



Factors affecting loyalty in mobile banking: A case study on BSI mobile customers

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Abstract

The main purpose of the study is to obtain insight into the features of mobile banking that influence customer loyalty. This study explored objectives such as service quality, price, product quality, and consumer satisfaction. The study was conducted in the Jakarta area. The sample used consisted of BSI Mobile users in the DKI Jakarta region who were at least 20 years old and had been using BSI Mobile for at least one year. The research method employed a quantitative approach using primary data with Likert scale as a measurement tool. Purposive sampling was utilized in this study, which had 250 respondents. The presented research used SEM (Structural Equation Model) data analysis with AMOS 24 software. According to the findings, service and price have positive and significant effects on customer loyalty and satisfaction. Product quality has no direct effect on consumer loyalty, and price has no direct effect on customer satisfaction. This study examines the aspects that influence customer loyalty at BSI Mobile, emphasizing the necessity of improving service quality, price, product quality, and customer satisfaction. Although product quality had no discernible impact, ensuring creative and diverse product quality in BSI Mobile remains critical. This study adds to the body of knowledge by improving understanding of the elements that influence customer loyalty in BSI Mobile, allowing for the formulation of successful strategies to increase BSI Mobile usage and growth in the mobile banking sector.

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1. Introduction

Mobile banking has emerged as one of the most promising manifestations of digital banking development in recent times. Presently, nearly all banks in Indonesia have adopted mobile banking services. Research conducted by MARS Indonesia, a full-service market research agency, has substantiated substantial growth in mobile banking usage within the country over a span of five years, with an average annual increase of 135.3%. In 2003, the number of mobile banking users stood at approximately 315,000 individuals, which significantly escalated to 8.2 million individuals by 2007. Mobile banking has emerged as a crucial financial transaction service, facilitating non-cash transactions through mobile devices. This technology has the potential to boost the revenue of banks. However, the benefits of mobile banking extend beyond financial institutions. Integrated within a converged service model, mobile banking can also benefit the revenue growth of other entities, such

as internet service providers and mobile network operators. In addition to being beneficial for banks, mobile banking also contributes to bank customers. There are three main reasons why bank customers require mobile banking services, based on the research findings by MARS Indonesia published in "Mobile Banking Market Study & Customer Behavior 2008." The three main reasons are as follows: (1) Efficiency due to the elimination of the need to visit a bank or ATM (Automated Teller Machine) (46.5%), (2) More effective transactions (32.7%), and (3) Ability to check account balances through a smartphone (17.8%). One advantage of mobile banking is that transactional efficiency dominates the main factor. In addition to these three benefits, the existence of mobile banking also allows customers to conduct transactions without using cash and eliminates the need to carry physical money, making it more convenient. In addition to conventional banks' mobile banking services, Islamic banks also offer mobile banking solutions, one of which is BSI Mobile by Bank Syariah Indonesia. Some Muslims in Indonesia prefer using Islamic banks over conventional banks to avoid usury (riba). Bank Syariah Indonesia, in conjunction with BSI Mobile, offers Islamic-compliant halal banking services. The presence of BSI Mobile facilitates effective and efficient financial transactions for the Muslim community in Indonesia. This is evident from the increased transactions on BSI Mobile since the establishment of Bank Syariah Indonesia in 2021. According to a news article by [Pratama \(2021\)](#); Hery Gunardi, the CEO (Chief Executive Officer) of Bank Syariah Indonesia, stated that currently, 95% of customer transactions are conducted through mobile banking, with only 5% visiting branch offices. BSI Mobile has innovated by offering beyond banking services to its customers, including features such as purchasing gold, distributing ZISWAF (stands for Zakat, Infaq, Sedekah, Wakaf; an Islamic social fund) opening online accounts, applying for financing, checking prayer times, and various other banking activities.

In previous research that discussed a similar topic, service quality, price, product quality, and customer satisfaction were investigated as mobile banking elements that affect customer loyalty ([Marliyah, Ridwan, & Sari, 2021](#); [Wiharso, Prasetyo, Prakoso, & Fabrianto, 2022](#); [Yusfiarto, 2021](#)). Several models have been developed to explain the elements that influence the loyalty of customers in mobile banking. The SERVQUAL model is one of the most often used theories. The service quality model (SERVQUAL) is a critical variable that can influence customer happiness and loyalty, particularly in the context of mobile banking.

Despite past research that has explored the aspects that influence customer satisfaction as well as loyalty in mobile banking, there are still study gaps that need to be filled. First of all, earlier research merely examined how directly a product's quality affects consumer satisfaction; it did not examine how directly a product's quality affects loyalty, despite the fact that customer pleasure is an important aspect in developing loyalty. Furthermore, past research had small and limited sample sizes. Therefore, this research aims to fill these gaps by analyzing the factors influencing customer loyalty in mobile banking among BSI Mobile customers using a larger sample size. The fundamental objective of this research is to determine the degree to which BSI Mobile elements can influence customer loyalty and to develop connections between variables like service quality, price, and product quality and customer loyalty and satisfaction. This study aims to provide recommendations and suggestions to PT Bank Syariah Indonesia for innovating their mobile banking application, BSI Mobile, in order to enhance its quality in terms of both service and product offerings. The company can also create product differentiation to distinguish itself from other mobile banking applications. By having unique features and characteristics, BSI Mobile has a greater opportunity to attract customers. Customers who are interested in the product are more likely to make a purchase, and if the product meets or exceeds their standards and expectations, it can create customer loyalty.

2. Literature Review

2.1. Service Quality (SERVQUAL)

Service quality, as defined by [Ali et al. \(2021\)](#), refers to the degree of alignment between customer expectations and perceptions of a service. In essence, it signifies that the assessment of service quality is based on how customers perceive the service they receive. [Gronroos \(1982\)](#), as cited in [Ali et al. \(2021\)](#), breaks down service quality into two components: technical and functional. Functional service quality pertains to the client's expectations of service, while technical service quality relates to what the consumer actually receives. According to these experts, service quality is the difference between a customer's perceived value of their purchase or service and their actual experience. The outcomes of service quality are a crucial component that businesses provide to their customers. All these definitions of service quality are customer-centric, focusing on what customers deem important for quality ([Lin, Lin, & Wang, 2021](#)). Customers receive services that align with their expectations, and this is pivotal in enhancing a company's value and competitiveness in comparison to its rivals. Quality is a paramount concern in today's business landscape, prompting many organizations to prioritize the quality of their products and services. Quality is integral to a company's operational objectives and responsibilities. Companies will evaluate policies concerning the significance of service quality, particularly in the service sector ([Amri, Asbari, Gazali, Novitasari, & Purwanto, 2021](#)). Companies that consistently enhance their service quality will excel at meeting customer expectations compared to those that neglect this aspect. The SERVQUAL model serves as a customer-centric tool for assessing service quality. According to [Parasuraman et al. \(1988\)](#), as cited by [Ali et al. \(2021\)](#), there are five key SERVQUAL indicators that gauge service quality: (1) reliability, (2) responsiveness, (3) assurance, (4) empathy, and (5) tangibility.

2.2. Price

According to Kotler (2012), as cited in Syahidin and Adnan (2022), price is the amount of money paid for a product or service. According to Erinawati and Syafarudin (2021), price is the total value exchanged by consumers to gain benefits from owning a product or service. The reason price is considered a key driver of a company's performance is that for customers in the middle- to lower-income segments in the marketing context, pricing is critical in evaluating a company's competitive power in the marketplace. According to these experts, pricing is a certain amount of money or value attributed to an item that may be converted into money and is part of the marketing mix. Price also acts as a determinant of purchase decisions for customers in the middle- to lower-income segments. According to Mappatempo, Asrawan, and Romadhoni (2022), when the price is set too high, consumers may consider switching to another company. According to Kotler (2012), as cited in Saputra and Djumarno (2021), one component that makes up the marketing mix is price or marketing strategies that generate revenue for a company. Therefore, if a company wants to retain customers and stay competitive, it must adjust its prices according to customers' purchasing power. A company can take the initial step by developing a pricing management strategy.

The indicators adapted from the three dimensions of price, according to the research results conducted by Sisca, Wijaya, Chandra, and Mailoli (2022), include: (1) price affordability, (2) discounts, and (3) payment methods.

2.3. Product Quality

After completing a purchase, customers regard the product as the most significant part, whether it is a real thing or a service to be experienced (Taufik, Santoso, Fahmi, Restuanto, & Yamin, 2022). Product quality refers to a product's capacity to satisfy its clients' needs and desires. According to these experts, product quality is an important factor that shoppers evaluate when making a purchase. When a product can fulfill customer needs and desires, it can be said to have good quality. According to Sirait (2021), customers tend to choose products with better quality compared to similar products that can meet their expectations and needs. Customers will be drawn to a product of high quality. A great-quality of product will also help the company's reputation. Product quality will influence customers' decisions about whether to keep purchasing the product or seek alternatives that meet their expectations (Rachmawati & Santika, 2022). As a result, maintaining product quality is crucial for a company in order to exceed client expectations.

The indicators adapted from the eight product quality dimensions according to the study conducted by Garvin (1987), as cited in Andri, Jasfar, and Kristaung (2022), are as follows: (1) Performance (2) Features (3) Reliability (4) Conformance (5) Durability (6) Serviceability (7) Aesthetics (8) Perceived Quality.

2.4. Customer Satisfaction

Customer satisfaction yields various advantages for a company, including fostering a harmonious rapport between the company and its clientele, establishing a solid foundation for ongoing customer contentment, and generating positive word-of-mouth endorsements. Consequently, customers are more inclined to purchase or utilize the company's services (Sasongko, 2021). In a broader context, satisfaction pertains to an individual's feelings of delight or dissatisfaction resulting from the comparison of a product's (or outcome's) perceived performance with their expectations (Pramudita, Gunawan, Ningsih, & Adilah, 2022). According to the aforementioned experts, customer satisfaction refers to how a customer feels about the level of satisfying performance a product or service provide. When a product or service aligns with a customer's needs, it leads to contentment. Conversely, if the product falls short of meeting the customer's expectations, contentment is diminished. Customer satisfaction is a measure of how satisfied customers are with the service or product they received in comparison to their expectations (Syafarudin, 2021). Meeting customer expectations translates into customer satisfaction. Typically, customer satisfaction is assessed by analyzing the overall perceptions of customers regarding a product or service. When a product's customers express general satisfaction, it is deemed to have achieved a certain level of customer contentment.

The indicators adapted from the customer satisfaction five dimensions, as stated in the research conducted by Andri et al. (2022), include: (1) product quality, (2) service quality, (3) price, (4) emotional factors, and (5) convenience.

2.5. Customer Loyalty

According to McMullan and Gilmore (2008) as cited in Othman, Harun, De Almeida, and Sadq (2020) customer loyalty is stated as the alignment of brand and behavioral reactions over time. It relates to an individual's preference for one brand over others. According to Sapitri and Onsardi (2021), it is important for a company to maintain sustainability by having high customer loyalty. Based on the opinions of these experts, customer loyalty is a form of attitude or behavior exhibited by customers towards a product from a company. This attitude or behavior can be reflected in customers making repeat purchases of a particular brand over time. Customer loyalty is defined as a customer's intentional commitment, perception of quality, contentment, and a strong sense of pride in a product, which results in recurrent purchases (Sasongko, 2021). Customer

pleasure is the starting point for customer loyalty. After satisfaction is achieved, an encouraging relationship between the seller and the customer might inspire loyalty.

Following are the modified indicators from Zeba, Royne Stafford, and Shaheen (2022) research on the four dimensions of customers loyalty: (1) cognitive loyalty (2) affective loyalty (3) conative loyalty (4) action loyalty.

Figure 1 Illustrates research conceptual model.

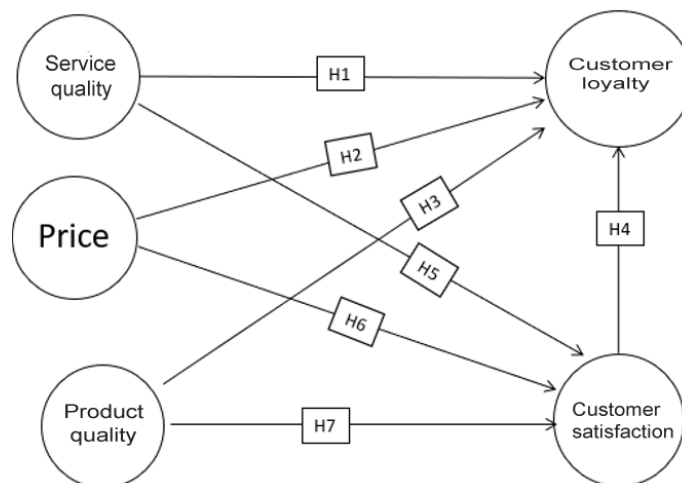


Figure 1. Research conceptual model.

2.6. Research Model

Seven hypotheses are offered in this research:

- H.1. Service quality has a significant and positive effect on customer loyalty.
- H.2. Price has a significant and negative effect on customer loyalty.
- H.3. Product quality has a significant and positive effect on customer loyalty.
- H.4. Customer satisfaction has a significant and positive effect on customer loyalty.
- H.5. Service quality has a significant and positive effect on customer satisfaction.
- H.6. Price has a significant and negative effect on customer satisfaction.
- H.7. Product quality has a significant and positive effect on customer satisfaction.

3. Research Methodology

This study's methodology is quantitative research using the SEM (Structural Equation Model) style of analysis. The demographic in this study is made up of BSI Mobile customers who live in the DKI Jakarta area. The sampling method used is purposive sampling, selecting BSI Mobile users who have been using the service for a minimum of one year, and are 20 years of age or older, and reside in the Jakarta area. Hair, Babin, Anderson, and Black (2019) proposed a formula for determining sample size:

$$N = \text{Number of Indicators} \times 10.$$

$$N = 25 \times 10.$$

$$N = 250.$$

Based on the calculation above, it can be concluded that a sample of 250 respondents who participated voluntarily will be taken from the unknown population. To collect data, an online questionnaire will be distributed using Microsoft Forms. This questionnaire will include questions related to the five research variables, designed to gather information about the factors influencing customer loyalty at BSI Mobile.

4. Results and Discussion

4.1. Respondent Profile

The sample for this study was obtained through the distribution of questionnaires via Microsoft Forms, resulting in a total of 250 respondents. The sample includes individuals from various demographics. Gender, age, greatest level of education, employment position, and monthly salary are examples of such information. The explanation of the respondent profiles reveals that the majority of BSI Mobile customers are female, with a total of 156 individuals (62.4%), while males account for 94 individuals (37.6%). Based on age, the bulk of responses are between the ages of 20 and 29, with a total of 132 individuals (52.8%). There are 40 respondents (16%) in the 30-39 age category, 36 (14.4%) in the 40-49 age range, 29 (11.6%) in the 50-60 age category, and 13 (5.2%) in the 60-plus age range who are over 60 years old. In terms of their highest level of education, the bulk of respondents have pursued a bachelor's degree, accounting for 150 individuals (60%). There are 54 respondents (21.6%) with a high school education as their highest qualification, and 46 respondents (18.4%)

with a diploma. Regarding employment status, the majority of respondents are students, totaling 94 individuals (37.6%). There are 40 respondents (16%) classified under other job categories, such as freelancers, homemakers, or unspecified occupations. Additionally, there are 38 respondents (15.2%) working in the private sector, 32 respondents (12.8%) working as government employees, 27 respondents (10.8%) who are self-employed, and 19 respondents (7.6%) who are retired. In the context of monthly revenue, the bulk of respondents (35.2%) earn between 1,000,000 and 5,000,000 each month. There are 52 respondents (20.8%) with an income between 5,000,000 and 10,000,000, 50 respondents (20%) with an income below 1,000,000, 39 respondents (15.6%) with an income above 15,000,000, and 21 respondents (8.4%) with an income between 10,000,000 and 15,000,000.

Table 1 presents the respondent profile.

Table 1. Respondent profile.

Demographics	Classification	Frequency	Percent
Gender	Male	94	37.6
	Female	156	62.4
	Total	250	100.0
Age	20-29	132	52.8
	30-39	40	16.0
	40-49	36	14.4
	50-60	29	11.6
	>60	13	5.2
Greatest level of education	High school	54	21.6
	Diploma	46	18.4
	Bachelor	150	60.0
Employment status	Student	94	37.6
	Private sector	38	15.2
	Government employees	32	12.8
	Self-employed	27	10.8
	Retired	19	7.6
	Others	40	16.0
Monthly income	< 1.000.000	50	20.0
	1.000.000 - 5.000.000	88	35.2
	5.000.000 - 10.000.000	52	20.8
	10.000.000 - 15.000.000	21	8.4
	> 15.000.000	39	15.6

4.2. Results

4.2.1. Validity Test

Based on what was found in the validity tests, it is possible to conclude that all 15 service quality indicators are valid. Likewise, all 9 items of the price indicators, 24 items of the product quality indicators, 12 items of the customer loyalty indicators, and 22 items of the customer satisfaction indicators can be considered valid. The factor loading values for each indicator in their respective variables that are greater than 0.35 are indicative of this. As a result, it may be stated that every single one of the indicators for each variable is valid in measuring the associated constructs (Hair et al., 2019).

Table 2 presents validity test.

Table 2. validity test.

Variable	Indicator	Factor loadings	Result
Service quality	SQ1	0.970	Valid
	SQ2	0.974	Valid
	SQ3	0.980	Valid
	SQ4	0.968	Valid
	SQ5	0.973	Valid
	SQ6	0.958	Valid
	SQ7	0.968	Valid
	SQ8	0.971	Valid
	SQ9	0.969	Valid
	SQ10	0.952	Valid
	SQ11	0.960	Valid
	SQ12	0.961	Valid
	SQ13	0.961	Valid

Variable	Indicator	Factor loadings	Result
Price	SQ14	0.951	Valid
	SQ15	0.972	Valid
	P1	0.966	Valid
	P2	0.975	Valid
	P3	0.961	Valid
	P4	0.950	Valid
	P5	0.949	Valid
	P6	0.966	Valid
	P7	0.965	Valid
	P8	0.971	Valid
Product quality	P9	0.974	Valid
	PQ1	0.955	Valid
	PQ2	0.971	Valid
	PQ3	0.961	Valid
	PQ4	0.972	Valid
	PQ5	0.965	Valid
	PQ6	0.961	Valid
	PQ7	0.975	Valid
	PQ8	0.971	Valid
	PQ9	0.970	Valid
	PQ10	0.975	Valid
	PQ11	0.965	Valid
	PQ12	0.976	Valid
	PQ13	0.964	Valid
	PQ14	0.967	Valid
	PQ15	0.977	Valid
	PQ16	0.967	Valid
	PQ17	0.964	Valid
	PQ18	0.967	Valid
	PQ19	0.964	Valid
	PQ20	0.972	Valid
	PQ21	0.964	Valid
	PQ22	0.974	Valid
	PQ23	0.968	Valid
PQ24	0.955	Valid	
Customer loyalty	CL1	0.948	Valid
	CL2	0.949	Valid
	CL3	0.929	Valid
	CL4	0.968	Valid
	CL5	0.960	Valid
	CL6	0.967	Valid
	CL7	0.971	Valid
	CL8	0.971	Valid
	CL9	0.931	Valid
	CL10	0.976	Valid
	CL11	0.976	Valid
	CL12	0.967	Valid
Customer satisfaction	CS1	0.970	Valid
	CS2	0.975	Valid
	CS3	0.978	Valid
	CS4	0.983	Valid
	CS5	0.967	Valid
	CS6	0.978	Valid
	CS7	0.976	Valid
	CS8	0.974	Valid
	CS9	0.978	Valid
	CS10	0.971	Valid
	CS11	0.983	Valid
	CS12	0.977	Valid

Variable	Indicator	Factor loadings	Result
	CS13	0.976	Valid
	CS14	0.979	Valid
	CS15	0.972	Valid
	CS16	0.977	Valid
	CS17	0.977	Valid
	CS18	0.971	Valid
	CS19	0.975	Valid
	CS20	0.971	Valid
	CS21	0.974	Valid
	CS22	0.977	Valid

4.2.2. Reliability Test

The results of the reliability test calculations indicate that Cronbach's Alpha values for the variables are as follows:

- Service quality: 0.995
- Price: 0.990
- Product quality: 0.997
- Customer loyalty: 0.992
- Customer satisfaction: 0.998

The reliability test, using Cronbach's Alpha values for each variable in this study, surpasses the threshold of 0.5, affirming their reliability.

Table 3 presents reliability test.

Table 3. Reliability test.

Variable	Cronbach's alpha
Service quality	0.995
Price	0.990
Product quality	0.997
Customer loyalty	0.992
Customer satisfaction	0.998

4.2.3. Model Fit Test

The research model takes the form of a path diagram, and modifications were made by eliminating some indicators from each variable until the P-value exceeded 0.05 or the model was deemed to be a good fit.

The criteria for assessing the model's fitness are considered good when the P-value (probability level) is greater than 0.05 (Hair et al., 2019). The model fitness test results reveal a P-value of 0.101 > 0.05, indicating a good match. The criteria for the CMIN/DF (Normed Chi-square) value to be considered good is ≤ 2.00 (Yaşlıoğlu & Yaşlıoğlu, 2020). The model fitness test results reveal a CMIN/DF ratio of 1.373 < 2.00, indicating a satisfactory fit.

Table 4 presents the goodness of fit measurement test.

Table 4. The goodness of fit measurement test.

Goodness of fit indices	Cut off value	Estimate	Result
Chi-Square	Expected small	34.322	Good
Probability level	≥ 0.05	0.101	Good
CMIN/DF	≤ 2.00	1.373	Good
GFI (Goodness of fit index)	≥ 0.95	0.975	Good
AGFI (Adjust goodness of fit index)	≥ 0.90	0.944	Good
RMSEA (Root mean square error of approximation)	≤ 0.08	0.039	Good
CFI (Comperatif fit index)	≥ 0.95	0.998	Good
TLI (Tucker-Lewis index)	≥ 0.95	0.997	Good

The next criteria for assessing the model's fitness are a small Chi-Square value, $GFI \geq 0.95$, and $AGFI \geq 0.90$ (Yaşlıoğlu & Yaşlıoğlu, 2020). The model fitness test findings in the present research demonstrate a Chi-Square value of 34.322, which is tiny and indicates a decent fit. In this study, the GFI value is 0.975 > 0.95 and the AGFI value is 0.944 > 0.90, indicating both of them are regarded as good. Furthermore, the RMSEA value is considered good if it is ≤ 0.08 , and the CFI and TLI values are ≥ 0.95 (Yaşlıoğlu & Yaşlıoğlu, 2020). The results of the model fitness test in this study show an RMSEA value of 0.039 < 0.08, indicating a good fit. The CFI value in this study is 0.998 > 0.95, and the TLI value is 0.997 > 0.95, indicating that both are also considered good.

Figure 2 Illustrates structural fit model.

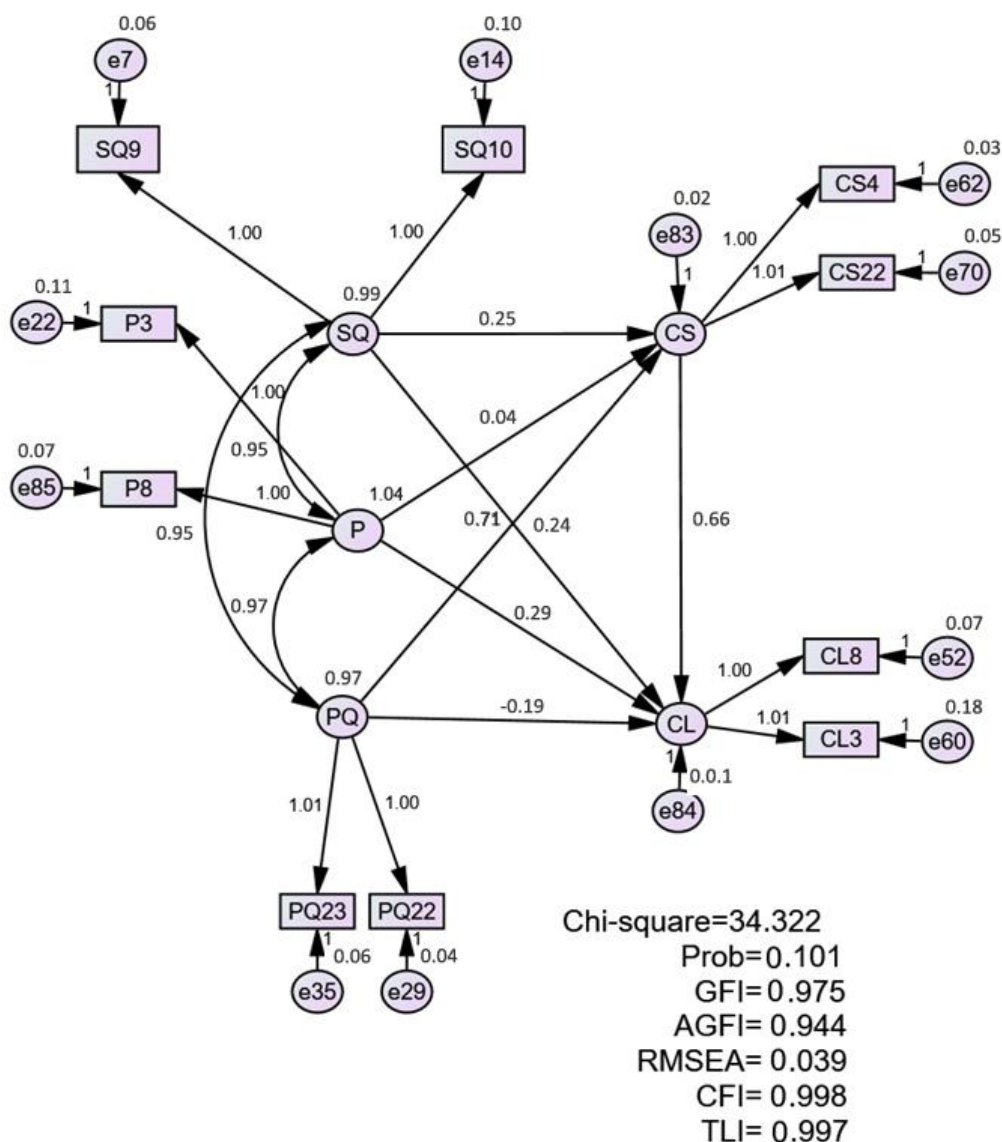


Figure 2. Structural fit model.

4.2.4. Hypothesis Testing

Hypothesis testing using SEM is the final step in testing the research model. Hypotheses are accepted if the value of C.R. > 1.96 in the regression weight table. Here are the results of the hypothesis testing:

Table 5 presents summary of hypothetical test results.

Table 5. Summary of hypothetical test results.

Hypothesis	Variable	C.R.	P	Result
H ₁	Service quality → Customer loyalty	2.030	0.042	Accepted
H ₂	Price → customer loyalty	2.964	0.003	Accepted
H ₃	Product quality → Customer loyalty	-0.769	0.442	Denied
H ₄	Customer satisfaction → Customer loyalty	2.806	0.005	Accepted
H ₅	Service quality → Customer satisfaction	2.737	0.006	Accepted
H ₆	Price → Customer satisfaction	0.454	0.650	Denied
H ₇	Product quality → Customer satisfaction	5.141	***	Accepted

Note: *** is significant.

The SEM model in AMOS 24 software shows the remaining indicators for each variable after modification. The variable "service quality" has two remaining indicators after modification. The variable

"price" retains two indicators. The variable "product quality" has two indicators after modification. The variables "customer loyalty" and "customer satisfaction" also retain two indicators after modification.

5. Discussion

5.1. The Implications of Service Quality regarding Customer Loyalty

Based on hypothesis testing 1 (H_1) with a Critical Ratio (C.R.) value of $2.030 > 1.96$ and a probability smaller than 0.05, it may be established that service quality significantly influences customer loyalty. This implies that H_a is accepted and H_0 is rejected. This research also reinforces previous theories stating that service quality enhances customer loyalty. For example, [Lin et al. \(2021\)](#) proposed a theory stating that service quality can boost customer loyalty when they are satisfied and delighted with the service, resulting in higher loyalty.

This research finding also supports the theory of [Dewi, Hajadi, Handranata, and Herlina \(2021\)](#) in their study titled "The Effect of Service Quality and Customer Satisfaction on Customer Loyalty in the Service Industry" conducted in the laundry service. According to the researcher, higher service quality leads to higher customer satisfaction and loyalty. According to the findings, service quality has a positive and significant impact on customer loyalty. The more excellent the quality of service, the more delighted clients is with BSI Mobile, and the more loyal they become to the service. Based on these findings, it is recommended for the mobile banking sector to maintain and continually improve service quality standards to remain competitive and up-to-date.

5.2. The Implications of Price regarding Customer Loyalty

Based on hypothesis testing 2 (H_2) with a Critical Ratio (C.R.) value of $2.964 > 1.96$ and a probability smaller than 0.05, it may be established that price significantly influences customer loyalty. This implies that H_a is accepted and H_0 is rejected. This research also reinforces previous theories stating that price affects customer loyalty. One theory proposed by [Hariyono, Ruspitasari, and Handoko \(2023\)](#) states that lower prices increase customer loyalty, indicating that price has a significant impact on customer loyalty.

The findings of his research also support the theory of [Herawaty et al. \(2022\)](#) in their study titled "The Influence of Service Quality and Price on Alfamart Consumer Loyalty with Customer Satisfaction as Mediation Variables," which focused on customer loyalty towards Alfamart. The research findings state that customers seek maximum benefits. When Alfamart's competitors offer greater discounts that provide more advantages to customers, they tend to switch to those competitors. The researchers also mention that consumers tend to seek discounted prices. As a result, price has a detrimental effect on customer loyalty because lower prices make customers more loyal.

5.3. The Implications of Product Quality Regarding Customer Loyalty

Based on the results of hypothesis testing 3 (H_3), with a Critical Ratio (C.R.) value of -0.769 (which is less than 1.96) and a probability value of 0.442 (greater than 0.05), it can be concluded that product quality does not have a direct impact on customer loyalty. This implies that H_a (the alternative hypothesis) is rejected and H_0 (the null hypothesis) is accepted. This research also reinforces previous theories stating that product quality does not influence customer loyalty. One theory proposed by [Andri et al. \(2022\)](#) states that product quality does not have an influence on customer loyalty.

The research findings further reinforce the theory put forth by [Arif and Syahputri \(2021\)](#) in their study titled "The Influence of Brand Image and Product Quality on Customer Loyalty with Consumer Satisfaction as an Intervening Variable in the Home Industry," This study specifically delved into the relationship between product quality and customer loyalty in the context of MSME (Micro, Small, and Medium Enterprises) businesses. According to the research findings, product quality cannot affect customer loyalty. The results of SEM-PLS calculations, where the p-values exceeded the threshold of 0.108, support this conclusion. In other words, even when the product quality is of a higher standard, it does not necessarily translate into higher customer loyalty. Consequently, these findings suggest that product quality does not exert a significant impact on customer loyalty within the examined context.

5.4. The Implications of Customer Satisfaction Regarding Customer Loyalty

Based on hypothesis testing 4 (H_4) with a Critical Ratio (C.R.) value of $2.806 > 1.96$ and a probability value smaller than 0.05, it can be concluded that customer satisfaction significantly influences customer loyalty. This implies that H_a (alternative hypothesis) is accepted and H_0 (null hypothesis) is rejected. These research findings provide robust support for previous theories that have consistently asserted the impact of customer satisfaction on customer loyalty. For instance, [Alzoubi, Alshurideh, Kurdi, Akour, and Aziz \(2022\)](#) proposed a theory indicating that customer satisfaction indeed has a positive and significant effect on customer loyalty.

Furthermore, these research findings align with the theory presented by [Islam et al. \(2021\)](#) in their study titled "The Impact of Corporate Social Responsibility on Customer Loyalty: The Mediating Role of Corporate Reputation, Customer Satisfaction, and Trust, which primarily focused on Corporate Social Responsibility

(CSR). According to their study, satisfied customers play a pivotal role as the primary drivers of customer loyalty. Their research findings underscore that customer satisfaction exerts a positive and substantial influence on customer loyalty. Additionally, the study highlights that companies in the telecoms industry should invest in ethical efforts, as customers tend to support and favor firms recognized for their contributions to society, leading to heightened levels of loyalty. Consequently, it is evident that customer satisfaction significantly shapes and influences customer loyalty.

5.5. The Implications of Service Quality Regarding Customer Satisfaction

Based on hypothesis testing 5 (H₅) with a Critical Ratio (C.R.) value of 2.737 > 1.96 and a probability value smaller than 0.05, it can be firmly established that service quality significantly influences customer satisfaction. This implies that H_a (alternative hypothesis) is accepted, while H₀ (null hypothesis) is rejected. These research findings provide strong support for previous theories that have consistently maintained the relationship between service quality and customer satisfaction. For instance, [Lubis, Dalimunthe, Absah, and Fawzee \(2021\)](#) proposed a theory affirming that service quality indeed has a positive and significant impact on customer satisfaction.

Furthermore, these research findings align with the theory presented by [Ali et al. \(2021\)](#) in their study titled "Impact of Service Quality on the Customer Satisfaction: Case Study at Online Meeting Platforms", which specifically focused on online meeting platforms. According to the study, organizer's level of service has a big impact on how satisfied attendees are at exhibitions. The study's conclusions reinforce the idea that service quality has a positive and substantial impact on customer satisfaction. These findings emphasize that, to enhance company revenue, it is crucial for organizations to prioritize customer satisfaction by delivering high-quality and accurate service. Consequently, it is evident that service quality has a significant impact on customer satisfaction.

5.6. The Implications of Price Regarding Customer Satisfaction

Based on hypothesis testing 6 (H₆) with a Critical Ratio (C.R.) value of 0.454 < 1.96 and a probability value of 0.650 > 0.05, it can be concluded that price does not have a significant effect on customer satisfaction. This indicates that H_a (alternative hypothesis) is rejected while H₀ (null hypothesis) is accepted. These research findings support existing theories that suggest that price does not play a substantial role in influencing customer satisfaction. As an example, [Capriati \(2023\)](#) proposed a theory asserting that price does not have a significant impact on customer satisfaction.

The results of this study also align with the theory proposed by [Bansaleng, Sepang, and Tampenawas \(2021\)](#) in their research titled "Pengaruh Kualitas Produk, Kualitas Pelayanan, dan Harga Produk terhadap Kepuasan Konsumen Pengguna Kartu XL di Manado" which specifically investigated customer satisfaction regarding XL SIM cards. Their research findings clearly indicate that price does not exert a significant influence on customer satisfaction. The concept of affordability or unaffordability of a product's price is relative and, in this context, does not contribute significantly to enhancing consumer satisfaction. Instead, other elements, such as service quality and potentially unexplored factors, play more substantial roles in determining customer satisfaction. The consideration of customers in their choice to use BSI Mobile's products is also identified as a pivotal determining factor in this study's outcomes.

5.7. The Implications of Product Quality Regarding Customer Satisfaction

Based on hypothesis testing 7 (H₇) with a value of 5.141 > 1.96 and a probability value smaller than 0.05, it can be firmly established that product quality significantly influences customer satisfaction. This implies that H_a (alternative hypothesis) is accepted, and H₀ (null hypothesis) is rejected. These research findings provide robust support for previous theories that consistently assert the impact of product quality on customer satisfaction. For example, [Erlinda, Purnama, and Tamzil \(2022\)](#) proposed a theory affirming that product quality indeed has a positive and significant effect on customer satisfaction.

Additionally, these research findings align with the theory presented by [Grace, Girsang, Simatupang, Candra, and Sidabutar \(2021\)](#) in their research titled "Product Quality and Customer Satisfaction and Their Effect on Consumer Loyalty," which focused on product quality in Mandiri Jaya Mobil Pematangsiantar. According to their research findings, service quality has a positive and significant effect on customer satisfaction. This implies that the quality of a product can instill trust in consumers, as modern consumers often seek high-quality and durable items. When customers are satisfied with product quality, it tends to generate positive responses in terms of customer loyalty. Satisfied customers are more likely to return for future purchases. Therefore, PT Bank Syariah Indonesia should consistently uphold the product quality of BSI Mobile to ensure the company's sustainability and strive for optimal customer satisfaction while preserving its competitive advantages.

6. Conclusions and Suggestions

6.1. Conclusion

The following findings can be taken from the research conducted:

1. Based on hypothesis testing 1 (H_1), service quality significantly affects customer loyalty.
2. Based on hypothesis testing 2 (H_2), price significantly affects customer loyalty.
3. Based on hypothesis testing 3 (H_3), product quality does not have a significant impact on customer loyalty.
4. Based on hypothesis testing 4 (H_4), customer satisfaction significantly affects customer loyalty.
5. Based on hypothesis testing 5 (H_5), service quality significantly affects customer satisfaction.
6. Based on hypothesis testing 6 (H_6), price does not have a significant impact on customer satisfaction.
7. Based on hypothesis testing 7 (H_7), product quality significantly affects customer satisfaction.

6.2. Suggestion and Limitations

The research process still has several limitations that have been identified. The factors influencing customer loyalty in this study only include three factors: service quality, price, and product quality of the BSI Mobile application. These three factors do not fully represent the entirety of the BSI Mobile application in measuring customer loyalty. Subsequent research can examine other factors in BSI Mobile's digital domain, such as E-Servqual, E-Price, E-Product Quality, E-Satisfaction, and E-Loyalty. The resulting research model is also narrow. Therefore, a recommendation for future research is to find a broader research model.

References

- Ali, B. J., Gardi, B., Jabbar Othman, B., Ali Ahmed, S., Burhan Ismael, N., Abdalla Hamza, P., . . . Anwar, G. (2021). Hotel service quality: The impact of service quality on customer satisfaction in hospitality. *International Journal of Engineering, Business and Management*, 5(3), 14-28.
- 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. *European Journal of Marketing*, 18(4), 36-44. <https://doi.org/10.1108/EUM000000004784>
- Alzoubi, H., Alshurideh, M., Kurdi, B., Akour, I., & Aziz, R. (2022). Does BLE technology contribute towards improving marketing strategies, customers' satisfaction and loyalty? The role of open innovation. *International Journal of Data and Network Science*, 6(2), 449-460. <https://doi.org/10.5267/ij.dns.2021.12.009>
- Amri, W. A., Ainul, Asbari, M., Gazali, G., Novitasari, D., & Purwanto, A. (2021). The effect of religiosity and service quality on job satisfaction: A case study of MSME employees. *International Journal of Social and Management Studies*, 2(1), 53-63.
- Andri, P., Jasfar, F., & Kristaung, R. (2022). Effect of product, distribution and service quality on customer loyalty through customer satisfaction at Indonesian marketplace. *Devotion Journal of Community Service*, 3(4), 321-330. <https://doi.org/10.36418/dev.v3i4.122>
- Arif, M., & Syahputri, A. (2021). The influence of brand image and product quality on customer loyalty with consumer satisfaction as a intervening variable at home industry. *Journal of International Conference Proceedings*, 4(2), 398-412. <https://doi.org/10.32535/jicp.v4i2.1274>
- Bansaleng, J. M., Sepang, J. L., & Tampenawas, J. L. A. (2021). The influence of product quality, service quality, and product prices on customer satisfaction with Xl card users in Manado. *Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi*, 9(3), 331-340.
- Capriati, Z. F. (2023). The influence of product and price diversity on customer satisfaction and its impact on minimarket customer loyalty at the Visiana Bakti Tvri Cooperative, Jakarta. *Scientific Journal of Reflection: Economic, Accounting, Management and Business*, 6(1), 170-177. <https://doi.org/10.37481/sjr.v6i1.631>
- Dewi, D., Hajadi, F., Handranata, Y., & Herlina, M. (2021). The effect of service quality and customer satisfaction toward customer loyalty in service industry. *Uncertain Supply Chain Management*, 9(3), 631-636.
- Erinawati, F., & Syafarudin, A. (2021). Effect of service quality, price, promotion on decisions. *Jurnal Valuasi: Jurnal Ilmiah Ilmu Manajemen dan Kewirausahaan*, 1(1), 130-146.
- Erlinda, U. E., Purnama, S., & Tamzil, F. (2022). The effect of service quality, product quality, and chatime product promotion on customer satisfaction case study of chatime customers in the Central Jakarta region. *APTISI Transactions on Management*, 6(1), 42-51. <https://doi.org/10.33050/atm.v6i1.1680>
- Grace, E., Girsang, R. M., Simatupang, S., Candra, V., & Sidabutar, N. (2021). Product quality and customer satisfaction and their effect on consumer loyalty. *International Journal of Social Science*, 1(2), 69-78.
- Hair, J. F., Babin, B. J., Anderson, R. E., & Black, W. C. (2019). *Multivariate data analysis* (8th ed.). England: Pearson Prentice.
- Hariyono, I., Ruspitasari, W. D., & Handoko, Y. (2023). The effect of price, product quality and customer trust on customer loyalty. *Bursa: Jurnal Ekonomi dan Bisnis*, 2(1), 179-188. <https://doi.org/10.59086/jeb.v2i1.245>
- Herawaty, M. T., Aprillia, A., Rahman, A., Rohimah, L., Taruna, H. I., Styaningrum, E. D., & Suleman, D. (2022). The influence of service quality and price on alfamart consumer loyalty with customer satisfaction as mediation variables. *International Journal of Social and Management Studies*, 3(2), 246-257.
- Islam, T., Islam, R., Pitafi, A. H., Xiaobei, L., Rehmani, M., Irfan, M., & Mubarak, M. S. (2021). The impact of corporate social responsibility on customer loyalty: The mediating role of corporate reputation, customer satisfaction, and trust. *Sustainable Production and Consumption*, 25, 123-135. <https://doi.org/10.1016/J.SPC.2020.07.019>
- Lin, Y.-H., Lin, F.-J., & Wang, K.-H. (2021). The effect of social mission on service quality and brand image. *Journal of Business Research*, 132(C), 744-752. <https://doi.org/10.1016/j.jbusres.2020.10.054>
- Lubis, A., Dalimunthe, R., Absah, Y., & Fawzee, B. K. (2021). The effect of corporate communication and service quality on customer loyalty and satisfaction in Sharia Banking. *The Journal of Asian Finance, Economics and Business*, 8(3), 1267-1274. <https://doi.org/10.13106/JAFEB.2021.VOL8.NO3.1267>

- Mappatempo, A., Asrawan, A., & Romadhoni, B. (2022). Switching intention in mediating the relationship between price, location and consumer satisfaction. *Jurnal Manajemen Sains Dan Organisasi*, 3(3), 176-183. <https://doi.org/10.52300/jmso.v3i3.8179>
- Marliyah, M., Ridwan, M., & Sari, A. K. (2021). The effect of E-Service quality on satisfaction and its impact on customer loyalty of mobile banking users case study of bank Syariah Mandiri KCP Belawan. *Budapest International Research and Critics Institute-Journal*, 4(2), 2717-2729. <https://doi.org/10.33258/BIRCI.V4I2.1980>
- Othman, B. A., Harun, A., De Almeida, N. M., & Sadq, Z. M. (2020). The effects on customer satisfaction and customer loyalty by integrating marketing communication and after sale service into the traditional marketing mix model of Umrah travel services in Malaysia. *Journal of Islamic Marketing*, 12(2), 363-388. <https://doi.org/10.1108/jima-09-2019-0198>
- Pramudita, D. T., Gunawan, N. F., Ningsih, M. C., & Adilah, R. (2022). Determination of customer satisfaction and customer loyalty: Price and product quality literature review marketing management. *Jurnal Manajemen Pendidikan Dan Ilmu Sosial*, 3(1), 424-436. <https://doi.org/10.38035/jmpis.v3i1.1004>
- Pratama, A. (2021). *BSI makes mobile banking a Locomotive for Sharia economic development*. Retrieved from <https://www.inews.id/Finance/Keuangan/Bsi-Jadikan-Mobile-Banking-Sebagai-Lokomotif-Pengembangan-Ekonomi-Syariah>
- Rachmawati, N. P., & Santika, I. W. (2022). The role of satisfaction in mediation the influence of product quality on customer loyalty of face-makeup products. *European Journal of Business and Management Research*, 7(3), 52-56. <https://doi.org/10.24018/ejbmr.2022.7.3.1290>
- Sapitri, L., & Onsardi, O. (2021). The effect of brand image and product quality toward wardah cosmetics consumers' loyalty as a study on students management study program, faculty of economics and business, Muhammadiyah University of Bengkulu. *Jurnal Ekonomi, Manajemen, Bisnis dan Akuntansi Review*, 1(2), 139-146.
- Saputra, A. J., & Djumarno, D. (2021). Effect of price and service quality on customer satisfaction and its implications for customer loyalty at Aston pluit hotel & residence Jakarta. *Dinasti International Journal of Economics, Finance & Accounting*, 2(1), 71-84. <https://doi.org/10.38035/dijefa.v2i1.728>
- Sasongko, S. R. (2021). Faktor-faktor kepuasan pelanggan dan loyalitas pelanggan literature review manajemen pemasaran. *Jurnal Ilmu Manajemen Terapan*, 3(1), 104-114. <https://doi.org/10.31933/jimt.v3i1.707>
- Sirait, R. M. (2021). The influence of local brand image and product quality on customer loyalty at PT. Sinar Menara Deli Medan. *Jurnal Global Manajemen*, 10(1), 38-45. <https://doi.org/10.46930/global.v10i1.1133>
- Sisca, S., Wijaya, A., Chandra, E., & Mailoli, J. (2022). The effect of product variation on consumer satisfaction in family courses and training institutions (LKP): Price as moderation. *Maker: Jurnal Manajemen*, 8(1), 101-108. <https://doi.org/10.37403/mjm.v8i1.466>
- Syafarudin, A. (2021). The effect of product quality on customer satisfaction implications on customer loyalty in the Era Covid-19. *Ilomata International Journal of Tax and Accounting*, 2(1), 71-83. <https://doi.org/10.52728/IJTC.V2I1.204>
- Syahidin, S., & Adnan, A. (2022). Analysis of the effect of price and location on customer satisfaction at the Andika Teknik Kemili Bebesen Takengon workshop. *Gajah Putih Journal of Economics Review*, 4(1), 20-32. <https://doi.org/10.55542/gpjer.v4i1.209>
- Taufik, A., Santoso, S., Fahmi, M. I., Restuanto, F., & Yamin, S. (2022). The role of service and product quality on customer loyalty. *Journal of Consumer Sciences*, 7(1), 68-82. <https://doi.org/10.29244/jcs.7.1.68-82>
- Wiharso, G., Prasetyo, J. H., Prakoso, B. S., & Fabrianto, L. (2022). The effect of mobile banking product quality on customer satisfaction of Indonesian Sharia bank Jakarta Wolter Monginsidi branch. *Matriks Jurnal Sosial Sains*, 3(2), 80-88. <https://doi.org/10.36418/matriks.v3i2.90>
- Yaşhoğlu, M. M., & Yaşhoğlu, D. T. (2020). How and when to use which fit indices? A practical and critical review of the methodology. *Istanbul Management Journal* 88(88), 1-20. <https://doi.org/10.26650/IMJ.2020.88.0001>
- Yusfiarto, R. (2021). The relationship between M-banking service quality and loyalty: Evidence in Indonesian Islamic banking. *Asian Journal of Islamic Management*, 3(1), 23-33. <https://doi.org/10.20885/AJIM.VOL3.ISS1.ART3>
- Zeba, F., Royne Stafford, M., & Shaheen, M. (2022). Understanding hedonic and utilitarian routes to loyalty through satisfaction and delight: Evidence from the fine-dining industry in India. *Journal of Food Service Business Research*, 25(5), 1-28. <https://doi.org/10.1080/15378020.2022.2131979>