

The Influence of Knowledge, Service Quality, Trust, and Perceived Value on Sharia Fintech Customer Satisfaction

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Abstract. *The existing fintech in Indonesia is changing the landscape of the global financial sector significantly. Using SEM-PLS analysis, this study aims to determine the effect of knowledge, service quality, trust, and perceived value on customers' satisfaction of sharia fintech. Using the sharia fintech ALAMI customers, this study finds that knowledge, trust, quality of services, and perceived behavior have a positive significant influence on ALAMI's customer satisfaction. This could be attributed to the easy access provided by fintech.*

Keywords: *Sharia Fintech; Knowledge; Perceived Value; Service Quality; Trust; Customer Satisfaction*

Abstrak. *Fintech yang ada di Indonesia mengubah lanskap sektor keuangan global secara signifikan. Dengan menggunakan Analisa SEM-PLS, penelitian ini bertujuan untuk mengetahui pengaruh pengetahuan, kualitas layanan, kepercayaan, dan nilai yang dipersepsikan terhadap kepuasan nasabah fintech syariah. Dengan fokus pada nasabah fintech syariah ALAMI, penelitian ini menemukan bahwa pengetahuan, kualitas layanan, kepercayaan, dan nilai yang dipersepsikan berpengaruh positif signifikan terhadap kepuasan nasabah fintech syariah ALAMI. Hal ini dapat dikaitkan dengan kemudahan akses yang disediakan oleh fintech.*

Kata kunci: *Fintech Syariah; Pengetahuan; Nilai Yang Dipersepsikan; Kualitas Layanan; Kepercayaan; Kepuasan Nasabah*

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Intriduction

Digital technology in Indonesia is marked by the increasing use of the internet by the public. According to the Indonesian Internet Service Providers Association (Asosiasi Penyedia Jasa Internet Indonesia/APJII), there has been an increase in internet users from 2019 to the second quarter of 2020, rising to 873.7 percent of the population, or the equivalent of 196.7 million users (APJII, 2020). Global Digital Report Data 2021, the number of internet consumers in Indonesia has reached 202.6 million people or more than 73.7 percent. Therefore, the activities of modern society today tend to be more intensive in using technology to meet their needs. Due to the presence of technology, humans feel their activities are more efficient.

The growth of global fintech investment is extraordinary. Fintech is a startup business that provides the same services as banks. The existing progressive technology system creates an efficient and practical impact on financial services, one of which is the regular feature of fintech (Lee and Shin 2018). The existing fintech in Indonesia changes the world landscape in the global financial sector significantly. There are currently more than 12,000 fintech startups globally, including 93 Islamic fintech, with fintech investments reaching \$57.9 billion in the first half of 2018 (DinarStandard, 2018). This increased from \$38.1 billion in 2017 to \$135.5 billion in 2019 (KPMG, 2019).

Indonesia has a significantly high level of development in the fintech industry (after China). This is because the fintech is intended to facilitate more loans for small and medium enterprises (MSMEs) throughout the Indonesian archipelago. Nowadays, fintech in Indonesia has developed rapidly. There is 152 fintech, including payment services, wealth management, and Peer-to-Peer (P2P) lending (Bank Indonesia-BI2019; Financial Services Authority-OJK 2019). In February 2019, the national P2P lending transactions volume reached IDR28 trillion (US\$2 billion). This amount represents more than 700 percent growth in just one year, from IDR3.5 trillion (US\$251 million) in February 2018 (OJK, 2019). Based on OJK (Financial Service Authority), fintech in Indonesia is divided into several sectors: financial planning, crowdfunding, lending, and payment aggregators. Fintech in global Islamic finance is currently more dominant in the form of crowdfunding platforms. Besides that, there are investment account platforms (IAP) and Islamic Robo-advisors (Gifr, 2017).

Sharia fintech is a combination of innovation between finance and technology in financial and investment services based on the values of Islamic principles.

Although sharia fintech is a new type of innovation, its development is quite rapid. This is because the emergence of sharia fintech is in line with changes in increasingly advanced technology. Thus, human lifestyles also change according to the times (Irma et al. 2018). Sharia Fintech in Indonesia started to get attention from the government with the issuance of a fatwa of the National Sharia Council of the Indonesian Ulama Council (DSN-MUI) Number 117/DSN-MUI/II/2018 regarding Fintech Services, P2P lending. P2P lending is a financial service that brings together investors or financiers (lenders) with prospective debtors (loan recipients) directly through the internet (online). The terms and process for applying for a loan at P2P lending are relatively simple, easy, and generally without collateral. This can be an alternative for people with difficulties accessing bank loans (Dupla, 2020).

P2P lending business actors in Indonesia are members of the Indonesian Joint Funding Fintech Association (AFPI). Letter No. S-5/D.05/2019 AFPI appointed OJK as Indonesia's official association of information technology-based money lending and borrowing service providers. OJK data in 2020 shows that the total number of fintech lending loans reached IDR155.9 trillion or 191.07% since its establishment. In terms of total borrower transactions, there were 43,561 million accounts or 246.23%, and the accumulated total borrower accounts were recorded as 43,561 million entities or 134.59%. The recorded lender accounts were 713,033 entities, or 45.09% (OJK, 2020).

The relatively high growth of P2P lending and the increasing value of technology-based financial services transaction value will be accompanied by a fairly high tax potential. In this case, the business entities consist of financing companies outside the banks and non-bank financial institutions established to carry out financing activities with licenses from the Minister of Finance.

The majority of Indonesian people are Muslims and demand sharia based-financial transactions. Among them are better fulfilled through sharia-based fintech, as P2P lending services are considered convenient, efficient, flexible and empowering. Thus, sharia fintech must adopt and use sharia contracts, such as *murābahah* (cost plus financing), *mushārahah* (joint ventures), *mudārahah* (capital and labor partnerships) and other sharia transactions. The main issue in the sharia fintech, nationally and globally, is the framework for experts' supervision role to ensure sharia compliance in the fintech industry.

Previous research mostly focuses on the perceived value of religiosity and satisfaction. Islamic fintech is more than those issues. More discussions are needed with a wider focus. This is to ensure customer satisfaction and more benefits from

implementing Islamic law. Therefore, this research aims to analyze how customer satisfaction in sharia P2P lending is influenced by knowledge, service quality, trust, and perceived value.

Literature Review

Sharia Fintech

According to the National Digital Research Center (NDRC), Financial Technology is a term commonly used to refer to innovation in financial services with a touch of modern technology (Rinaldi, 2020). A fintech is a transaction tool that enables the public to easily find financial products, improve financial literacy, and provide services such as MSME loans in financial institutions.

Sharia-based fintech has been developed. The difference between the sharia-based fintech and the general one is that the sharia-based fintech avoids the involvement of interests or usury prohibited by Islam. The startup Beehive started the first sharia fintech in Dubai in 2004. The financing provided for the first time used a low-cost P2P lending marketplace system for MSMEs. Meanwhile, in 2014, sharia fintech from Singapore managed to dominate Indonesia's market share with the crowdfunding system and already has sharia financial services. The first Indonesian sharia fintech start-up in 2017 to get a halal certificate from the MUI was Paytren. To date, there have been many sharia fintech companies in Indonesia, with 37 local companies registered as members of the Indonesian Islamic Fintech Association (AFS), such as Paytren, Star-Zakat, SyarQ, Investments and so on.

Sharia fintech combines existing finance and technology innovations that facilitate the transaction and investment processes based on sharia values (Mukhlisin, 2019). However, the issue in Indonesian sharia-based fintech is the framework of experts' role in supervising the sharia compliance of the fintech industry.

Peer to Peer Lending

Peer to Peer (P2P) markets first emerged in developed countries with more efficient financial sectors, mature credit core systems and more effective law enforcement than emerging markets (Jiang et al. 2018). In Indonesia, the solution to meet the public's financial needs is to use P2P lending services. P2P lending results from a decline in public trust in the formal financial system (Abubaka and Handayani 2018). Practical P2P lending in Indonesia is regulated in the law on fintech P2P lending providers based on Financial Services Authority Regulation (PJOK) 77/PJOK.01/2016 (OJK, 2016).

P2P investment and social lending refer to borrowing between individuals through online platforms seeking profit without intermediary financial institutions, although traditional institutions can participate as lenders. P2P lending is person-to-person lending, also known as P2P lending. P2P lending is operated digitally through a platform with requests that the investment committee evaluates before the investment is made (Piskin & Ku, 2019).

On the other hand, the initial objective of P2P lending platforms was to provide funds for small and medium enterprises (SMEs) as gifts. The Islamic P2P lending model is very different from the interest-bearing credit model in conventional banking. There are alternative payment schemes in the form of sharia-based loans and profit-sharing plans (Hudaefi, 2019). Several aspects need to be considered for the investment and credit process to become sharia. First, a financing product for trade, physical goods or services must be based on a profit-and-loss partnership. Second, transactions must not be completed before funding, and a trade agreement must be based on legal force. Third, the loan process, borrowing costs, interest on the loan amount, and loan flexibility affect obtaining loan funds (Rosavina et al., 2019). In addition, there is an immediate unsecured process, loan models, and regular loan application information that includes loan size, maturity and purpose, percentage of loans funded, offer days used, credit rating measures and interest rates. Platform services include calculating interest rates and payment terms, creating written documents and disbursing funds.

Trust, Knowledge, Service Quality, Perceived Value

Trust is a reliable belief or promises that a person will fulfill his/her obligations in an exchange relationship (Chesin et al., 2018). Trust refers to a psychological state consisting of an individual's intention to accept vulnerability based on positive expectations from the intentions or behavior of others (Zhang et al., 2018).

Conceptualization of perceived value is a customer's overall assessment of the usefulness of a product based on perceptions of what is earned in exchange for what is paid (Jin & Xu, 2020). The perceived value is good when the benefits outweigh the sacrifices in obtaining the product or service (Abror et al., 2020). Thus, the perceived value of the customer's assessment is the benefits of the product or service compared to the cost of the product or service and the perceived functional value and spiritual value (Abror et al. 2020).

Satisfaction is a condition in which a product will meet customer expectations. Customer satisfaction refers to the customer's pleasure or disappointment after

comparing the product or service's expectations and performance (Miranda et al., 2018). Customer satisfaction is the overall customer perception of the performance of a product or service (El-Adly, 2019).

Knowledge is a customer choice or theory that can explain a customer's act based on their knowledge (Hansen, 2018). Customer financial knowledge refers to the collection of facts and principles (information and understanding) that he/she collects (stored in memory) about finance (Page & Uncle, 2020). Knowledge can be made subjectively and objectively. Subjective knowledge refers to the individual's perception of his/her knowledge, while objective knowledge refers to absolute knowledge as measured by objective standards (Alba et al., 2020).

Knowledge competence in the use of services refers to personal knowledge regarding the understanding and utilization of information technology. Since the level of knowledge on the protection of personal information affects individuals' intentions and compliance behavior, information security is important for protecting personal information and securing services. In general, knowledge about individual services is created through experience and learning (Lim, 2018). For example, knowledge of cellular electronic payment systems positively affects the ease of system utilization (Kim et al., 2019).

Quality is the totality of features and characteristics of a product or service that depend on its ability to meet needs. The modern concept of quality is the existence of features in accordance with the goal, namely shifting the evaluation of quality from the provider to the customers. Therefore, service providers must understand the attitudes and perspectives of customers to provide quality services. Now that customers are becoming increasingly sensitive to quality (modern quality concept), the ultimate goal of quality is meeting customer needs and exceeding customer expectations (Manshor A.T et al., 2019). The conceptual definition of service quality is the gap between customer expectations for service and their perceptions (ideal quality, service met, failed, and exceeded expectations) about the service experience. The position quality of service performed can only be assessed during and after consumption.

Hypothesis

H1: Knowledge affects customer satisfaction

H2: Service quality affects customer satisfaction

H3: Trust affects customer satisfaction

H4: Perceived value affects customer satisfaction

Methods

This research was conducted in July 2022 at PT. Alami Fintech Sharia, located at Plaza 89, Kavling X7, H.R. Rasuna Said No. 6, Setiabudi, South Jakarta, Indonesia. This study uses purposive sampling to select samples with certain considerations (Sugiyono, 2018). The samples were taken from ALAMI customers already using the ALAMI platform aged 20-60 years.

This study employs a questionnaire, with each question calculated using an ordinal scale and given a scale of 1 (one) to 5 (five). Using 23 indicators, this study involved 230 respondents. The number of samples was determined based on Hair et al (2018).

After the data collection, each question is tested using a validity test using the Pearson correlation method. These test criteria can be declared valid if $r_{count} > r_{table}$. If each question and all variables have a value of $r_{count} > r_{table}$ (Priyatno 2012), the value of the r_{table} for $n = 105$ at the 5% significance level is 0.190. After that, it was tested using a reliability test with Cronbach's Alpha method. This test can be reliable if each variable has a Cronbach's Alpha value > 0.6 (Hair et al. 2018). Structural equation modeling (sem) analysis with the Partial Least Squares (PLS) approach was applied to see the direct influence between variables or latent variables on sharia fintech customer satisfaction. This analysis serves to test the hypothesis of this study. The variables used are divided into latent and manifest variables.

Results and Discussion

Characteristics of Respondents

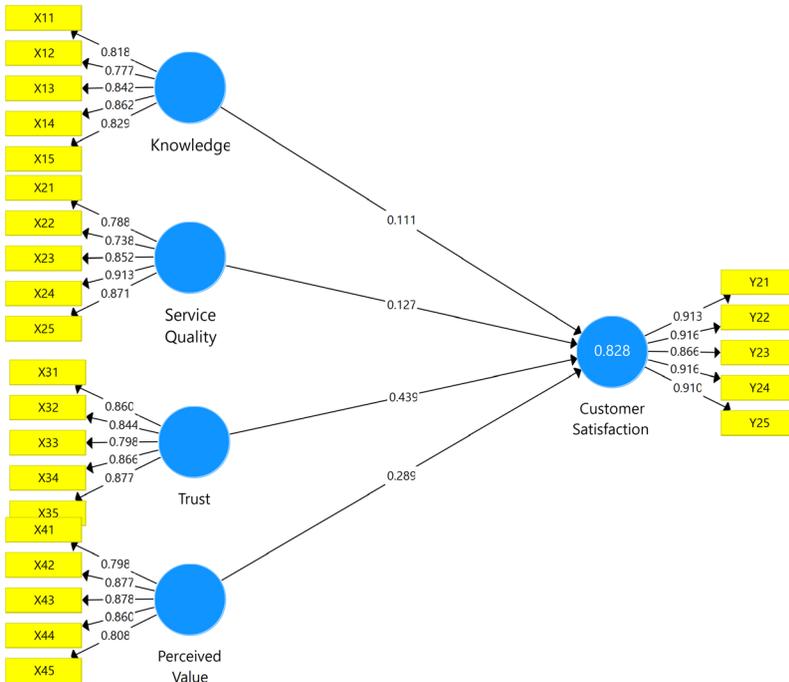
The following is a summary of the characteristics or profiles of respondents who meet the criteria. Based on the summary, male respondents are more dominant (77.4%) compared to female respondents (22.6%). The majority of respondents are of mature ages, with the majority aged >30 years (68.9%), followed by those aged 26-30 years (18.6%). Most of them are Muslims, with a percentage (of 96.9%). This is in line with the object of this study, which is sharia fintech.

Based on income level, most respondents have an average income of more than IDR5,000,000 (74.1%), followed by those with IDR2,000,000-IDR5,000,000 (17.7%). This shows that customers of sharia fintech products have relatively decent and sufficient income for living expenses.

Evaluation of the Measurement Model (Outer Model)

Parameter evaluation of the measurement model (outer model) uses the validity test of the convergent. The convergent validity test is from the value of the loading factor and Average Variance Extracted (AVE). It is known that the measurement model in this study has met the standard values on the outer model criteria. This shows that this model has good validity and reliability. The validity value is based on the loading factor value > 0.70 . Based on the data processing results with the help of Smart PLS software, the results presented in the image below show that several indicators in this study have a loading factor value > 0.70 .

Figure 1. Diagram of Path Coefficient and Hypothesis Test



Meanwhile, the value of composite reliability (ρ_c), Cronbach's Alpha, indicator reliability, and average variance extracted (AVE) can be seen in Table 1 below. It can be seen that all variables have very good internal consistency and stability indicators.

Table 1. Construct Reliability and Validity

Variable	<i>Cronbach's Alpha</i>	<i>Composite Reliability (ρc)</i>	<i>Average Variance Extract (AVE)</i>
Knowledge	0,884	0,915	0,683
Service Quality	0,890	0,900	0,697
Customer Trust	0,903	0,906	0,721
Perceived Value	0,899	0,926	0,714

Evaluation of the Structural Model (Inner Model)

The structural model test is by looking at the R-Square value. This stage aims to analyze the level of estimation between independent variables (knowledge, service quality, trust, perceived value) on the dependent variable (customer satisfaction). According to Ghozali (2015), the structural model in PLS is evaluated by using R2 for the endogenous construct of path coefficient values or t-values for each path to test the significance between constructs in the structural model. The value of R2 is used to measure the variation of changes in exogenous variables to endogenous variables.

The assessment of the inner model is used to see the relationship between latent variables in the model. In the inner model, there are four latent variables. The condition indicates the model variables with a significant positive effect: the calculated T value > T table = 1.96 and P-value > 0.05. The bootstrapping method on Smart PLS was used to obtain path coefficients and T-Statistics values. Table 2 presents the bootstrap results using Smart PLS.

Table 2. Bootstrapping Results

	<i>T-Statistics</i>	<i>P-values</i>	<i>Hypothesis</i>
Knowledge -> Customer satisfaction	2.231	0.026	H1: Accepted
Service quality -> Customer satisfaction	2.078	0.038	H2: Accepted
Trust -> Customer satisfaction	3.686	0.000	H3: Accepted
Perceived value -> Customer satisfaction	6.269	0.000	H4: Accepted

Hypothesis Test Results

Hypothesis testing was carried out to answer the research objectives. The bootstrapping technique was carried out in hypothesis testing, as shown in Table 3.

H1: Knowledge affects customer satisfaction

The results of hypothesis testing indicate that H5 is accepted (p -value < 0.05). Knowledge positively influences customer satisfaction in using sharia financial technology lending. Thus, the findings of this study strengthen the evidence that knowledge management significantly influences customer satisfaction.

H2: Service quality affects customer satisfaction

The results of hypothesis testing indicate that H6 is accepted (p -value < 0.05). One of the factors that determine customer satisfaction is service quality. Customers will feel satisfied and consider the product reliable if the quality of service is as expected. Feelings of pride in the product will also increase along with good service quality. These results are supported by research by Paramitha (2018), showing that e-service quality significantly indirectly affects customer satisfaction mediated by purchasing decisions.

H3: Trust affects customer satisfaction

The results of hypothesis testing indicate that H7 is accepted (p -value < 0.05). Trust is the hardest aspect to obtain in a product or service, especially when using a new product. Of course, the main idea when customers try new products is to see whether the product can be trusted or not. The trust given by the manufacturer will lead to customers' positive feelings. The trust in producers will impact customers' satisfaction and encourage them to recommend the products to others. So, the higher the level of trust in the product, the more confident the users. This, in turn, will impact their satisfaction. These results align with Kartika & Ganarsih's (2019) research, which shows that trust indirectly influences customer satisfaction mediated by purchasing decisions.

H4: Perceived value affects customer satisfaction

The results of hypothesis testing indicate that H8 is accepted (p -value < 0.05). ALAMI customers' perceived value of P2P lending can prove its reliability in influencing customer loyalty. This is based on customers' experience who have used the product (Rangkuti, 2004). These results are supported by research by Liou and Tsao (2010) that perceived value affects customer loyalty to Taiwan Railways. The results of this study indicate that respondents assess the perceived value variable can affect the level of customer loyalty. The results of this study are supported by research conducted by Chandra and Innocentius (2018) that perceived value affects

customer loyalty. Customer relationship with the company is strengthened when customers get adequate results about the company's perceived value.

Managerial Implications

The above discussion reveals that the variables of knowledge, trust, service quality, and perceived value of ALAMI can influence customer satisfaction. This means that the customers believe these variables are independent and important to increase their satisfaction in transactions through the sharia fintech platform. The emergence of sharia P2P Indonesia cannot be removed from the history of conventional P2P. The sharia fintech industry was first initiated in Indonesia in 2018 to provide a fintech system with sharia or Islamic law compliance. It was recorded that according to OJK data, in December 2020, there were 152 registered and licensed fintech companies consisting of 141 conventional fintech and 11 sharia fintech. Fintech is regulated by OJK Regulation Number 77/POJK.01/2016 concerning P2P Lending Ownership Financing Services. This regulates fintech as a whole, both conventional and sharia systems.

In implementing sharia fintech in Indonesia, the MUI issued a DSN-MUI Fatwa No 117/DSNMUI/II/2018 on Technology-Based Financing Services that Comply with Sharia Principles. The sharia fintech in Indonesia is expected to improve the implementation of economic activities based on sharia principles.

The function of a sharia P2P lending company is to bring borrowers and lenders together. ALAMI Syariah acts as a facilitator. In transactions, ALAMI Syariah strictly avoids *maysir*, or unclear transactions or interests. It does not harm either party (*zulm*) because ALAMI Syariah will provide the best for its users as much as possible. If a default occurs in the future, the risk is in both the lender and borrower. In other words, profits and losses are shared by both the lender and the borrower.

ALAMI Syariah has succeeded in maintaining user trust. As mentioned, the knowledge, trust, and quality of services provided directly influence ALAMI's customer satisfaction. Referring to research indicators, this could be because customers feel that the ALAMI sharia P2P lending platform is easy to use. After all, the transactions can be done using a smartphone. So, the users believe that all transaction mechanisms must be managed properly. Increasing the value of benefits is also necessary for ALAMI Syariah to continue to strive to improve its platform's security. This is necessary as technological developments continue to increase and are accompanied by increasing risks of cybercrime.

Conclusion

This study concludes that knowledge, service quality, and perceived value are rejected, while the trust variable is accepted. This shows that trust is the most significant aspect of increasing customers' satisfaction with sharia fintech products or services. In addition, the improvements in service quality and easy transaction features will create a sense of trust and customer satisfaction. One of the factors that determine customer satisfaction is service quality. Customers will feel satisfied if the quality of service is as expected. Customers will feel that the product is reliable. Feelings of pride in the product will also increase along with good service quality. This study found that all independent variables influence the dependent variable of customer satisfaction. Thus, knowledge, service quality-perceived value and trust variables directly affect customer satisfaction. These all, in turn, affect business continuity as they encourage customer loyalty.

References

- Abror, A., Patrisia, D., Engriani, Y., Idris, I., & Dastgir, S. (2022). Islamic bank trust: the roles of religiosity, perceived value and satisfaction. *Asia Pacific Journal of Marketing and Logistics*, 34(2), 368-384. <http://doi.org/10.1108/APJML-10-2020-0715>.
- Abror, A. (2019). Service Quality, Religiosity, Customer Satisfaction, Customer Engagement and Islamic Banks Customer Loyalty. *Journal of Islamic Marketing*, 11(6), 1691-1705. <http://doi.org/10.1108/jima-03-2019-0044>.
- Abror, A., Wardi, Y., Trinanda, O. and Patrisia, D. (2019). The Impact of Halal Tourism, Customer Engagement on Satisfaction: Moderating Effect of Religiosity, *Asia Pacific Journal of Tourism Research*, 24(7), 633-643. <http://doi.org/10.1080/10941665.2019.1611609>.
- Alba, Joseph W. and John W. Hutchinson. (2020). Knowledge Calibration: What Consumers Know and What They Think They Know. *Journal of Consumer Research.*, 27(2), 123-156. <https://doi.org/10.1086/314317>.
- Bernarto, I., & Patricia, M. M. (2019). Pengaruh Perceived Value, Customer Satisfaction dan Trust Terhadap Customer Loyalty Restoran XYZ di Tangerang. *Journal Of Business Studies*, 4(1), 82-98. <https://core.ac.uk/download/pdf/268463247.pdf>.
- DinarStandard. (2018). Islamic Fintech report 2018: Current Landscape and Path Forward. <https://www.salaamgateway.com/reports/islamic-fintech-report-2018-current-landscape-and-path-forward>.

- El-Adly, M.I. (2019). Modelling the Relationship Between Hotel Perceived Value, Customer Satisfaction, and Customer Loyalty. *Journal of Retailing and Consumer Services*, 50(C), 322-332. <https://doi.org/10.1016/j.jretconser.2018.07.007>.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E. (7th Eds.). (2018). *Multivariate Data Analysis*. New Jersey: Pearson Education.
- Hansen, T. (2018). Understanding trust in financial services: the influence of financial healthiness, knowledge, and satisfaction. *Journal of Service Research*, 15(3), 280-295. <https://doi.org/10.1177/1094670512439105>.
- Hudaefifi, F.A. and Heryani, N. (2019). The Practice of Local Economic Development and Maqasid Al-Shariah: Evidence From a Pesantren in West Java, Indonesia. *International Journal of Islamic and Middle Eastern Finance and Management*, 12(5), 625-642. <https://doi.org/10.1108/IMEFM-08-2018-0279ros>.
- Jiang, L. and Probst, T.M. (2018). The Moderating Effect of Trust in Management on Consequences of Job Insecurity. *Economic and Industrial Democracy*, 40(2), 409-433. <https://doi.org/10.1177%2F0143831X16652945>.
- Kartika, M., & Ganarsih, R. L. (2019). Analisis E-Wom, Online Shopping Experience dan Trust Terhadap Keputusan Pembelian dan Kepuasan Konsumen E-Commerce Shopee pada Mahasiswa Pascasarjana Universitas Riau. *Tepak Manajemen Bisnis*, 11(2), 289–307. <https://jtmb.ejournal.unri.ac.id/index.php/JTMB/article/view/7439>.
- Kim, C., Mirusmonova, M., & Lee, I. (2019). An empirical examination of factors influencing the intention to use mobile payment. *Computers in Human Behavior*, 26(3), 310–322. <https://doi.org/10.1016/j.chb.2009.10.013>.
- KPMG. (2018). *The Pulse of Fintech—H1 2018—KPMG Global*, available at: <https://assets.kpmg/content/dam/kpmg/xx/pdf/2018/07/h1-2018-pulse-of-fintech.pdf>.
- Lee, I, Shin, Y.J. (2018). Fintech: Ecosystem, Business Models, Investment Decisions and Challenges. *Business Horizons*, 61(1), 35-46. <https://doi.org/10.1016/j.bushor.2017.09.003>.
- Lim, S. H. (2018). An investigation of the psychology of password replacement by email users. *Journal of the Korea Institute of Information Security & Cryptology*, 26(5), 1251–1258. (In Korean). <https://doi.org/10.13089/JKIISC.2016.26.5.1251>.

- Miranda, S., Tavares, P, Queiro, R. (2018). Perceived Service Quality and Customer Satisfaction: a Fuzzy Set QCA Approach in the Railway Sector. *Journal of Business Research*, 89, 371-377. <https://doi.org/10.1016/j.jbusres.2017.12.040>.
- Mukhlisin, M. (2019). Islamic Fintech: Quo Vadis? Insight: Buletin Ekonomi Islam, V, 17-18. <https://ekon.go.id/publikasi/detail/2969/umkm-menjadi-pilar-penting-dalam->.
- OJK. (2019). Penyelenggara fintech terdaftar di OJK per 1 Februari 2019, available at www.ojk.go.id/id/berita-dan-kegiatan/publikasi/Pages/Penyelenggara-fintech-Terdaftar-di-OJK-per-Februari-2019.aspx
- Rosavina, M., Rahadi, R.A., Kitri, M.L., Nuraeni, S., Mayangsari, L. (2019). P2P Lending Adoption by SMEs in Indonesia. *Journal Research Finance. Mark.* 11 (2), 260–279. <https://doi.org/10.1108/QRFM-09-2018-0103>.
- Stewart, Jurrjens. (2018). Data security and Consumer Trust in Fintech Innovation in Germany. *Article information and Computer Security*. Published by emerald insight. <https://doi.org/10.1108/ICS-06-2017-0039>.
- Sugiyono. (2018). *Metode Penelitian Kombinasi (Mix Methods)*. Bandung: Alfabeta.