

Does Fintech Affect Consumer Retention in Islamic Banks? Empirical Evidence from OIC Countries

Sher Zaman Khan¹, Safer Ullah Khan¹, Eli Sumarliah^{2*}

¹Institute of Business Administration, Gomal University, Dera Ismail Khan, Pakistan

²Faculty of Engineering, Al-Ihya Islamic University of Kuningan, Indonesia

*Corresponding Author

E-mail: 2761514566@qq.com

Received
March 31, 2023

Revised
September 19, 2024

Accepted
September 24, 2024

Published
September 31, 2024

Abstract: FinTech is a trendy topic that has increased rapidly in Organization of Islamic Cooperation (OIC) countries, where Muslim consumers desire to use banking services in a Sharia conforming way. Thus, the research seeks to examine the effect of FinTech applied by Islamic banks of OIC countries on consumer retention. The Islamic banking system in OIC nations has mainly been in the foreground in carrying FinTech to its operations at the initial phase. Although consumers typically do not select Islamic banks for technologies, the study tries to investigate the effect of FinTech in maintaining consumers. Data collection uses the strata sampling method; online questionnaires are spread and collected from 317 customers of chosen banks in OIC countries. SPSS 25.0 analyzes statistical data via numerous examinations such as regression analysis, factor analysis, sample adequacy, and reliability analysis. The results show that compliance, consulting services, and payments of FinTech affect consumer retention. However, financing services considered vital in conventional banks do not significantly influence consumer retention. The research tries to help Islamic banks satisfy their consumers by using FinTech applications and helping FinTech firms enhance their finance amenities.

Keywords: Financial technology; FinTech; consumer retention; OIC countries; Islamic banking; Islamic bank

To cite this
article (APA
Style):

Khan, S. Z., Khan, S. U., & Sumarliah, E. (2024). Does fintech affect consumer retention in Islamic banks? Empirical evidence from OIC countries. *International Journal of Islamic Business Ethics (IJIBE)*, 9(2), 103-115.
<http://dx.doi.org/10.30659/ijibe.9.2.103-115>

INTRODUCTION

FinTech, an acronym for Financial Technology, is a developing field in the commercial sphere. FinTech's global financing persists stable, creating 8.7 billion USD capitalized through more than 300 transactions throughout Q4'17 (KPMG, 2017). Meanwhile, a quarter of the company promotes yearly international FinTech lending above 31 billion USD, equivalent to the amount obtained in 2016, although less than in 2015 as the wave of investments reached a detectable level. Besides, Citigroup predicts that American and European banks will remove 1.8 million employments as FinTech grows over the subsequent decade (Citigroup, 2016). In the meantime, overinvestment in the Britain FinTech segment is predicted to trigger another 0.1 million employments in Great Britain by 2020 (Innovate Finance, 2015).

FinTech has been a longtime supporter of the development and growth of the banking industry for the past forty years (Arner et al., 2015). FinTech employs the same term in a scheme called “Financial Services Technology Consortium” by Citigroup in 1866. It implies applying technology to deliver financial service. Nowadays, the word FinTech puts numerous items in one basket. Dissemination of information, provision of advice, persuasion of clients, collaboration with other companies, big data, digitization of services, and big data (Caria, 2017). There are two types of firms: GAFA (Google, Amazon, Facebook, Apple) and FinTech (KPMG, 2017). GAFA has switched from its primary services due to market turmoil. The analysis of historical FinTech is conducted by Arner et al. (2015), who classify FinTech based on its evolvement periods, as presented in Table 1.

Table 1. The classification of FinTech

Types	Period	Description
FinTech 1.0	1866– 1967	When financial services begin to be linked with technologies, it remains operated by humans, and not many firms are aware of the nature and importance of this link. This link causes the fast transfer of funds and deals globally and catalyzes internationalization.
FinTech 2.0	1967– 2008	The change of financial business characterizes it into the digital industry, and it can work successfully only by using digital communication and technology. Financial firms begin to invest in technologies to deliver advanced services and reduce the workload on their workers.
FinTech 3.0	2008– now	Novel commercial start-ups and hi-tech firms typify the current period. It provides financial resolution immediately to consumers instead of delivering support for banks technically and making cashless/e-money markets.

Financial crisis 2008 has risen the start-ups and shifting of consumers from central banking firms to non-central banking firms (Arner et al., 2015). A report is published to categorize FinTech development in different ways in the first two stages but indicates the last wave of 2008 that Arner et al. (2015) propose (BCG, 2016). Customer retention is described as the future direction for customers to keep using the service providers (Danesh et al., 2012). Customer retention is also viewed as a marketing objective to prevent customers from shifting to another competitor (Ramakrishnan, 2006).

LITERATURE REVIEW

FinTech refers to the application of technologies to deliver financial services. Leong and Sung (2018) define it as follows: “Any new and creative concepts that enhance financial services by suggesting technological resolutions based on to various business conditions, as the notions can also produce novel business frameworks or even novel industries.” FinTech is a sacred association of information technology and finance, which has evolved throughout the years (Arner et al., 2015). Arner et al. (2015) draw a larger perspective and identify financial technology introduced in the middle of the 9th century.

It is not easy to describe the exact meaning of a FinTech firm, but academicians such as Dorfleitner et al. (2017) explain FinTech as a consortium of many firms that deliver technical assistance for financial service. FinTech firms provide a talented digital financial ecosystem for collecting large amounts of data, developing economies of scale, and involving multiple

stakeholders (Mok and Saha, 2017). Since firms have different technologies, models, and products, they have some things in common, which are examined in many research works. These things include:

1. Digitization: Fintech firms adopt advanced technologies to meet new commercial and societal necessities. With the advent of mobile technologies, everything is digitized today; it includes financial services (Gimpel et al., 2017).
2. Information: Fintech firms rely on data and use the data to increase values and enhance their contributions and business frameworks (Caria, 2017). Those firms distribute data between operators via linked networks (Gimpel et al., 2017).
3. Financial innovation: FinTech firms combine financial goods and services, innovation, and technology (Caria, 2017). In FinTech 3.0, financial innovation has a significant influence in differentiating services, and the extent to which a firm can transform to deliver financial services immediately to its consumers determines the firm's expectations.
4. Customer-oriented: All features included in FinTech are solely aimed at providing improved solutions for its clients. Those FinTech firms were created to deliver simplicity, transparency, information and advice, ease of use, and convenience that banking platforms cannot provide.
5. Partnership: A firm can be either a technology firm that delivers digital services or a primary banking system that offers financial services. Providing both requires an alliance between technology companies and financial institutions. FinTech firms can integrate with other FinTech organizations to acquire more experience, gain new abilities and lessen costs synergistically.

FinTech offers several services, and these applications can be classified into different categories. The authors address four FinTech implementations from a previous study conducted by academicians Leong and Sung (2018). These academicians categorized all the advanced services that FinTech provides into four main classes. Their research describes critical FinTech applications that increase values to the business, as presented in Table 2.

Consumer retention demonstrates the consumer's repurchase intent on a company's service (Edward and Sahadev, 2011). These scholars use consumer retention as a gauge of their intent to remain loyal to the service providers. FinTechs succeed by adhering to a deep awareness of the clients. While older companies have lost their proximity, FinTech firms have developed through the continuous development of innovative, consumer-focused operations with strong differential value propositions (Reimer et al., 2017). Consumers are more likely to adopt convenient and seamless solutions, whether through banks or non-banks; thus, they are more tech-savvy and less devoted in the conventional sense. Banks must adhere to this transformation and provide nearly all banking services using technologies (Coetzee, 2018).

Table 2. FinTech Applications

	Applications	Services
1	Compliance	Abiding laws, standards, policies, rules, and regulatory technology (RegTech). *For Islamic banks: compliance with Shariah regulations and rules and information about Shariah-empowered goods and services.
2	Financing	Low-interest rate debt, alternative lending, financial inclusion, social cohesion, equity promotion, and crowdfunding.
3	Consulting	Management decisions, client supports, insurance services, asset management consultation, and investment advice.
4	Payment	Blockchain, ease of access, traceability, security, ease of payment electronic payment process, cashless payments.

The 2018 Islamic Financial Outlook reports that the industry's wealth achieved 2 trillion USD by the end of 2016 and is expected to attain 2.1 trillion USD by the end of 2017. The Islamic banking industry is expected to increase to 296 billion USD by 2019, equivalent to a market share of 18 percent of total insurance payments and 5.5 billion USD by 2019. Hassan (2017) reports that the Islamic financial business is currently reaching about 100 million consumers worldwide, but the prospective market is six times higher, and this gap can be bridged using FinTech.

Islamic banks use Sharia law as a significant pillar of dealing with customers; thus, one of the most vital success drivers that cause the development of Islamic banks is the commitment of these financial firms to the provisions of Sharia law in their whole transactions (Ghalaita, 2015). FinTech has been studied in Indonesian banks by Aisyah (2018), and it proposes that Islamic FinTech will make Islamic bank financial transactions more automated, convenient, and user-friendly, creating improved consumer loyalty and satisfaction.

This study intends to clarify the effect of FinTech on consumer retention in Islamic banks in the Organization of Islamic Cooperation (OIC) countries, as presented in Figure 1. Islamic banks are rapidly adopting FinTech, with OIC countries such as Malaysia, UAE, Indonesia, Turkey, and Saudi Arabia possessing high start-ups of FinTech (Dinar Standard, 2020). This research looks at two main issues:

1. How Islamic banking consumers perceive the usage of FinTech?
2. Does FinTech also assist Islamic banks in retaining their consumers?

Based on the above discussion, the authors can infer the following hypotheses:

H1: Compliance with Sharia laws impacts consumer retention in Islamic banks.

H2: The financing service of FinTech impacts consumer retention in Islamic banks.

H3: Consulting services of FinTech impacts on the consumer retention in Islamic banks.

H4: Payment services of FinTech impacts consumer retention in Islamic banks.

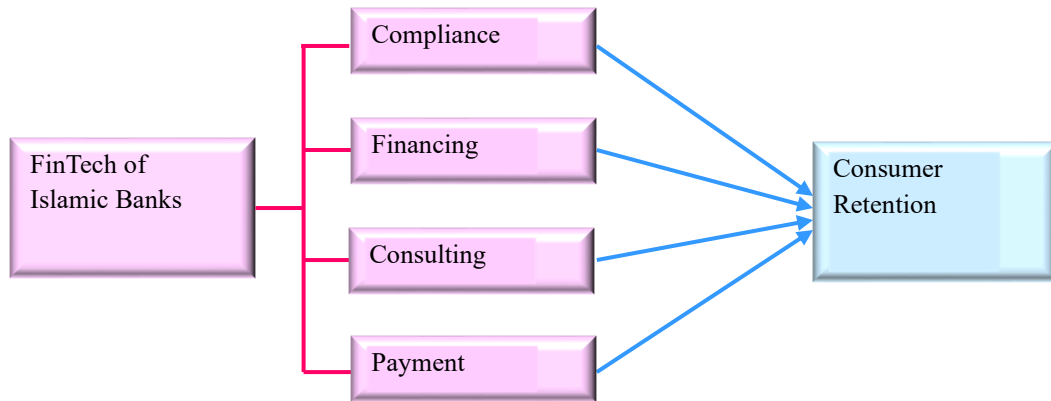


Figure 1. Research Framework

METHODOLOGY

This study develops a structured questionnaire to gain consumers' awareness of FinTech and their future outlook for banks. Four constructs of FinTech implementation are obtained from Leong and Sung (2018), i.e., compliance, financing, consulting, payment. Consumer retention is gauged using the studies of Lee et al. (2012) and Edward and Sahadev (2011). The survey uses measurement items signifying the intent to reconsider, word of mouth, and the likelihood of maintaining with the bank in the subsequent half-decade. The questionnaire is spread to 400 consumers of chosen Islamic banks in OIC countries by non-cross sectional method (convenience sampling); however, only 317 replies are returned with complete information and usable for further analysis. The survey was conducted during the period of September-November 2019. The research instrument was a six-section questionnaire written in the English language involving:

1. Demographic profile
2. Compliance
3. Finance
4. Consulting
5. Payment
6. Consumer retention

All the written inquiries uses a five-point Likert scale where 5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, or 1 = strongly disagree.

RESEARCH DESIGN

This study develops a structured questionnaire to gain consumers' awareness of FinTech and their future outlook for banks. Four constructs of FinTech implementation are obtained from Leong and Sung (2018), i.e., compliance, financing, consulting, payment. Consumer retention is gauged using the studies of Lee et al. (2012) and Edward and Sahadev (2011). The survey uses measurement items signifying the intent to reconsider, word of mouth, and the likelihood of maintaining with the bank in the subsequent half-decade. The questionnaire is spread to 400 consumers of chosen Islamic banks in OIC countries by non-cross sectional method (convenience sampling); however, only 317 replies are returned with complete information and

usable for further analysis. The survey was conducted during the period of September-November 2019. The research instrument was a six-section questionnaire written in the English language involving:

1. Demographic profile
2. Compliance
3. Finance
4. Consulting
5. Payment
6. Consumer retention

All the written inquiries uses a five-point Likert scale where 5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, or 1 = strongly disagree.

FINDING

Demographic Profile

Table 3 presents this study's demographic profile and delivers the complete report of 317 participants. All participants in this profile are from the Organization of Islamic Cooperation (OIC) countries; most of whom are from Indonesia (40%), followed by Malaysia (24%), Turkey (18%), UAE (11%), Saudi Arabia (3%), Pakistan (3%), and Kazakhstan (1%). Most participants are male, i.e., 52 percent, and only 48 percent of participants are female. Besides, 63 percent of the participants are married, and 37 percent of them are unmarried. According to the information, most participants are 40-49 years old (46%), pursued by 30-39 years old (22%), 20-29 years old (22%), and 50 or older (10%). Most participants employ the Internet for online banking instead of going directly to the banks.

Table 3. Profile of respondents

Demographic aspects	Frequency (N=317)	Percentage
Country of origin		
Indonesia	126	40%
Malaysia	75	24%
Pakistan	56	18%
Saudi Arabia	36	11%
Turkey	14	5%
UAE	11	3%
Gender		
Female	151	48%
Male	166	52%
Marital status		
Unmarried	117	37%
Married	200	63%
Age		
20–29	70	22%
30–39	71	22%
40–49	145	46%
50 and older	31	10%
Internet usage		
Mostly	161	51%
Often	117	37%
Sometimes	37	12%
Rarely	2	1%

Reliability Assessment

The reliability testing employs Cronbach's Alpha to measure the inner consistency of measurement items signifying every FinTech configuration and consumer retention, as presented in Table 4. The reliability of customer retention and every FinTech configuration is above 0.7, which is satisfactory (Cronbach, 1951). Therefore, the data of consumer retention and FinTech in the research is reliable and valuable for supplementary analysis.

Table 4. Results of reliability assessment

Configuration	Measurement Items	Cronbach's alpha
Compliance	4	0.8947
Financing	3	0.9333
Consulting	4	0.8714
Payment	6	0.9821
Consumer retention	9	0.9069
Joint scale	26	0.9536

Table 5 displays the correlation test among the entire autonomous variables. The regression model measurements cannot be fully computed if a perfect linear correlation exists between the two predictors. The variance inflation factor (VIF) in the research is tested at tolerance levels.

The framework has a multicollinearity issue only if the VIF value is above five and the tolerance value is below 0.1 or 0.2 simultaneously (Henseler et al., 2015). The authors do not find any multicollinearity issues in this research framework because every autonomous variable has an unchained relationship.

Table 5. Relationships among autonomous variables

Autonomous variable	Tolerance VIF	Collinearity statistics
Compliance	1.6889	0.6104
Financing	1.5092	0.6835
Consulting	1.8992	0.5433
Payments	1.5793	0.6530

Bartlett and KMO's Sample Acceptability Tests

The authors use Bartlett and Kaiser-Meyer-Olkin's (KMO)'s examinations to test the sampling acceptability of the study; Table 6 presents the results. Bartlett's sphericity test verifies the substantial disparities in the possessions of the correlation matrix and identity matrix. When the test yields the likelihood value below 0.05, it signifies the substantial disparities in the correlation matrix and identity matrix, which is anticipated (Leech et al., 2005). Table 6 displays that the value of Bartlett's test is significant at 0.0000, signifying that this research's sampling data is acceptable for factor evaluation (Bartlett, 1954). The KMO value for the entire items is 0.9171, which is 91.71 percent, denoting that this study's sample acceptability is adequate contrasted to 0.5, which is 50 percent of the criterion (Leech et al., 2013).

Table 6. Bartlett and KMO's testing results

Bartlett's test of sphericity	Sig	0.0000
	df	330
	Approx, chi-square	8.1989
Kaiser-Meyer-Olkin gauge of sampling acceptability		0.9171

Factor Assessment

Factor assessment is employed to reduce factors to a similar structure and to validate the framework. This study uses principal component analysis with Varimax turnover. Five item groups are classified from nine consumer retention-related items and seventeen FinTech-related items. As shown in Table 7, the factor loading values exceed 0.50 for all measurement items. For example, the values of FinTech-related items are as follows: (a) Compliance items (CMP1, CMP2, CMP3, CMP4) are 0.6744, 0.7668, 0.5931, and 0.6612, respectively, (b) Financing items (FNC1, FNC2, FNC3) are 0.7779, 0.7668, and 0.7739, respectively, (c) Consulting items (CSL1, CSL2, CSL3, CSL4) are 0.7556, 0.7119, 0.7932, and 0.5779, respectively, d) Payment items ((PYM1, PYM2, PYM3, PYM4, PYM5, PYM6) are 0.9313, 0.9272, 0.8308, 0.9608, 0.8582, and 0.7373, respectively. These values are substantial and reasonable because factor loading values > 0.5. Besides, the values of Consumer retention--related items (CRT1 to CRT9) also vary from 0.6388 to 0.8450. These values represent great factor loading values (> 0.5), which are universally regarded the significance in a statistical examination, implying robust intervariable associations within the hypothetical framework (Kaiser, 1974).

Table 7. Results of Factor Assessment

Measurement Items	CMP	FNC	CSL	PYM	CRT
<i>FinTech-related items</i>					
Compliance					
CMP1	0.6744				
CMP2	0.7668				
CMP3	0.5931				
CMP4	0.6612				
Financing					
FNC1		0.7779			
FNC2		0.7668			
FNC3		0.7739			
Consulting					
CSL1			0.7556		
CSL2			0.7119		
CSL3			0.7932		
CSL4			0.5779		
Payment					
PYM1				0.9313	
PYM2				0.9272	
PYM3				0.8308	
PYM4				0.9608	
PYM5				0.8582	
PYM6				0.7373	
<i>Consumer retention-related items</i>					
CRT1					0.7658
CRT2					0.7485
CRT3					0.6815
CRT4					0.7262
CRT5					0.7272
CRT6					0.6754
CRT7					0.8450
CRT8					0.6388
CRT9					0.7668
Note: CMP=Compliance; Financing=FNC; CSL= Consulting; PYM=Payment; CRT=Consumer retention					

Regression Assessment

Table 8 displays the findings of a regression assessment where compliance, consulting services, and payments significantly affect consumer retention in OIC countries' Islamic banks and consequently accept hypotheses H1, H3, and H4. These findings are in line with the outcomes of earlier publications (Afroze & Rista, 2022; Negassa & Japee, 2023; Vakulenko et al., 2022).

On the other hand, autonomous variable of financing via FinTech does not significantly influence consumer retention (p-value=0.2356, which is >0.01 or >0.05), and therefore, reject H2. This outcome is not in line with the finding of Ilyas et al. (2024). There are two possible

reasons regarding this outcome. First, among the greatest consumer retention issues confronted by companies is the intense market competition. Consumers have abundant choices, and firms should present exceptional services to maintain consumer engagement (Vizury, 2023). Thus, financing service alone will not affect customers to keep coming back for the usage of FinTech. Second, this study was conducted before the COVID-19 outbreak in late 2019 and early 2020 when the number of digital financial systems and other digital tools started to be used very massively due to lockdown restrictions in almost all parts of the world (Ozili et al., 2024) which formed a ‘digital habit’ until the current post-pandemic era (Sumarliah et al., 2021; 2022a; 2022b). Moreover, the assessment reveals that 29.4 percent of the data matches the framework, signifying that the data is good and that FinTech implementation alone cannot measure customer retention. Numerous other factors can also be measured, e.g., Sharia subjects associated with consumers retention at Islamic banks in OIC countries, banking image, consumer needs, product design, profits, and return on investment. Overall, Table 8 shows that the strongest predictor of consumer retention in Islamic banks in OIC countries is the compliance of FinTech with regulations ($\beta = 0.2925$), followed by consulting services ($\beta=0.1666$), and payment ($\beta=0.1493$).

Table 8. Regression Analysis

Autonomous variable	β	p-value	t-value
Compliance	0.2925	0.0000**	4.8220
Financing	0.0691	0.2356	1.1980
Consulting	0.1666	0.0102*	2.5810
Payment	0.1493	0.0122*	2.5786

Notes: Significant at: * p -value < 0.05, **p-value < 0.01, $R^2 = 0.294$, adjusted $R^2 = 0.285$. Contingent variable: consumer retention.

DISCUSSION

This study's findings revealed that compliance, consulting services, and payments significantly affect consumer retention in OIC countries' Islamic banks. These findings are consistent with the outcomes of earlier studies (Afroze & Rista, 2022; Negassa & Japee, 2023; Vakulenko et al., 2022). On the other hand, financing via FinTech does not significantly influence consumer retention, which does not correspond to the finding of Ilyas et al. (2024). The possible reasons are that financing service alone will not affect customers to keep coming back for the usage of FinTech, and at the time of the survey, the sample was not yet as familiar with digital technology in the financial system as those during and post-COVID-19 pandemic.

The convenience and ease of payments for Islamic banking consumers increase their satisfaction and last for a long time. The introduction of these services also helps to take advantage of other traditional banks' services, increasing consumer satisfaction. Consumers will not select Islamic banks for such services, but their existence creates a competitive advantage over other banks. As the industry shifts to a cashless economy, consumers will select the banks which provide such services and work with other stakeholders for further innovation. Consumers of Islamic banks will always favor capitalizing on Sharia-empowered investments and equities. FinTech provides an app that allows Islamic banks to notify and remind their consumers of novel Islamic investment goods and services. It will aid in allocating finances to

these clients in economies that might otherwise have been unused. Such applications help Islamic banking clients to capitalize money in Sharia-based investments and stocks since Islamic capital markets are also aligned with Islamic banks.

Compliant with Sharia's regulations for products and services provided by Islamic banks is a significant challenge. Some Islamic finance with innovative goods and services flow to Western goods. Islamic banking consumers are typically very concerned that a product is in rigorous compliance with Sharia regulations and laws. The information delivered by the banks will help consumers comprehend the functioning of commodities and thus enhance the level of consumer retention at the banks. In Islamic finance, financing and crowdfunding are not yet very trendy; thus, it may need time for consumers to comprehend this notion. This app is also suitable for new entrepreneurs and people in business looking to increase money. Therefore, at this stage, FinTech finance applications are not very important to the client's retention.

CONCLUSION

The research is directed to examine the effect of a much-renowned FinTech on Islamic banking consumer retention in OIC countries. FinTech uses four main applications: compliance, financing, consulting, and payment. The research surveyed 317 Islamic banking consumers revealed that compliance, consulting, and payments affect consumer retention, while FinTech's financial applications have no significance in consumer retention. The study provides practical implications that aid Islamic banks in determining which fields of FinTech they are focusing on and where they need further improvements. The survey is possibly generalized to all banking industries, but the findings can also apply to conventional banks.

This study's findings provide several implications for theory and practice. Regarding theoretical implications, the results added novel insights to the existing literature by (1) supporting previous studies in other developing nations regarding the significant influences of compliance, consulting, and payments of FinTech on consumer retention, and (2) delivering a different outcome regarding the insignificant influence of financing aspect on consumer retention. These outcomes enrich the existing body of literature in financial system discipline.

Regarding practical implications, the findings provide managers in the FinTech industry with novel insights regarding factors that influence consumer retention for FinTech products and services. Managers should focus on strengthening the aspects of compliance, consulting, and payments to entice consumers and keep them engaged in using companies' FinTech offerings. As the competition in the FinTech market is getting fiercer, managers should encourage unique and innovative products and services for customers to maintain their engagement with companies' businesses.

Limitations and Future Studies

The survey was completed online by the participants, leaving no room for face-to-face in-depth interviews. Consumers are possibly not as familiar with FinTech services as indicated in the survey. Future studies can use a qualitative research method to obtain more personal and detailed information from consumers. Also, further studies can be conducted by testing financial performance and consumer satisfaction with more sophisticated FinTech applications. FinTech's impacts on traditional banking operations can also be compared and examined in

future research. Finally, qualitative or longitudinal studies can be conducted in future research to enrich the findings.

REFERENCES

- Afroze, D., & Rista, F. I. (2022). Mobile financial services (MFS) and digital inclusion—a study on customers’ retention and perceptions. *Qualitative Research in Financial Markets*, 14(5), 768-785.
- Aisyah, M. (2018). Islamic bank service quality and its impact on Indonesian customers’ satisfaction and loyalty. *Al-Iqtishad Journal of Islamic Economics*, 10 (2), 367–388.
- Arner, D.W., Barberis, J., & Buckley, R.P. (2015). The evolution of FinTech: a new post-crisis paradigm. *Geo. J. Int’l L.*, 47(1), 1271.
- Bartlett, M.S. (1954) A note on the multiplying factors for various χ^2 approximations. *Journal of the Royal Statistical Society. Series B (Methodological)*, 16(1), 296–298.
- Caria. (2017). *FinTech: An Explorative Study into the Characteristics of their Business Models*, Working Paper, April, Vrije Universiteit Amsterdam.
- Citigroup. (2016). *Digital Disruption: How FinTech is Forcing Banking to a Tipping Point*. Retrieved from <http://www.disruptivefinance.co.uk/2016/04/01/how-fintech-is-forcing-banking-to-a-tippingpoint-citi-report/>.
- Coetzee, J. (2018). Strategic implications of FinTech on South African retail banks. *South African Journal of Economic and Management Sciences*, 21(1), 11.
- Cronbach, L.J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297–334.
- Danesh, S.N., Nasab, S.A., & Ling, K.C. (2012). The study of customer satisfaction, customer trust, and switching barriers on customer retention in Malaysia hypermarkets. *International Journal of Business and Management*, 7(7), 141.
- DinarStandard. (2020). *State of the Global Islamic Economy 2019/20 Report*. Retrieved 08 20, 2020, from Salaam Gateway: <https://www.salaamgateway.com/specialcoverage/SGIE19-20#:~:text=The%202019%2F20%20State%20of,faith%2Dinspired%20ethical%20consumption%20needs>
- Dorfleitner, G., Hornuf, L., Schmitt, M., & Weber, M. (2017). Definition of FinTech and description of the FinTech industry. *FinTech in Germany*, 5–10, Springer, Cham.
- Edward, M., & Sahadev, S. (2011). Role of switching costs in the service quality, perceived value, customer satisfaction, and customer retention linkage. *Asia Pacific Journal of Marketing and Logistics*, 23(3), 327–345. DOI:10.1108/13555851111143240.
- Ghalaita, J.B. (2015). *The rise of the Islamic economy*. Retrieved from <https://www.worldfinance.com/banking/the-rise-of-the-islamic-economy>
- Gimpel, H., Rau, D., & Röglinger, M. (2017). Understanding FinTech start-ups – a taxonomy of consumer-oriented service offerings. *Electronic Markets*, 28(1), 1–20.
- Henseler, J., Ringle, C.M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135.
- Innovate Finance (2015) *Innovate Finance Manifesto: U.K. 2020*. Retrieved from <https://appgfintech.org.uk/news/innovate-finance-manifesto-uk-2020/>.

- Kaiser, H.F. (1974). An index of factorial simplicity. *Psychometrika*, 39(1), 31–36.
- KPMG (2017) *The Pulse of FinTech Q4 2016: Global Analysis of Investment in FinTech*. Retrieved from <https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2017/02/pulse-of-fintech-q4-2016.pdf>.
- Leech, N., Barrett, K., & Morgan, G.A. (2013). *SPSS for Intermediate Statistics: Use and Interpretation*. Routledge, Taylor & Francis Group, New York.
- Leong, K., & Sung, A. (2018). FinTech (financial technology): what is it and how to use technologies to create business value in FinTech way?. *International Journal of Innovation, Management, and Technology*, 9(2), 74–78.
- Li, M., Green, R.D., Farazmand, F.A., & Grodzki, E. (2012). Customer loyalty: influences on three types of retail stores' shoppers. *International Journal of Management and Marketing Research*, 5(1), 1–19.
- Mok, A., & Saha, R. (2017). Strategic risk management in banking. *Deloitte Inside Magazine*. Retrieved from https://www2.deloitte.com/content/dam/Deloitte/lu/Documents/financial-services/Banking/lu_inside_issue14_strategic_risk_management.pdf (accessed 2 October 2018).
- Negassa, G. J., & Japee, G. P. (2023). The effect of bonding, responsiveness and communication on customer retention: the mediating role of customer satisfaction. *Journal of Relationship Marketing*, 22(2), 115-131.
- Ozili, P. K., Mhlanga, D., Ammar, R., & Fersi, M. (2024). Information effect of fintech and digital finance on financial inclusion during the COVID-19 pandemic: *Global evidence*. *FinTech*, 3(1), 66-82.
- Ramakrishnan, K. (2006). *Customer Retention: The Key to Business Performance*. Retrieved from <http://www.estrategicmarketing.com/smNov-Dec2/art11.html> (accessed 20 June 2018).
- Sumarliah, E., Khan, S. Z., & Khan, R. U. (2022b). Modest wear e-commerce: examining online purchase intent in Indonesia. *Research Journal of Textile and Apparel*, 26(1), 90-108.
- Sumarliah, E., Khan, S. U., & Khan, I. U. (2021). Online hijab purchase intention: the influence of the Coronavirus outbreak. *Journal of Islamic Marketing*, 12(3), 598-621.
- Sumarliah, E., Li, T., & Wang, B. (2020). Hijab fashion supply chain: a theoretical framework traversing consumers' knowledge and purchase intention. *MATEC Web of Conferences*, 308, 04004. DOI:10.1051/mateconf/202030804004
- Sumarliah, E., Usmanova, K., Mousa, K., & Indriya, I. (2022a). E-commerce in the fashion business: the roles of the COVID-19 situational factors, hedonic and utilitarian motives on consumers' intention to purchase online. *International Journal of Fashion Design, Technology and Education*, 15(2), 167-177.
- Vakulenko, Y., Arsenovic, J., Hellström, D., & Shams, P. (2022). Does delivery service differentiation matter? Comparing rural to urban e-consumer satisfaction and retention. *Journal of Business Research*, 142, 476-484.
- Vizury (2023). *Top 5 Customer Retention Challenges and their Solutions*. Retrieved from <https://vizury.com/blog/customer-retention-challenges>