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Multiple Regression of Service Quality, Customer Loyalty, and User Satisfaction in Mobile Banking Migration

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Abstract-The migration of mobile banking applications represents a strategic challenge in banking digital transformation, as it can enhance service capabilities while simultaneously posing risks of decreased user satisfaction due to system and interface changes. This study aims to analyze the influence of service quality and customer loyalty on user satisfaction during the application migration process from BSI Mobile to BYOND by BSI. A quantitative approach was employed, involving 50 active users of Bank Syariah Indonesia who had transitioned to the BYOND by BSI application. This sample size is considered adequate for multiple linear regression analysis in an explanatory study. Service quality was measured using the five SERVQUAL dimensions: tangibles, reliability, responsiveness, assurance, and empathy. Customer loyalty was assessed through the dimensions of repeat usage, advocacy, trust, and commitment, while user satisfaction was measured based on content, accuracy, format, ease of use, and timeliness. Reliability testing results indicate that all instruments are highly reliable (α service quality = 0.988; α customer loyalty = 0.945; α user satisfaction = 0.960). Multiple linear regression analysis reveals that service quality has a significant effect on user satisfaction (B = 0.091; t = 4.313; $p < 0.001$), whereas customer loyalty exhibits the most dominant influence (B = 0.781; t = 22.143; $p < 0.001$). Simultaneously, both variables explain 96.9% of the variance in user satisfaction ($R^2 = 0.969$; F = 734.559; $p < 0.001$). These findings confirm that, in the context of mobile banking application migration, customer loyalty plays a stronger role than service quality in maintaining user satisfaction, while acknowledging the limitations related to location and respondent characteristics. This study contributes empirically by demonstrating that customer loyalty can mitigate user resistance to digital system changes, making it a key factor in the successful migration of Islamic banking applications such as BYOND by BSI.

Keywords: Service Quality; Customer Loyalty; User Satisfaction; Mobile Banking; Islamic Banking

1. INTRODUCTION

The rapid advancement of digital technology has significantly transformed the banking industry through the widespread adoption of mobile banking as a primary channel for financial transactions. Digital banking services enable users to conduct transactions quickly, securely, and flexibly, thereby accelerating the global growth of mobile banking usage. (Abu-Taieh et al., 2022) emphasize that digital service quality encompassing system reliability, security, and ease of use is a critical determinant of sustained mobile banking adoption. Other international studies further indicate that application feature quality, interface design, and user trust have a direct and significant impact on mobile banking user satisfaction (Gazi et al., 2024). In addition, (Kumalasari et al., 2022) argue that system quality, information quality, and service quality are the main determinants influencing user satisfaction and loyalty, highlighting the importance of integrating all components of digital banking services.

In Indonesia, banking digitalization has also experienced substantial growth. Data from Bank Indonesia show that the value of digital banking transactions reached IDR 5,784 trillion in 2023 and continues to increase alongside the widespread use of mobile banking channels. Research by (Caroline & Witono, 2025) demonstrates that customer trust and perceived security significantly influence the acceptance of mobile banking services. These findings suggest that the success of digital banking transformation depends not only on technological innovation but also on banks' ability to maintain service quality and foster user trust. Within this context, Bank Syariah Indonesia (BSI), the largest Islamic bank in Indonesia, has accelerated its digital transformation by continuously developing mobile banking services to meet customers' evolving expectations.

Digital banking transformation extends beyond service feature enhancement and also involves application migration processes, such as the transition from BSI Mobile to the newly launched BYOND by BSI application. Application migration represents a critical phase in digital transformation, as it has the potential to enhance users' digital experiences while simultaneously posing challenges related to user adaptation, interface changes, and potential technical disruptions. (Mulyati et al., 2024) indicate that service quality and trust in technology significantly influence user experience and switching intentions during digital system changes. Similarly, (Akob, 2022) emphasizes that ineffective management of user experience during application migration can lead to substantial declines in customer satisfaction and loyalty. In the Islamic banking sector, digital service quality plays an even more prominent role, as customers evaluate not only technical convenience but also security, reliability, and trustworthiness in accordance with Sharia principles. (Gazi et al., 2024) find that digital service quality in Islamic banks has a strong influence on customer satisfaction. This is further supported by (Rahmatika, 2022), who reports that digital service quality and customer trust significantly affect mobile banking user satisfaction in Islamic banking institutions. Furthermore, (Mulyati et al., 2024) reveal that digital transformation in Islamic banks enhances customer satisfaction by improving the efficiency and stability of mobile banking services. (Afriliyana et al., 2023) also confirm that customer trust in the security and reliability of mobile banking applications directly influences user satisfaction and loyalty.

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Geographically, Palu City represents a relevant research setting due to its growing digital economic development, as reflected in regional economic reports released by Bank Indonesia for Central Sulawesi. Field observations indicate that the migration process from BSI Mobile to BYOND by BSI in Palu City has occurred relatively rapidly, driven by increasing user demand for more modern, faster, and more stable digital banking services. Nevertheless, this transition phase remains susceptible to temporary declines in user satisfaction, particularly in the presence of system disruptions, transaction delays, or difficulties in adapting to new features. Beyond service quality, customer loyalty constitutes a crucial determinant in maintaining user satisfaction during application migration. . (Barjaktarovic Rakocevic et al., 2025) assert that digital service satisfaction is influenced by user expectations, perceived risk, and technology-based service quality. In the context of application migration, customer loyalty functions as a buffering factor that can mitigate user resistance to system changes, as loyal customers tend to exhibit greater tolerance toward temporary service disruptions.

Although numerous studies have examined the relationships among service quality, user satisfaction, and customer loyalty in mobile banking, research that specifically focuses on the application migration phase remains limited, particularly within the context of Islamic banking in Indonesia. Most prior studies assess user satisfaction under relatively stable service conditions rather than during critical and high-risk digital transition phases. In fact, the application migration stage represents the most vulnerable point in digital banking transformation, as it can significantly influence trust, loyalty, and long-term mobile banking usage sustainability. The lack of empirical investigation at this stage may lead banks to inadequately manage user experiences, despite ongoing advancements in digital features and technologies.

While previous literature has extensively explored user satisfaction in digital banking, a significant research gap remains regarding the specific dynamics during the critical phase of system migration. Most existing studies, such as those by (Gazi et al., 2024) and (Kumalasari et al., 2022), predominantly focus on user satisfaction in stable, fully operational mobile banking environments. They often overlook the volatility and friction inherent in the transition period, where users are forced to adapt to new interfaces and workflows. This study bridges that gap by isolating the 'migration effect' specifically analyzing how established customer loyalty functions as a buffer against potential dissatisfaction caused by the technical adjustments of a new system. Furthermore, this research differentiates itself through its methodological focus on the Islamic banking sector. Unlike conventional banking studies, this research integrates the unique behavioral characteristics of Islamic bank customers, who value not only technical reliability (Service Quality) but also the emotional and ethical commitment (Loyalty) to the institution. By employing Multiple Linear Regression analysis, this study offers a precise explanatory model to quantify the comparative strength of Service Quality versus Customer Loyalty in driving satisfaction. This comparative approach provides a more nuanced understanding than simple descriptive studies, offering empirical evidence on which factor is more critical to prioritize during a digital overhaul.

Based on these considerations, this study aims to analyze the effects of service quality and customer loyalty on user satisfaction during the application migration process from BSI Mobile to BYOND by BSI in Palu City. This research offers novelty by focusing explicitly on the migration phase of Islamic mobile banking applications, a topic that has received limited attention in prior studies, particularly within the regional context of Eastern Indonesia. Theoretically, this study contributes to the enrichment of Islamic digital banking literature by positioning user satisfaction within the dynamics of digital system change. Practically, the findings are expected to provide Bank Syariah Indonesia with strategic insights for designing more adaptive, user-experience-oriented application migration management strategies capable of sustaining customer satisfaction and loyalty over the long term.

2. RESEARCH METHODS

2.1 Basic Research Framework

This study employs an explanatory quantitative approach, which aims to examine causal relationships between independent and dependent variables using measurable empirical data. This approach is selected because it allows for the analysis of both direct and simultaneous effects of Service Quality (X1) and Customer Loyalty (X2) on User Satisfaction (Y) during the digital banking application migration process from BSI Mobile to BYOND by BSI in Palu City. The research population consists of all active users of Bank Syariah Indonesia (BSI) in Palu City who have migrated to or are currently using the BYOND by BSI application. A purposive sampling technique was applied using the following criteria:

a. Having previously used the BSI Mobile application,
b. Having used BYOND by BSI for at least one month, and
c. Residing in Palu City.

The study sample comprises 50 respondents, which meets the minimum statistical adequacy for regression analysis (Memon et al., 2025)**.** Data were collected through an online questionnaire (Google Forms) using a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).

2.2 Research Procedures

This study follows a systematic and structured research flow to ensure the validity and reliability of the findings. As illustrated in Figure 1, the research stages began with identifying the core problem regarding potential user resistance during the migration from BSI Mobile to BYOND by BSI in Palu City. Following the problem identification, a comprehensive literature review was conducted to establish the theoretical foundation for Service Quality, Customer

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Loyalty, and User Satisfaction variables. The data collection stage involved distributing online questionnaires to 50 active users selected through purposive sampling.

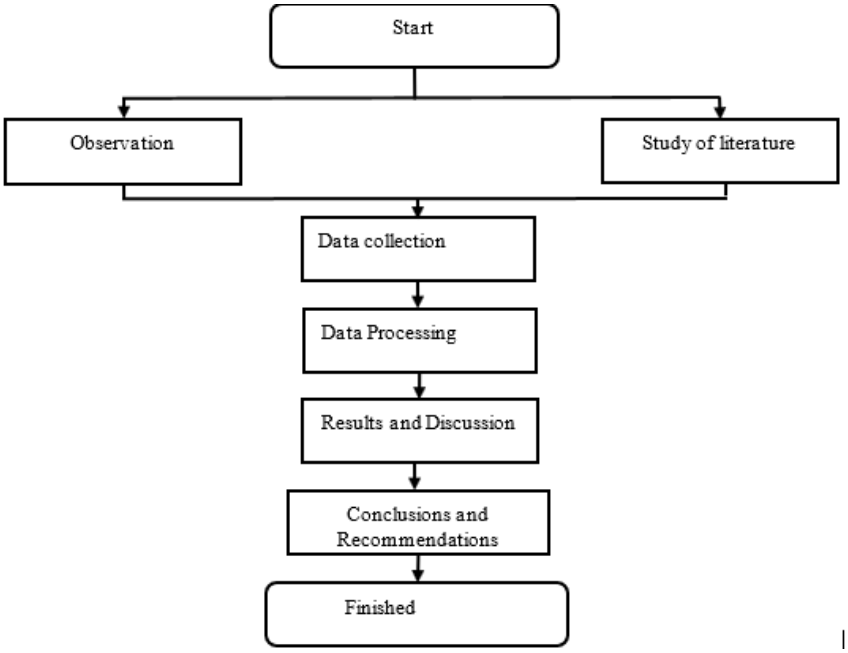

Figure 1. Research Flowchart Procedures

Once the data was collected, the research proceeded to the data processing stage using SPSS software. This stage commenced with instrument testing, specifically validity and reliability tests, to ensure that the questionnaire items accurately measured the intended constructs. Subsequently, the classical assumption tests including normality, multicollinearity, and heteroscedasticity tests were performed to verify that the data met the prerequisites for regression analysis. The final stage involved hypothesis testing using Multiple Linear Regression Analysis to determine the magnitude of the influence of independent variables on the dependent variable, followed by drawing conclusions and formulating recommendations for the banking management.

2.3 Research Variables and Indicators

Service quality was measured using the SERVQUAL model (Huwaida et al., 2024), consisting of five dimensions with a total of 15 measurement items: a) Tangibles: completeness of facilities, attractive application interface, and professionalism of BSI staff. b) Reliability: consistency of services, accuracy of transaction information, and minimal processing errors. c) Responsiveness: speed of staff response and ease of accessing help features. d) Assurance: data security, transparency of fees, and staff competence. e) Empathy: attention to user needs, provision of digital education, and openness to user feedback.

Customer loyalty was measured by adapting the loyalty dimensions proposed by (Syahira et al., 2024), consisting of 11 measurement items across the following dimensions: a) Repeat Purchase: frequency of transactions and preference for BYOND by BSI features. b) Advocacy: willingness to recommend the application and share positive experiences. c) Commitment: intention to continue using the application despite system updates. d) Trust: confidence in service security, reliability, and transparency.

User satisfaction was measured using the User Information Satisfaction (UIS) model (Fadhliah & Putra 2024), consisting of 10 measurement items across the following dimensions: a) Content: completeness of balance information, transaction history, and feature updates. b) Accuracy: correctness and consistency of transaction data. c) Format: clarity of display layout and ease of reading icons and menus. d) Ease of Use: ease of navigation and transaction speed. e) Timeliness: promptness of information delivery and service updates.

The questionnaire was validated through expert judgment by lecturers specializing in management and information systems. Instrument reliability was subsequently tested using Cronbach's Alpha, yielding the following results: a) αX1 (Service Quality) = 0.988, b) αX2 (Customer Loyalty) = 0.945, c) αY (User Satisfaction) = 0.960. And all variables demonstrate very high reliability ($\alpha > 0.70$).

2.4 Data Analysis Technique and Algorithms

To solve the research problem and measure the causal relationships between variables, this study employs the Multiple Linear Regression algorithm. This method was selected because it allows for the simultaneous analysis of how Service Quality (X1) and Customer Loyalty (X2) predict the variance in User Satisfaction (Y). The regression model used in this study is mathematically formulated as follows:

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$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + e \quad (1)$$

Y = User Satisfaction (Dependent Variable)
α = Constant value
β_1, β_2 = Regression coefficients for each independent variable
X_1 = Service Quality (measured via Tangibles,Reliability,Responsiveness,Assurance,Empathy)
X_2 = Customer Loyalty (measured via Repeat Purchase,Advocacy,Commitment,Trust)
e = Error term

Furthermore, the measurement of Service Quality adopts the SERVQUAL algorithm approach adapted for digital banking contexts. This method calculates the performance perception score to determine its direct impact on satisfaction during the critical migration phase.

2.6 Conceptual Framework

The conceptual framework in this study explains the causal relationship between Service Quality (X1) and Customer Loyalty (X2) toward User Satisfaction (Y) during the migration process from BSI Mobile to BYOND by BSI. Service Quality is measured using the SERVQUAL dimensions consisting of tangible, reliability, responsiveness, assurance, and empathy, while Customer Loyalty is measured through repeat purchase, advocacy, commitment, and trust. User Satisfaction is assessed based on content, accuracy, format, ease of use, and timeliness. Both independent variables (X1 and X2) are assumed to have partial as well as simultaneous effects on User Satisfaction (Y). Based on this relationship, the research hypotheses are formulated as follows:
H1: Service Quality (X1) and Customer Loyalty (X2) simultaneously affect User Satisfaction (Y).
H2: Service Quality (X1) partially affects User Satisfaction (Y).
H3: Customer Loyalty (X2) partially affects User Satisfaction (Y).
The conceptual framework of this research is presented in Figure 2.

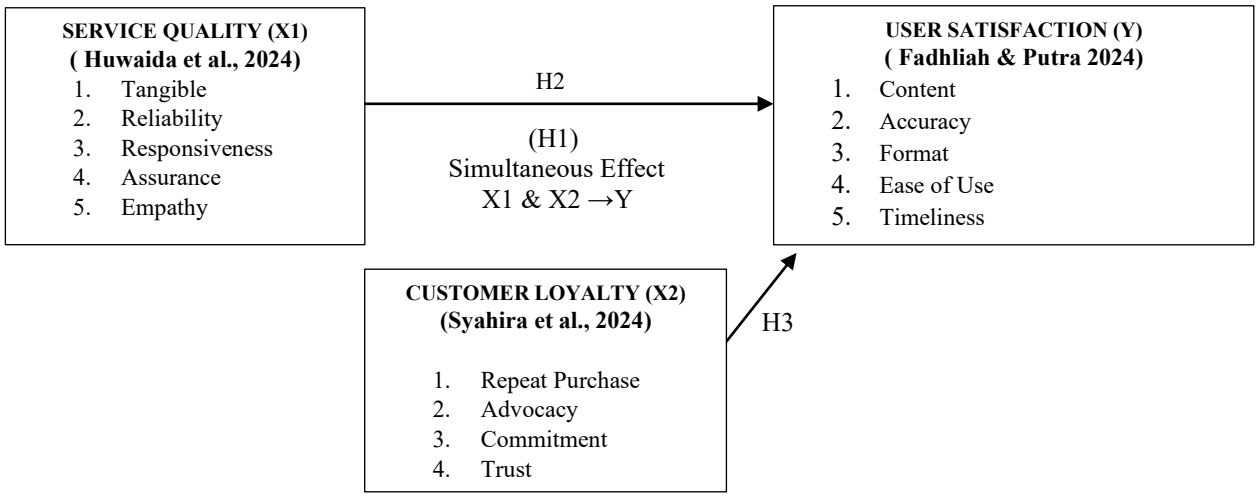

Figure 2. Conceptual Framework of the Research

3. RESULTS AND DISCUSSION

3.1 Instrument Validity and Reliability Test

Prior to conducting descriptive and inferential analyses, the research instruments (questionnaires) used to measure Service Quality (X1), Customer Loyalty (X2), and User Satisfaction (Y) underwent a data quality assessment, including validity and reliability tests. The validity test ensures that each questionnaire item accurately measures the intended construct, while the reliability test assesses the consistency of the measurement instrument.

3.1.1 Validity Test

The validity test was conducted to evaluate the ability of each item to represent the variables Service Quality (X1), Customer Loyalty (X2), and User Satisfaction (Y). The Pearson Product Moment correlation was used, with the criterion that an item is considered valid if the calculated correlation coefficient (r-count) exceeds the r-table value. In this study, the sample consisted of 50 respondents, yielding 48 degrees of freedom (df). At a 5% significance level ($\alpha = 0.05$), the r-table value was 0.2787.

Prior to further analysis, the research data were subjected to the Results of Service Quality Validity Test, the results of which are shown in the following table:

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Table 1 Results of Service Quality Validity Test (X1 **)**

No	Service Quality Indicators	r-count	r table	Description
1	I feel that BYOND by BSI's service facilities are comprehensive and support my transactions. (X1.1)	0.938	0.2787	Valid
2	I found the BYOND by BSI app's interface comfortable and easy to use. (X1.2)	0.940	0.2787	Valid
3	I feel that BSI (Bank Syariah Indonesia) employees are well-dressed and professionally focused. (X1.3)	0.941	0.2787	Valid
4	I feel that BYOND by BSI's services are consistently operating according to procedures. (X1.4)	0.949	0.2787	Valid
5	I feel the balance and transaction information displayed is accurate. (X1.5)	0.945	0.2787	Valid
6	I find that the transaction process through BYOND by BSI rarely experiences errors. (X1.6)	0.959	0.2787	Valid
7	I felt that the BSI (Bank Syariah Indonesia) employees or customer service responded to my questions quickly. (X1.7)	0.939	0.2787	Valid
8	I feel that BSI (Bank Syariah Indonesia) employees are ready to help me when I encounter problems. (X1.8)	0.937	0.2787	Valid
9	I found the help features in the BYOND by BSI app easy to find and use. (X1.9)	0.945	0.2787	Valid
10	I feel my data and transactions are secure when using BYOND by BSI. (X1.10)	0.903	0.2787	Valid
11	I feel that BSI (Bank Syariah Indonesia) employees have good problem-solving skills. (X1.11)	0.925	0.2787	Valid
12	I felt that the procedures and service fees were explained clearly and transparently. (X1.12)	0.899	0.2787	Valid
13	I feel that BSI (Bank Syariah Indonesia) employees are attentive to my needs as a user. (X1.13)	0.917	0.2787	Valid
14	I found the BYOND by BSI app to provide helpful guidance and education. (X1.14)	0.884	0.2787	Valid
15	I feel that BSI (Bank Syariah Indonesia) employees are open to receiving suggestions and questions from me. (X1.15)	0.872	0.2787	Valid

Prior to further analysis, the research data were subjected to the **2**Loyalty Validity Test, the results of which are shown in the following table:

Table 3 Loyalty Validity Test (X2)

No	Customer Loyalty Indicators	r-count	r table	Information
1	I use BYOND by BSI regularly for my financial transactions. (X2.1)	0.414	0.2787	Valid
2	I prefer BYOND by BSI's features over other apps. (X2.2)	0.840	0.2787	Valid
3	I am willing to recommend BYOND by BSI to family or friends. (X2.3)	0.863	0.2787	Valid
4	I often share my positive experiences about BYOND by BSI. (X2.4)	0.847	0.2787	Valid
5	I sometimes share my experiences with BYOND by BSI on social media or in communities. (X2.5)	0.882	0.2787	Valid
6	I still use BYOND by BSI even though there are other banking apps. (X2.6)	0.839	0.2787	Valid
7	I intend to use BYOND by BSI in the long term. (X2.7)	0.848	0.2787	Valid
8	I'm still using BYOND by BSI despite the system update. (X2.8)	0.777	0.2787	Valid
9	I believe BSI's (Bank Syariah Indonesia) digital services are consistent and reliable. (X2.9)	0.862	0.2787	Valid
10	I am confident that my data and transactions are always safe. (X2.10)	0.751	0.2787	Valid
11	I believe BSI is transparent in providing information on costs and service procedures. (X2.11)	0.880	0.2787	Valid

Prior to further analysis, the research data were subjected to the 4Satisfaction Validity Test, the results of which are shown in the following table:

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Table 5Satisfaction Validity Test (Y)

No	User Satisfaction Indicators	r-count	r table	Information
1	I am satisfied because the information provided in BYOND by BSI is always in accordance with service changes (Y1)	0.834	0.2787	Valid
2	I'm satisfied because the app provides comprehensive information on balances, transactions, and features (Y2)	0.884	0.2787	Valid
3	I am satisfied because the transaction data displayed is accurate (Y3)	0.918	0.2787	Valid
4	I am satisfied that the app information is consistent every time I check it. (Y4)	0.919	0.2787	Valid
5	I am satisfied because the appearance and menu of the application are neat and easy to understand (Y5)	0.891	0.2787	Valid
6	I am satisfied because the fonts and icons make it easier for me to read the information. (Y6)	0.938	0.2787	Valid
7	I was satisfied because I could find the features and menus in BYOND by BSI easily without any difficulty. (Y7)	0.926	0.2787	Valid
8	I feel comfortable because the transaction process is fast and hassle-free (Y8)	0.887	0.2787	Valid
9	I feel at ease because the transaction was processed quickly. (Y9)	0.730	0.2787	Valid
10	I am satisfied because the update information was delivered quickly and clearly. (Y10)	0.619	0.2787	Valid

Based on the test results, all indicators across the three variables had calculated r-values higher than the critical r-value (0.2787). Therefore, all questionnaire items are considered valid and suitable for use as data collection instruments in this study.

3.1.2 Reliability Test

The reliability test was conducted to determine the internal consistency of the research instruments using Cronbach's Alpha coefficient. A variable is considered reliable if its Cronbach's Alpha value is greater than 0.70.

Table 4. Reliability Test Results of Research Variables

Variables	Cronbach's alpha	Number of Items	Information
Service quality (X1)	0.988	15	Reliable
Customer Loyalty (X2)	0.945	11	Reliable
User Satisfaction (Y)	0.960	10	Reliable

Based on Table 4, all variables have Cronbach's Alpha values above 0.90, indicating a very high level of reliability. This suggests that the research instruments possess excellent internal consistency, ensuring that the data generated are trustworthy and suitable for further analysis.

3.2 Descriptive Statistics of Variables

Descriptive statistical analysis was conducted to illustrate respondents' perceptions of the indicators forming the variables Service Quality (X1), Customer Loyalty (X2), and User Satisfaction (Y) in the BYOND by BSI application during the digital service system migration process.

3.2.1 Descriptive Statistics of Service Quality (X1)

Table 5. Descriptive Statistics of Service Quality (X1)

No	Service Quality Indicators	N	Means	Standard Deviation	Information
1	Complete BYOND by BSI service facilities	50	4.08	0.899887	
2	The application display is comfortable and easy to use	50	4.08	0.899887	
3	BSI employees look neat and professional	50	4.14	0.808375	Highest
4	BYOND by BSI services are consistent according to procedures	50	4.08	0.899887	
5	Accurate balance/transaction information	50	4.12	0.824126	
6	The transaction process rarely experiences errors.	50	4.02	0.936559	
7	BSI CS answers questions quickly	50	4.10	0.839096	
8	BSI employees are ready to help when problems arise	50	4.08	0.853325	
9	The help feature in the app is easy to find.	50	4.10	0.863075	
10	Secure data and transactions when using BYOND by BSI	50	4.06	0.912722	

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No	Service Quality Indicators	N	Means	Standard Deviation	Information
11	BSI employees have the ability to solve problems	50	4.04	0.856190	
12	Procedures & costs are clear & transparent	50	3.92	0.944155	
13	BSI employee service to user needs	50	3.90	0.931315	Lowest
14	The BYOND by BSI app provides guidance/education	50	3.90	0.974156	Lowest
15	BSI employees are open to suggestions and questions	50	3.92	0.922286	
	Total X1		60.54	12.368838	

Based on Table 5, the indicator "BSI employees appear neat and act professionally" (X1.3) obtained the highest mean score of 4.14. This indicates that the professionalism of BSI employees is perceived very positively by users of the BYOND by BSI application. Conversely, the indicators "BSI employees pay attention to user needs" (X1.13) and "BYOND by BSI provides helpful guidance or educational resources" (X1.14) had the lowest mean scores, each at 3.90. These findings suggest a need for improvement in communication, user education, and personalized attention, particularly to support user adaptation during the digital system migration process.

3.2.2 Descriptive Statistics of Customer Loyalty (X2)

Table 6. Descriptive Statistics of Customer Loyalty (X2)

No.	Customer Loyalty Indicators	N	Means	Standard Deviation	Information
1	Routine use of BYOND by BSI for transactions	50	4.02	0.246610	Highest
2	Prefer BYOND by BSI features over other apps	50	4.00	0.755929	
3	Willing to recommend BYOND by BSI	50	4.00	0.857143	
4	Often share positive experiences about BYOND by BSI	50	3.98	0.795138	
5	Sometimes share experiences on social media	50	3.94	0.890081	
6	Keep using BYOND by BSI even if you have other bank applications	50	4.02	0.769044	Highest
7	Intend to use BYOND by BSI long term	50	3.84	0.865672	
8	Continue using BYOND by BSI even if there is a system update	50	3.96	0.807111	
9	Trust BSI's consistent & reliable digital services	50	3.66	0.871546	Lowest
10	Be sure your data & transactions are always safe	50	3.78	0.953832	
11	Trust BSI transparent service fees & procedures	50	3.92	1.084962	
	Total X2		43.12	7.364116	

Based on Table 6, the indicators "Routine use of BYOND by BSI for financial transactions" (X2.1) and "Continue using BYOND by BSI despite other banking apps" (X2.6) show the highest mean score of 4.02. This reflects a strong user retention and preference for the BYOND by BSI application. However, the indicator "Trust in the consistency and reliability of BSI digital services" (X2.9) had the lowest mean score of 3.66. These findings suggest that, while user loyalty is relatively high, there is still room for improvement in maintaining stability and reliability to strengthen long-term loyalty.

3.2.3 Descriptive Statistics of User Satisfaction (Y)

Table 7. Descriptive Statistics of User Satisfaction (Y)

No.	User Satisfaction Indicators	N	Average	Standard Deviation	Information
1	BYOND by BSI information according to service changes	50	4.20	0.880631	
2	The application provides complete balance/transaction/feature information.	50	4.38	0.725343	Highest
3	The transaction data displayed is accurate	50	4.30	0.788954	
4	Application information is always consistent	50	4.26	0.803309	
5	The application display/menu is neat & easy to understand	50	4.30	0.788954	
6	Fonts/icons make it easier to read information	50	4.24	0.893514	
7	Easy to find features/menus in BYOND by BSI	50	4.22	0.763718	
8	Fast and hassle-free transaction process	50	4.18	0.800255	
9	Transactions are processed quickly	50	3.92	0.695173	Lowest
10	Update information is delivered quickly & clearly	50	3.86	0.700146	Lowest
	Total Y		41.86	6.737074	

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Based on Table 7, the indicator "Application provides complete information on balance, transactions, and features" (Y2) obtained the highest mean score of 4.38. This finding confirms that completeness of information and features is a key factor driving user satisfaction with the BYOND by BSI application. Conversely, the indicators "Transactions are processed quickly" (Y9) and "Updates are delivered quickly and clearly" (Y10) had the lowest mean scores, at 3.92 and 3.86, respectively. This suggests that transaction processing speed and timely delivery of updates are critical aspects that need improvement to enhance overall user satisfaction.

3.3 Hypothesis Testing

Hypothesis testing was conducted to examine the effects of Service Quality (X1) and Customer Loyalty (X2) on User Satisfaction (Y), both simultaneously and partially.

3.3.1 Simultaneous Test (F-Test)

Table 6. ANOVA – Simultaneous Effect of X1 and X2 on Y

ANOVA						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2155.074882	2	1077.537441	734.559	<0.001
	Residual	68.945118	47	1.466917		
	Total	2224.020000	49			

a. Dependent Variable: User Satisfaction
b. Predictors: (Constant), Service Quality, Customer Loyalty

Based on Table 8, the F-value is 734.559 with a significance level of < 0.001. Since the F-value exceeds the F-table value (3.19) and the significance is below 0.05, the hypothesis stating that Service Quality and Customer Loyalty simultaneously have a significant effect on User Satisfaction is accepted. This finding indicates that the success of BYOND by BSI digital services is determined by a combination of perceived service quality and the level of user loyalty toward the banking institution.

3.3.2 Partial Test (t-Test)

Table 7. Coefficients – Partial Effect of X1 and X2 on Y

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.684872	1.036556		2.590	0.013
	Service Quality (X1)	0.090607	0.021007	.075	4.313	<0.001
	Customer Loyalty (X2)	0.781303	.137	.637	22.143	<0.001

a. Dependent Variable: Y

Based on the unstandardized coefficients displayed in Table 9, the regression algorithm equation for this study is formulated as follows:

$$Y = 2.685 + 0.091(X1) + 0.781(X2).$$

This equation mathematically demonstrates the "algorithm output" where the constant value is 2.685, meaning user satisfaction is naturally high. Furthermore, the coefficient for Customer Loyalty (0.781) is significantly larger than Service Quality (0.091), proving that loyalty is the dominant driver in this migration model. The results show that Service Quality (X1) has a t-value of 4.313 with significance < 0.001, while Customer Loyalty (X2) has a t-value of 22.143 with significance < 0.001. Both t-values are greater than the critical t-value (2.011), indicating that both variables have a significant partial effect on User Satisfaction. These results demonstrate that Customer Loyalty has a more dominant influence than Service Quality in shaping user satisfaction with the BYOND by BSI application, particularly in the context of digital service system migration.

3.3.3 Coefficient of Determination (R^2)

Table 8. Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.695[a]	.969	.968	1.211164

a. Predictors: (Constant), X2, X1

The R Square (R^2) value of 0.969 indicates that 96.9% of the variation in User Satisfaction can be explained jointly by Service Quality and Customer Loyalty. The remaining 3.1% is influenced by variables outside the research model.

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This very high coefficient of determination suggests that the research model has a strong predictive capability, which is relevant for a study involving active BYOND by BSI users during the digital system migration process.

3.4 Discussion

This section discusses the research findings by linking empirical results, hypothesis testing, and relevant previous literature to explain the influence of Service Quality and Customer Loyalty on User Satisfaction in the BYOND by BSI application, within the context of digital service system migration from BSI Mobile. The discussion focuses on interpreting the results, their theoretical relevance, and the study's contribution to the literature on mobile banking, particularly in Islamic banking.

3.4.1 The Effect of Service Quality and Customer Loyalty on User Satisfaction

The simultaneous test (F-test) results indicate that Service Quality (X1) and Customer Loyalty (X2) together have a significant effect on User Satisfaction (Y), with an F-value of 734.559 and a significance level of $p < 0.001$. The coefficient of determination (R^2) of 0.969 shows that 96.9% of the variation in user satisfaction can be explained by these two variables. These findings confirm Hypothesis H1 and suggest that user satisfaction with the BYOND by BSI application is shaped through the synergy between perceived service quality and pre-existing customer loyalty.

In the context of application migration, users evaluate not only the technical performance of the application but also long-term relationships, trust, and commitment to the banking institution. These results are consistent with (Jodi, 2023), who reported that mobile banking service quality significantly affects satisfaction, which in turn impacts customer loyalty. Additionally, (Hasyim, et al., 2025) found that mobile banking service quality has both direct and indirect effects on the loyalty of younger users through satisfaction and trust. For users of BYOND by BSI in Palu, these findings underscore that digital system migration requires a holistic approach, where user satisfaction is influenced not only by application features but also by service continuity and bank loyalty.

3.4.2 The Effect of Service Quality on User Satisfaction

Partial test results show that Service Quality has a positive and significant effect on User Satisfaction ($B = 0.091$; $t = 4.313$; $p < 0.001$), supporting Hypothesis H2. This finding aligns with SERVQUAL theory, emphasizing the importance of tangibles, reliability, responsiveness, assurance, and empathy in shaping user satisfaction. Descriptive statistics further reinforce this finding. The indicator "staff present themselves neatly and professionally" obtained the highest mean score (4.14), indicating that the role of human resources remains crucial even in digital services. This supports the view that the "human touch" remains an important factor in digital banking, especially during system transition or migration. Additionally, indicators related to the reliability of balance and transaction information also show high mean scores (4.12), confirming that reliability is a key element in building trust and user satisfaction in mobile banking. This is consistent with (Novendra et al., 2022), who found that system reliability and information accuracy are primary determinants of satisfaction in digital banking services. However, indicators related to personal attention and the availability of guidance or education received the lowest mean scores (3.90 each). This suggests that empathy and user education still need improvement, particularly in the context of application migration. This aligns with (Mariana, 2022), who emphasized the importance of user support and clear information in enhancing satisfaction in e-banking services.

3.4.3 Customer Loyalty as the Dominant Factor in User Satisfaction

The results indicate that Customer Loyalty is the most dominant variable influencing User Satisfaction ($B = 0.781$; $t = 22.143$; $\beta = 0.637$; $p < 0.001$), supporting Hypothesis H3. This suggests that loyalty, reflected in habitual usage, long-term commitment, and trust in the bank, plays a crucial role in shaping user satisfaction. Loyalty indicators, such as routine usage and commitment to continue using BYOND by BSI despite alternative applications, obtained the highest mean scores. This demonstrates that users have strong attachment to BSI services, which ultimately affects their satisfaction perception. Conversely, the indicator of trust in service consistency and reliability obtained the lowest mean score (3.66), indicating concerns about system stability. Similar findings were reported by (Rahmatika, 2022), who stated that despite high customer loyalty, issues related to digital system stability and reliability remain challenges in maintaining long-term satisfaction. These findings corroborate (Ho et al., 2025), emphasizing that loyalty and trust are key factors in retaining digital service users, even during system or technology changes.

3.4.4 Research Contribution and Novelty

This study makes significant contributions to the literature on mobile banking and Islamic banking in Indonesia. First, it shows that in the context of application migration, customer loyalty can be more influential than technical service quality in shaping user satisfaction, expanding on prior research that generally emphasizes service quality as the primary determinant of satisfaction. Second, the study employs recent literature (2022–2025) and examines the context of digital transformation in Islamic banking, making it relevant to current industry developments. Third, it provides empirical evidence in the context of Islamic banking application migration (BSI Mobile to BYOND by BSI), which is still relatively limited in the literature. Practically, the findings imply that bank management should prioritize enhancing user education, system stability, and customer loyalty to sustain user satisfaction over time.

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4. CONCLUSION

This study aimed to analyze the effect of Service Quality and Customer Loyalty on User Satisfaction with the BYOND by BSI application during the migration from BSI Mobile in Palu City. The results indicate that both Service Quality and Customer Loyalty simultaneously have a significant effect on User Satisfaction, with a very high explanatory power, effectively addressing all research questions. Partially, Customer Loyalty is the most dominant factor in shaping User Satisfaction compared to Service Quality, indicating that commitment, habitual usage, and trust in the bank provide greater tolerance for temporary disruptions during the application transition. Nevertheless, Service Quality dimensions, particularly reliability and tangibles, still play an important role in maintaining positive user perceptions of digital banking services. The findings confirm all research hypotheses, demonstrating that in the context of Islamic banking digital service migration, user satisfaction is influenced not only by technical aspects of the system but also by pre-existing customer behavioral loyalty. However, this study has some limitations, including a relatively small sample size, the use of purposive sampling, and a cross-sectional design, which restricts generalizability and long-term causal inferences. Future research is recommended to include a larger and more diverse sample, incorporate additional variables such as digital literacy, perceived risk, technology trust, and user experience, and employ mixed-methods and longitudinal studies to gain a more comprehensive understanding of satisfaction and loyalty dynamics in Islamic banking digital transformation.

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