

Hobson, S. F., Anand, R., Yang, J., & Lee, J. (2011, September). Towards interoperability in municipal government: a study of information sharing practices. In *IFIP Conference on Human-Computer Interaction* (pp. 233-247). Springer, Berlin, Heidelberg.

Jawad, A., & Christian, K. (2019). Islamic banking and economic growth: Applying the conventional hypothesis. *Journal of Islamic Monetary Economics and Finance*, *5*(1). https://doi.org/10.21098/jimf.v5i1.1047

Ji, X., Wang, K., Xu, H., & Li, M. (2021). Has digital financial inclusion narrowed the urban-rural income gap: the role of entrepreneurship in China. *Sustainability*, *13*(15), 8292.

Jovanovic, M., Sjödin, D., & Parida, V. (2021). Co-evolution of platform architecture, platform services, and platform governance: Expanding the platform value of industrial digital platforms. *Technovation*. https://doi.org/10.1016/j.technovation.2020.102218

Kaur, S. J., Ali, L., Hassan, M. K., & Al-Emran, M. (2021). Adoption of digital banking channels in an emerging economy: exploring the role of in-branch efforts. *Journal of Financial Services Marketing*, *26*(2), 107–121. https://doi.org/10.1057/s41264-020-00082-w

Kaur, S., & Arora, S. (2021). Role of perceived risk in online banking and its impact on behavioral intention: trust as a moderator. *Journal of Asia Business Studies*, *15*(1), 1–30. https://doi.org/10.1108/JABS-08-2019-0252

Khan, M. A., & Alhumoudi, H. A. (2022). Performance of e-banking and the mediating effect of customer satisfaction: A structural equation model

approach. *Sustainability (Switzerland)*, *14*(12). https://doi.org/10.3390/su14127224

Khatoon, S., Zhengliang, X., & Hussain, H. (2020). The mediating effect of customer satisfaction on the relationship between electronic banking service quality and customer purchase intention: Evidence from the Qatar banking sector. *SAGE Open*, *10*(2). https://doi.org/10.1177/2158244020935887

Lee, S., & Lee, K. C. (2020). Comparative study of service quality on VIP customer satisfaction in internet banking: South Korea case. *Sustainability*, *12*(16), 6365. https://doi.org/10.3390/su12166365

Li, F., Lu, H., Hou, M., Cui, K., & Darbandi, M. (2021). Customer satisfaction with bank services: The role of cloud services, security, e-learning and service quality. *Technology in Society*, *64*(July 2020), 101487. https://doi.org/10.1016/j.techsoc.2020.101487

Lynn, M., & Brewster, Z. W. (2018). A within-restaurant analysis of changes in customer satisfaction following the introduction of service inclusive pricing or automatic service charges. *International Journal of Hospitality Management*, *70*, 9–15. https://doi.org/10.1016/j.ijhm.2017.11.001

Anwar, S. M, Junaidi, J., Salju, S., Wicaksono, R., & Mispiyanti, M. (2020). Islamic bank contribution to Indonesian economic growth. *International Journal of Islamic and Middle Eastern Finance and Management*, *13*(3), 519–532. https://doi.org/10.1108/IMEFM-02-2018-0071

Malar, D. A., Arvidsson, V., & Holmstrom, J. (2019). Digital transformation in banking: Exploring value co-creation in online banking services in India. *Journal of Global Information Technology Management*, *22*(1), 7–24. https://doi.org/10.1080/1097198X.2019.1567216

Mansour, W., Ajmi, H., & Saci, K. (2022). Regulatory policies in the global Islamic banking sector in the outbreak of COVID-19 pandemic. *Journal of Banking Regulation*, *23*(3), 265–287. https://doi.org/10.1057/s41261-021-00147-3

Mbama, Cajetan I., & Ezepue, P. O. (2018a). Digital banking, customer experience and bank financial performance: UK customers' perceptions. *International Journal of Bank Marketing*, *36*(2), 230–255. https://doi.org/10.1108/IJBM-11-2016-0181

Mbama, Cajetan Ikechukwu, Ezepue, P., Alboul, L., & Beer, M. (2018). Digital banking, customer experience and financial performance: UK bank managers' perceptions. *Journal of Research in Interactive Marketing*, *12*(4), 432–451. https://doi.org/10.1108/JRIM-01-2018-0026

Murthy, S. (2022). E-banking and customers' satisfaction in public and private sector banks In Karnataka: An empirical analysis. In *Journal of Positive School Psychology* (Vol. 2022). Retrieved from http://journalppw.com

Narastri, M., & Kafabih, A. (2020). Financial technology (fintech) di Indonesia ditinjau dari perspektif Islam. In *Indonesian Interdisciplinary Journal of Sharia Economics (IIJSE* (Vol. 2).

Nurhayati, N., & Sukesti, F. (2016). Peningkatan loyalitas nasabah bank syariah melalui peningkatan kualitas layanan dan kepuasan nasabah dengan variabel religiusitas sebagai variabel moderating (studi pada bank syariah di kota Semarang). *Economica: Jurnal Ekonomi Islam*, *7*(2), 141–153. https://doi.org/10.21580/economica.2016.7.2.1158

Nyarku, K. M., Kusi, L. Y., Domfeh, H. A., Ofori, H., Koomson, I., & Owusu, J. A. (2018). Moderating the service quality-customer loyalty relation through customer satisfaction, gender and banking status: Evidence from mobile money users in University of Cape Coast, Ghana. *International Journal of Academic Research in Business and Social Sciences*, *8*(6). https://doi.org/10.6007/ijarbss/v8-i6/4265

Owusu Kwateng, K., Osei Atiemo, K. A., & Appiah, C. (2019). Acceptance and use of mobile banking: An application of UTAUT2. *Journal of Enterprise Information Management*, *32*(1), 118–151. https://doi.org/10.1108/JEIM-03-2018-0055

Owusu, G. M. Y., Bekoe, R. A., Addo-Yobo, A. A., & Otieku, J. (2021). Mobile banking adoption among the Ghanaian Youth. *Journal of African Business*, *22*(3), 339–360. https://doi.org/10.1080/15228916.2020.1753003

Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005a). E-S-QUAL a multiple-item scale for assessing electronic service quality. *Journal of Service Research*, *7*(3), 213–233. https://doi.org/10.1177/1094670504271156

Purwanto, A., & Sudargini, Y. (2021). Partial least squares structural equation modeling (PLS-SEM) analysis for social and management research : A literature review. *Journal of Industrial Engineering & Management Research*, *2*(4), 114–123.

Rabbani, M. R., Ali, M. A. M., Rahiman, H. U., Atif, M., Zulfikar, Z., & Naseem, Y. (2021). The response of Islamic financial service to the COVID-19 pandemic: The open social innovation of the financial system. *Journal of Open Innovation: Technology, Market, and Complexity*, *7*(1), 85

Rabbani, M. R., Bashar, A., Nawaz, N., Karim, S., Ali, M. A. M., Rahiman, H. U., & Alam, M. S. (2021). Exploring the role of Islamic fintech in combating the aftershocks of COVID-19: The open social innovation of the Islamic financial system. *Journal of Open Innovation: Technology, Market, and Complexity*, *7*(2). https://doi.org/10.3390/joitmc7020136

Rahman, S. A., Tajudin, A., & Tajuddin, A. F. A. (2018). Determinant factors of Islamic financial literacy in Malaysia. *American Journal of Humanities and Social Sciences Research*, *2*(10), 125–132.

Rahmayati, R. (2021). Competition strategy in the Islamic banking industry: An empirical. *International Journal of Business, Economics and Social Development*, *2*(2), 65–71.

Rajini, N. S., Ramamoorthy, S., Radha Rammohan, S., Rajakumar, P. S., & Niveditha, V. R. (2020). Reliability of cloud services provided to non-banking financial institutions. *International Journal of Control and Automation*, *13*(2 Special Issue), 165–172.

Ramadonna, Y., & Aziz, Z. (2019). The effect of customer relationship management and customer value on customer satisfaction of services and its impact on customer loyalty in PT. BPR Rangkiang AUR. *Jurnal Menara Ekonomi: Penilitian Dan Kajian Ilmiah Bidang Ekonomi*, *5*, 103–115.

Ramesh, V., Jaunky, V. C., Roopchund, R., & Oodit, H. S. (2020). Customer satisfaction,loyalty and adoption of e-banking technology in Mauritius. *Advances in Intelligent Systems and Computing*, *1076*, 861–873. https://doi.org/10.1007/978-981-15-0947-6_82/COVER

Rantyanti, V. N. P., & Halim, R. E. (2020). The influence of service innovation and service quality to customer satisfaction and loyalty in banking industry. *European Journal of Molecular and Clinical Medicine*, *07*(01), 4026–4038.

Rashid H. (2020). Prospects of digital financial services in Bangladesh in the context of fourth industrial revolution. *Asian Journal of Social Sciences and Legal Studies*, 88–95. https://doi.org/10.34104/ajssls.020.088095

Rashid, M. H. U., Nurunnabi, M., Rahman, M., & Masud, M. A. K. (2020). Exploring the relationship between customer loyalty and financial performance of banks: Customer open innovation perspective. *Journal of Open Innovation: Technology, Market, and Complexity*, *6*(4), 1–19. https://doi.org/10.3390/joitmc6040108

Raza, S. A., Umer, A., Qureshi, M. A., & Dahri, A. S. (2020). Internet banking service quality, e-customer satisfaction and loyalty: the modified e-SERVQUAL model. *TQM Journal*, *32*(6), 1443–1466. https://doi.org/10.1108/TQM-02-2020-0019

Razis, G., & Mitropoulos, S. (2022). An integrated approach for the banking intranet/extranet information systems: the interoperability case. *International Journal of Business and Systems Research*, *16*(3), 330–357. https://doi.org/10.1504/IJBSR.2022.122531

Rigdon, E. E., Sarstedt, M., & Ringle, C. M. (2017). On Comparing Results from CB-SEM and PLS-SEM: Five Perspectives and five recommendations. *Marketing ZFP, 39*(3), 4–16. https://doi.org/10.15358/0344-1369-2017-3-4

Riyadi, S. (2021). The effects of image, brand and quality on customer loyalty of sharia banking. *Journal of Asian Finance, Economics and Business*, *8*(3), 1315–1325. https://doi.org/10.13106/jafeb.2021.vol8.no3.1315

Saad, A. Y. Q., & Alshehri. (2021). Measurements of Service Quality of Islamic Banking in Malaysia: A Non-Malaysian Customers' Perspective. *The Journal of Asian Finance, Economics and Business*, *8*(5), 413–420. https://doi.org/10.13106/jafeb.2021.vol8.no5.0413

Saifurrahman, A., & Kassim, S. (2021). *Islamic financial literacy for Indonesian MSMEs during COVID-19 Pandemic: Issues and importance*. *Journal of Islamic Finance*, *10*, 045-060.

Salem, M. Z., Baidoun, S., & Walsh, G. (2019). Factors affecting Palestinian customers' use of online banking services. *International Journal of Bank Marketing*, *37*(2), 426–451. https://doi.org/10.1108/IJBM-08-2018-0210

Setia, D., & Indra, A. P. (2022). Analysis of customer assessment of the switching and ease of reserving manual transactions to digital at Bank Syariah Indonesia KCP Medan Tomang Elok. *Jurnal Ekonomi, Manajemen, Bisnis Dan Akuntansi Review*, *2*(1), 157–162.

Setiawati, R., Nidar, S. R., Anwar, M., & Masyita, D. (2018). Islamic financial literacy: Construct process and validity. *Academy of Strategic Management Journal*, *17*(4), 1-12.

Shankar, A., & Jebarajakirthy, C. (2019). The influence of e-banking service quality on customer loyalty: A moderated mediation approach. *International Journal of Bank Marketing*, *37*(5), 1119–1142. https://doi.org/10.1108/IJBM-03-2018-0063

Soomro, Z. A., Shah, M. H., & Ahmed, J. (2016). Information security management needs more holistic approach: A literature review. *International Journal of Information Management*, *36*(2), 215–225. https://doi.org/10.1016/J.IJINFOMGT.2015.11.009

Stanisławski, R., & Szymonik, A. (2021). Impact of selected intelligent systems in logistics on the creation of a sustainable market position of manufacturing companies in Poland in the context of industry 4.0. *Sustainability*, *13*(7). https://doi.org/10.3390/su13073996

Tahar, A., Riyadh, H. A., Sofyani, H., & Purnomo, W. E. (2020). Perceived ease of use, perceived usefulness, perceived security and intention to use e-filing: The role of technology readiness. *Journal of Asian Finance, Economics and Business*, *7*(9), 537–547. https://doi.org/10.13106/JAFEB.2020.VOL7.NO9.537

Thaker, M. A. B. M. T., Amin, M. F. B., Thaker, H. B. M. T., & Pitchay, A. B. A. (2018). What keeps Islamic mobile banking customers loyal?. *Journal of Islamic Marketing*, *10*(2), 525-542.

Windasari, N. A., Kusumawati, N., Larasati, N., & Amelia, R. P. (2022). Digital-only banking experience: Insights from gen Y and gen Z. *Journal of Innovation and Knowledge*, *7*(2). https://doi.org/10.1016/j.jik.2022.100170

Ya', I. M., Tijjani, A., Babangida, M. I., & Yahaya, Z. (2022). Effect of internet banking efficiency and availability on customer trust among students of Bauchi State Tertiary Institutions. *International Journal of Scientific Research and Innovative Studies,* 8(5), 80-86.

Yusfiarto, R. (2021). The relationship between m-banking service quality and loyalty: Evidence in Indonesian Islamic banking. *Asian Journal of Islamic Management (AJIM)*, *3*(1), 23–33. https://doi.org/10.1108/AJIM.vol3.iss1.art3

Zhao, Q., Tsai, P. H., & Wang, J. L. (2019). Improving financial service innovation strategies for enhancing China's banking industry competitive advantage during the fintech revolution: A hybrid MCDM model. *Sustainability* , *11*(5). https://doi.org/10.3390/su11051419

Zouari, G., & Abdelhedi, M. (2021a). Customer satisfaction in the digital era: Evidence from Islamic banking. *Journal of Innovation and Entrepreneurship*, *10*(1). https://doi.org/10.1186/s13731-021-00151-x

This page is intentionally left blank