

Does Customer Satisfaction Mediate the Relationship Between E-Service Quality and Customer Loyalty? myBCA Users Case

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Abstract

This study examines whether customer satisfaction acts as a mediating variable in the relationship between E-Service Quality (e-SQ) and customer loyalty among myBCA users in Indonesia. The research evaluates four dimensions of e-SQ, consisting of efficiency, fulfillment, system availability, and privacy, to identify how each dimension contributes to user satisfaction and loyalty in mobile banking services. A quantitative survey design was applied, and data were collected through an online questionnaire distributed to myBCA users who met the study criteria. A total of 221 valid responses were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4. The results show that efficiency and fulfillment significantly enhance customer satisfaction, while system availability and privacy do not show significant effects on satisfaction. In contrast, all four e-SQ dimensions have significant positive effects on customer loyalty. Customer satisfaction, however, does not significantly influence customer loyalty and fails to mediate the relationship between e-SQ dimensions and loyalty. These findings suggest that loyalty toward myBCA is driven more by users' direct evaluation of service performance than by satisfaction as an intervening factor. The "study contributes to digital banking research by demonstrating that" functional service quality may have a stronger direct role in retaining users than satisfaction in the mobile banking context.

Keywords:

E-Service Quality; Customer Satisfaction; Customer Loyalty; Mobile Banking; myBCA.

1. INTRODUCTION

Digital transformation has changed the way banking institutions deliver services and interact with customers. Mobile banking applications are no longer viewed only as supporting transaction channels, but have become important digital platforms for improving customer experience, service accessibility, and competitive advantage in the banking sector (Beanning & Zulkarnain, 2024). Customers today expect banking services that are fast, accessible, secure, and convenient in supporting their daily financial activities (Alam et al., 2025). As internet penetration and digital adoption continue to increase, banks are required to continuously innovate in delivering high-quality electronic services capable of meeting customer expectations consistently.

In Indonesia, the development of digital banking is supported by the increasing use of internet-based services. APJII (2026) reported that internet penetration in Indonesia reached 81.72% in 2026, showing that Indonesian society is increasingly connected to digital platforms, including financial technology and mobile banking services. This phenomenon has encouraged banks to develop mobile banking platforms that not only facilitate transactions but also improve overall user experience (Sembiring & Iskanto, 2025). One of the leading digital banking applications in Indonesia is myBCA, developed by Bank Central Asia (BCA) as an omni-channel mobile banking platform integrating multiple banking services into a single super application (Setyawan & Rachmawati, 2024). The application provides customers with various features, such as fund transfers, bill payments, multi-account access, and integrated financial management services (Putri & Dewi, 2025).

As part of its digital transformation strategy, myBCA competes directly with other digital banking applications such as BRImo and Livin' by Mandiri (Setyawan & Rachmawati, 2024). The application has also received recognition for its performance quality in the Indonesian banking industry. Nevertheless, despite its technological capabilities and service integration, users still report several technical issues, including slow response time, login failures, transaction errors, and system instability under certain conditions (Putri & Dewi, 2025). These issues may negatively affect customer experience and influence users' perceptions regarding the quality of electronic services provided by the application. Furthermore, Dhamara et al. (2024) found that user reviews of myBCA were still dominated by negative sentiment, indicating that electronic service quality remains an important concern for the company.

E-Service Quality (e-SQ) is commonly used to evaluate how well digital platforms deliver services to users. In this study, e-SQ is understood through the E-S-QUAL framework developed by Parasuraman et al. (2005), which includes four dimensions: efficiency, fulfillment, system availability, and privacy. Efficiency reflects the ease and speed of using a digital platform. Fulfillment refers to the extent to which the platform can deliver services and complete transactions as promised. System availability relates to the technical reliability and accessibility of the system, while privacy concerns the protection of user data and transaction security (Parasuraman et al., 2005). In digital banking services, these dimensions are considered essential as customers rely heavily on the reliability, convenience, and security of mobile banking applications for real-time financial activities (Nurjanah et al., 2025).

Prior studies have examined the relationship between e-SQ, customer satisfaction, and customer loyalty in various digital service settings. Setiawan et al. (2022) found that e-SQ has a significant effect on customer satisfaction. Similar findings were also reported by Huda & Citrasari (2025) and Nurjanah et al. (2025), who showed that better electronic service quality can improve customer satisfaction and loyalty. In the context of myBCA, Sembiring & Iskanto (2025) reported that efficiency and usability significantly contribute to customer satisfaction. These findings indicate that high-quality electronic services are capable of enhancing customer experience and encouraging long-term customer retention.

However, the relationship between e-SQ, customer satisfaction, and customer loyalty is not always consistent. Johan & Nainggolan (2025) found that e-SQ did not significantly influence customer loyalty among BCA mobile banking users. Setiawan et al. (2022) also reported insignificant relationships between e-SQ, customer satisfaction, and customer loyalty in certain contexts. These mixed results indicate that the effect of e-SQ on loyalty may depend on other factors, including customer satisfaction as a possible mediating variable. In addition, most prior studies still examine e-SQ as a general construct without analyzing the contribution of each individual dimension toward customer satisfaction and loyalty. Research specifically focusing on myBCA users as a digital banking super application in Indonesia also remains limited.

Based on this gap, this study aims to examine whether customer satisfaction mediates the relationship between e-SQ and customer loyalty among myBCA users in Indonesia. Rather than treating e-SQ as a single construct, this study investigates four specific dimensions, namely efficiency, fulfillment, system availability, and privacy. This approach allows the study to identify which dimensions directly influence customer satisfaction and loyalty, and whether customer satisfaction acts as an intervening mechanism in the relationship between e-SQ and customer loyalty.

This study is expected to provide both theoretical and practical contributions. Theoretically, the study extends the literature on digital banking service quality by examining the role of customer satisfaction as a mediator between specific e-SQ dimensions and customer loyalty. Practically, the findings may help BCA and other banking institutions understand which aspects of digital service quality should be prioritized to retain users and improve mobile banking performance amid increasingly intense competition in the digital banking industry. Based on the research framework and previous empirical findings, the following hypotheses are proposed:

- H1 : Efficiency positively and significantly influences customer satisfaction among myBCA users.
- H2 : Fulfillment positively and significantly influences customer satisfaction among myBCA users.
- H3 : System availability positively and significantly influences customer satisfaction among myBCA users.
- H4 : Privacy positively and significantly influences customer satisfaction among myBCA users.
- H5 : Efficiency positively and significantly influences customer loyalty among myBCA users.
- H6 : Fulfillment positively and significantly influences customer loyalty among myBCA users.
- H7 : System availability positively and significantly influences customer loyalty among myBCA users.
- H8 : Privacy positively and significantly influences customer loyalty among myBCA users.
- H9 : Customer satisfaction positively and significantly influences customer loyalty among myBCA users.
- H10 : Customer satisfaction significantly mediates the relationship between efficiency and customer loyalty among myBCA users.
- H11 : Customer satisfaction significantly mediates the relationship between fulfillment and customer loyalty among myBCA users.
- H12 : Customer satisfaction significantly mediates the relationship between system availability and customer loyalty among myBCA users.
- H13 : Customer satisfaction significantly mediates the relationship between privacy and customer loyalty among myBCA users.

2. RESEARCH METHOD

This study used a quantitative explanatory approach to analyze the relationships among e-SQ, customer satisfaction, and customer loyalty in the context of myBCA users. The quantitative approach was applied because the study focuses on testing predetermined hypotheses and measuring the strength of relationships among variables through statistical analysis (Sugiyono, 2020). The research model consists of four e-SQ dimensions, namely efficiency, fulfillment, system availability, and privacy, as independent variables. Customer satisfaction was positioned as the mediating variable, while customer loyalty served as the dependent variable.

The population of this study comprised users of the myBCA mobile banking application in Indonesia. According to data published by BCA, the number of myBCA users reached approximately 7.7 million accounts by the end of 2024. Since the study required respondents with relevant experience in using myBCA, a non-probability sampling method with purposive sampling was applied. Purposive sampling was considered suitable because respondents were selected according to specific criteria aligned with the research objectives (Tajik et al., 2024). The criteria included respondents who were at least 17 years old, had used myBCA for transactions within the last six months, and conducted transactions through the application at least five times per month.

The minimum sample size was determined using the inverse square root method for Partial Least Squares Structural Equation Modeling (PLS-SEM). Referring to Kock & Hadaya (2018, as cited in Hair et al., 2022), the minimum required sample size for this study was 155 respondents to obtain sufficient statistical power. Nevertheless, this study targeted at least 200 respondents to improve the stability of the estimation and meet the recommended sample size for marketing research (Malhotra, 2020).

Primary data were obtained through an online questionnaire distributed using Google Forms. The questionnaire link was shared through social media and messaging platforms to reach potential respondents who met the research criteria. Screening questions were placed at the beginning of the questionnaire to ensure that only eligible respondents could proceed to the main section. The measurement items were adapted from established instruments. The indicators for e-SQ were adapted from Parasuraman et al. (2005), while the indicators for customer satisfaction and loyalty were adapted from Santoso & Ruslim (2024). All items were measured using a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree.

Data analysis was carried out using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4. PLS-SEM was selected because it is appropriate for analyzing predictive models, mediation effects, and relationships among latent constructs, especially when the data may not fully meet normality assumptions (Hair et al., 2022). The analysis was conducted in two stages. First, the measurement model was evaluated to assess indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. This stage involved outer loadings, Cronbach's Alpha, Composite Reliability, Average Variance Extracted (AVE), the Fornell-Larcker criterion, and the Heterotrait-Monotrait Ratio (HTMT). Second, the structural model was examined using Variance Inflation Factor (VIF), coefficient of determination (R^2), effect size (f^2), predictive relevance (Q^2), model fit, path coefficients, and bootstrapping results.

Hypothesis testing was conducted by examining the t-statistics and p-values generated from the bootstrapping procedure. A relationship was considered statistically significant when the t-statistic was greater than 1.96 and the p-value was below 0.05. The mediating role of customer satisfaction was assessed through the specific indirect effects. The mediation effect was interpreted based on the significance of both direct and indirect effects, where full mediation occurs when the indirect effect is significant while the direct effect is not significant, and partial mediation occurs when both effects are significant (Ledermann et al., 2025).

Ethical considerations were applied throughout the research process. Respondents were informed about the purpose of the study before completing the questionnaire, and their participation was voluntary. No personally identifiable information was collected, and all responses were used only for academic purposes. Although the use of purposive sampling and self-reported online questionnaires may limit the generalizability of the findings, the use of validated measurement items and an adequate sample size was expected to support the reliability of the research results.

3. RESULTS AND DISCUSSION

3.1. Results

3.1.1. Demographic Characteristics

Table 1 presents the demographic characteristics of the respondents. A total of 221 valid responses were obtained in this study. Based on gender, the majority of respondents were female, accounting for 64.71%, while male respondents represented 35.29% of the total sample. In terms of age, most respondents were between 17 and 25 years old, representing 86.43% of the sample. This indicates that the respondents were dominated by young users who are generally familiar with digital banking applications. Regarding employment status, students represented the largest group of respondents at 66.52%, followed by employees at 18.10% and

freelancers at 6.79%. Meanwhile, based on area distribution, most respondents were from Java and Bali, accounting for 49.77%, followed by Kalimantan at 37.10%. These results indicate that the study involved respondents from different regions in Indonesia, although the sample was primarily dominated by young users and students.

Table 1. Demographic Characteristics

Profile	n	%	Profile	n	%
Gender			Age (years old)		
Male	78	35.29	17 - 25	191	86.43
Female	143	64.71	26 - 35	22	9.95
Total	221	100.00	36 - 45	6	2.71
Status			46 - 55	2	0.90
Student	147	66.52	Total	221	100.00
Employee	40	18.10	Area		
Civil Servant	9	4.07	Sumatra	25	11.31
Entrepreneur	9	4.07	Java & Bali	110	49.77
Freelancer	15	6.79	Kalimantan	82	37.10
Unemployment	1	0.45	Sulawesi & Eastern Indonesia	4	1.81
Total	221	100.00	Total	221	100.00

Source: Data Processing (2026)

3.1.2. Measurement Model Evaluation

3.1.2.1. Convergent Validity and Reliability

The measurement model was evaluated through indicator reliability, internal consistency reliability, and convergent validity. Indicator reliability was assessed using outer loadings, with values above 0.70 considered acceptable for reflective constructs (Hair et al., 2022). As shown in Table 2, all retained indicators met this criterion, with values ranging from 0.766 to 0.924. Internal consistency reliability was confirmed through Cronbach's Alpha and Composite Reliability, where most constructs exceeded the recommended threshold of 0.70. Although the Cronbach's Alpha value for system availability was slightly below 0.70 at 0.667, it remained acceptable for exploratory research because its Composite Reliability of 0.856 and AVE of 0.748 met the required criteria (Hair et al., 2022). In addition, all AVE values ranged from 0.663 to 0.852, exceeding the minimum threshold of 0.50. Therefore, the measurement model demonstrated adequate reliability and convergent validity.

Table 2. Convergent Validity and Reliability

Variable	Items	Outer Loadings	CA	CR	AVE
Efficiency	EF2	0.839	0.878	0.911	0.672
	EF3	0.789			
	EF4	0.832			
	EF5	0.833			
	EF7	0.803			
Fulfillment	FU1	0.810	0.898	0.922	0.663
	FU2	0.805			
	FU3	0.834			
	FU4	0.783			
	FU6	0.835			
	FU7	0.819			
System Availability	SA1	0.897	0.667	0.856	0.748
	SA3	0.831			
Privacy	PR2	0.807	0.846	0.897	0.685
	PR3	0.851			
	PR4	0.881			
	PR5	0.766			
Customer Satisfaction	CS1	0.922	0.826	0.920	0.852
	CS2	0.924			
Customer Loyalty	CL1	0.824	0.854	0.902	0.696
	CL2	0.833			
	CL4	0.833			
	CL5	0.846			

Source: Data Processing (2026)

3.1.2.2. Discriminant Validity

Discriminant validity was examined using the Fornell-Larcker criterion and the Heterotrait-Monotrait Ratio (HTMT). The Fornell-Larcker criterion requires the square root of AVE for each construct to be higher than its correlations with other constructs. As shown in Table 3, the diagonal values were higher than the corresponding inter-construct correlations. For instance, customer loyalty had a square root of AVE value of 0.834, while customer satisfaction had a value of 0.923. Both values exceeded their correlations with other constructs. This confirms that each construct shared more variance with its own indicators than with other constructs.

Table 3. Discriminant Validity using Fornell-Larcker Criterion

	CL	CS	EF	FU	PR	SA
CL	0.834					
CS	0.593	0.923				
EF	0.754	0.679	0.819			
FU	0.719	0.773	0.734	0.814		
PR	0.752	0.652	0.777	0.766	0.828	
SA	0.682	0.445	0.622	0.603	0.592	0.865

Source: Data Processing (2026)

The HTMT ratio was also applied because it is considered a more sensitive approach for assessing discriminant validity. According to Henseler et al. (2015), HTMT values below 0.90 indicate that discriminant validity has been established. Table 4 shows that all HTMT values were below 0.90. The highest value was 0.898 between privacy and efficiency, followed by 0.897 between system availability and customer loyalty, and 0.894 between fulfillment and customer satisfaction. Although three HTMT values were close to the recommended threshold of 0.90, they remained below the cutoff proposed by Henseler et al. (2015). Therefore, discriminant validity was still considered acceptable, although future studies may further refine the measurement items to improve construct separation.

Table 4. Discriminant Validity using HTMT Ratio

	CL	CS	EF	FU	PR
CS	0.706				
EF	0.868	0.796			
FU	0.819	0.894	0.826		
PR	0.874	0.775	0.898	0.872	
SA	0.897	0.586	0.807	0.774	0.780

Source: Data Processing (2026)

3.1.3. Structural Model Evaluation

3.1.3.1. Collinearity Assessment

Before evaluating the structural relationships, collinearity among predictor constructs was assessed using the Variance Inflation Factor (VIF). VIF values below 5 indicate that multicollinearity is not a serious concern in the structural model (Hair et al., 2022). As reported in Table 5, the VIF values ranged from 1.787 to 3.879. The highest VIF value was found in the relationship between fulfillment and customer loyalty, but it was still below the recommended threshold. Thus, the structural model did not indicate serious collinearity problems and was suitable for hypothesis testing.

Table 5. Collinearity Assessment

Relationship	VIF	Decision
EF → CS	3.045	No collinearity issue
FU → CS	2.855	No collinearity issue
SA → CS	1.787	No collinearity issue
PR → CS	3.231	No collinearity issue
CS → CL	2.716	No collinearity issue
EF → CL	3.241	No collinearity issue
FU → CL	3.879	No collinearity issue
SA → CL	1.825	No collinearity issue
PR → CL	3.236	No collinearity issue

Source: Data Processing (2026)

3.1.3.2. Coefficient of Determination

The coefficient of determination was used to evaluate the explanatory power of the model. R^2 explains how much variance in an endogenous construct can be explained by its predictor variables. Based on Hair et

al. (2022), R^2 values of 0.75, 0.50, and 0.25 may be interpreted as substantial, moderate, and weak explanatory power, respectively.

As presented in Table 6, the R^2 value for customer satisfaction was 0.625. This means that efficiency, fulfillment, system availability, and privacy explained 62.5% of the variance in customer satisfaction. Meanwhile, the R^2 value for customer loyalty was 0.689, indicating that 68.9% of the variance in customer loyalty was explained by the predictors included in the model. These findings show that the model has moderate explanatory power for both endogenous constructs.

Table 6. Coefficient of Determination

Variable	R^2	Decision
CL	0.689	Moderate
CS	0.625	Moderate

Source: Data Processing (2026)

3.1.3.3. Effect Size

Effect size was evaluated using f^2 to identify the relative contribution of each predictor construct to the endogenous constructs. Following the guideline commonly used in PLS-SEM, f^2 values of 0.02, 0.15, and 0.35 indicate small, medium, and large effects, respectively (Hair et al., 2022). As shown in Table 7, fulfillment had the strongest effect on customer satisfaction, with an f^2 value of 0.358, which indicates a large effect. This result suggests that the ability of myBCA to complete transactions accurately and deliver services as expected is the most influential factor in explaining user satisfaction.

Efficiency had a small effect on customer satisfaction, while system availability also showed a small effect. Privacy had almost no effect on customer satisfaction, as indicated by its f^2 value of 0.002. For customer loyalty, system availability showed the strongest contribution, although the effect remained small. Efficiency, fulfillment, and privacy also showed small effects on customer loyalty. Customer satisfaction, however, had no effect on customer loyalty, with an f^2 value of 0.000. This pattern suggests that loyalty in this study was shaped more by direct evaluations of e-SQ dimensions than by satisfaction.

Table 7. Effect Size

Relationship	f^2	Decision
EF → CS	0.064	Small
FU → CS	0.358	Large
SA → CS	0.021	Small
PR → CS	0.002	No Effect
CS → CL	0.000	No Effect
EF → CL	0.071	Small
FU → CL	0.024	Small
SA → CL	0.122	Small
PR → CL	0.073	Small

Source: Data Processing (2026)

3.1.3.4. Predictive Relevance

Predictive relevance was assessed using Q^2 predict. A Q^2 value greater than zero indicates that the model has predictive relevance for the endogenous construct (Hair et al., 2022). As shown in Table 8, customer loyalty had a Q^2 predict value of 0.676, while customer satisfaction had a Q^2 predict value of 0.610. Since both values were above zero, the model demonstrated predictive relevance. This indicates that the model has the ability to predict customer satisfaction and customer loyalty among myBCA users.

Table 8. Predictive Relevance

Variables	Q^2 predict	Decision
CL	0.676	Predictive Relevance
CS	0.610	Predictive Relevance

Source: Data Processing (2026)

3.1.3.5. Model Fit

Model fit was evaluated using SRMR, d_{ULS} , d_G , Chi-square, and NFI. In PLS-SEM, SRMR is commonly used to assess approximate model fit, with values below 0.08 indicating an acceptable fit (Hu & Bentler, 1999). As presented in Table 9, the SRMR value for both the saturated and estimated models was 0.063. Since this value was below the recommended threshold, the model showed an acceptable approximate fit.

The d_{ULS} and d_G values were 1.100 and 0.697, respectively, while the Chi-square value was 945.591. These indices are reported as additional model fit information generated by SmartPLS. Although the NFI value (0.755) was below the conventional threshold of 0.90 commonly applied in covariance-based SEM, NFI is

generally regarded as a supplementary fit index in PLS-SEM. Hair et al. (2022) emphasized that SRMR is the primary global fit measure in PLS-SEM, whereas NFI should be interpreted cautiously because PLS-SEM focuses on predictive capability rather than exact covariance model fit. In the present study, the model demonstrated acceptable SRMR (0.063), adequate construct reliability and validity, as well as satisfactory predictive relevance ($Q^2 > 0$), indicating that the proposed structural model is appropriate for predictive analysis.

Table 9. Model Fit

	Saturated model	Estimated model
SRMR	0.063	0.063
d _{ULS}	1.1	1.1
d _G	0.697	0.697
Chi-square	945.591	945.591
NFI	0.755	0.755

Source: Data Processing (2026)

Figure 1 presents the PLS-SEM estimation model generated using SmartPLS 4. The model illustrates the relationships between efficiency, fulfillment, system availability, privacy, customer satisfaction, and customer loyalty. It also shows the role of customer satisfaction as a mediating variable between the e-SQ dimensions and customer loyalty. The path coefficients displayed in the figure provide an overview of the direction and strength of the relationships among the constructs.

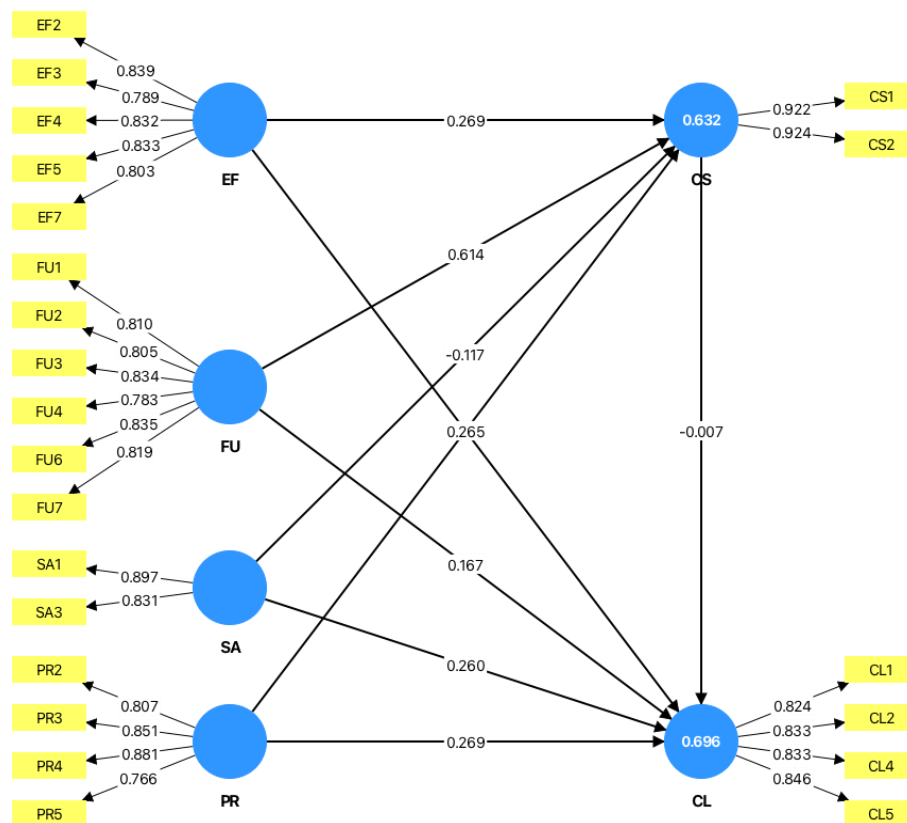


Figure 1. PLS-SEM Estimation Model

3.1.4. Hypothesis Testing

3.1.4.1. Direct Effect

Hypothesis testing was conducted using the bootstrapping procedure in SmartPLS 4. The significance of each relationship was determined based on the t-statistic and p-value. A hypothesis was considered supported when the t-statistic exceeded 1.96 and the p-value was below 0.05 (Hair et al., 2022).

As shown in Table 10, efficiency had a positive and significant effect on customer satisfaction, with a coefficient of 0.269 and a p-value of 0.005. Therefore, H1 was supported. Fulfillment also had a positive and significant effect on customer satisfaction, with a coefficient of 0.614 and a p-value of 0.000, supporting H2. This result indicates that fulfillment was the strongest predictor of customer satisfaction. System availability had a negative but insignificant effect on customer satisfaction, with a coefficient of -0.117 and a p-value of 0.051. Since the p-value was above 0.05, H3 was rejected. Privacy also had an insignificant effect on customer satisfaction, with a coefficient of 0.042 and a p-value of 0.634. Therefore, H4 was rejected.

For customer loyalty, all e-SQ dimensions showed significant positive effects. Efficiency had a significant effect on customer loyalty, with a coefficient of 0.265 and a p-value of 0.011, supporting H5. Fulfillment also significantly influenced customer loyalty, with a coefficient of 0.167 and a p-value of 0.023, supporting H6. System availability had a significant effect on customer loyalty, with a coefficient of 0.260 and a p-value of 0.000, supporting H7. Privacy also significantly influenced customer loyalty, with a coefficient of 0.269 and a p-value of 0.006, supporting H8.

However, customer satisfaction did not have a significant effect on customer loyalty, with a coefficient of -0.007, a t-statistic of 0.097, and a p-value of 0.923. Therefore, H9 was not supported. This finding suggests that, in the context of myBCA users, satisfaction does not necessarily translate into loyalty. Instead, customer loyalty appears to be influenced more directly by the dimensions of e-SQ.

Table 10. Direct Effect

Hypo	Path	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	Decision
H1	EF → CS	0.269	0.283	0.096	2.809	0.005	Accept
H2	FU → CS	0.614	0.607	0.083	7.429	0.000	Accept
H3	SA → CS	-0.117	-0.122	0.060	1.953	0.051	Reject
H4	PR → CS	0.042	0.038	0.089	0.477	0.634	Reject
H5	EF → CL	0.265	0.283	0.104	2.548	0.011	Accept
H6	FU → CL	0.167	0.164	0.074	2.273	0.023	Accept
H7	SA → CL	0.260	0.257	0.058	4.448	0.000	Accept
H8	PR → CL	0.269	0.261	0.098	2.753	0.006	Accept
H9	CS → CL	-0.007	-0.015	0.071	0.097	0.923	Reject

Source: Data Processing (2026)

3.1.4.2. Mediation Effect

The mediation effect was examined through specific indirect effects using the bootstrapping procedure. A mediation effect is considered significant when the indirect effect has a p-value below 0.05. As shown in Table 11, none of the indirect effects were statistically significant. The indirect effect of efficiency on customer loyalty through customer satisfaction had a p-value of 0.930, so H10 was rejected. The indirect effect of fulfillment on customer loyalty through customer satisfaction was also insignificant, with a p-value of 0.923, leading to the rejection of H11. Similarly, system availability did not have a significant indirect effect on customer loyalty through customer satisfaction, with a p-value of 0.934, so H12 was rejected. Privacy also showed no significant indirect effect, with a p-value of 0.967, meaning that H13 was rejected.

These results show that customer satisfaction does not mediate the relationship between e-SQ dimensions and customer loyalty. This finding is consistent with the direct effect result, where customer satisfaction did not significantly influence customer loyalty. Thus, the effect of e-SQ on customer loyalty among myBCA users is better explained through direct relationships rather than through satisfaction as an intervening variable.

Table 11. Mediation Effect

Hypo	Path	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	Decision
H10	EF → CS → CL	-0.002	-0.004	0.021	0.088	0.930	Reject
H11	FU → CS → CL	-0.004	-0.009	0.043	0.097	0.923	Reject
H12	SA → CS → CL	0.001	0.002	0.010	0.083	0.934	Reject
H13	PR → CS → CL	0.000	0.000	0.007	0.041	0.967	Reject

Source: Data Processing (2026)

3.2. Discussion

The results of this study show that e-SQ has an important role in explaining customer satisfaction and customer loyalty among myBCA users, although the effects differ across dimensions. Efficiency and fulfillment were found to significantly influence customer satisfaction. This means that users tend to feel more satisfied when myBCA is easy to operate, supports fast transactions, and can deliver transaction results accurately. Among all dimensions, fulfillment had the strongest effect on customer satisfaction, indicating that successful and reliable transaction completion is a key factor in determining user satisfaction. This finding is consistent with the e-SQ concept, which emphasizes fulfillment and efficiency as essential elements of electronic service quality (Parasuraman et al., 2005).

The insignificant effects of system availability and privacy on customer satisfaction may indicate that these dimensions are perceived as basic requirements in digital banking services. Users may already expect mobile banking applications to be available, stable, and secure. Therefore, these factors may not necessarily increase satisfaction unless users experience system failures or security issues. In other words, system

reliability and privacy protection may function more as minimum service standards rather than direct sources of satisfaction.

Different results were found in the relationship between e-SQ dimensions and customer loyalty. Efficiency, fulfillment, system availability, and privacy all had significant positive effects on customer loyalty. This finding implies that users' loyalty toward myBCA is directly influenced by their perceptions of the application's service quality. Users may remain loyal when the application helps them complete transactions efficiently, provides accurate service outcomes, operates reliably, and protects their personal and financial information. These results support previous studies showing that e-SQ can directly strengthen customer loyalty in digital banking and online service contexts (Huda & Citrasari, 2025; Nurjanah et al., 2025).

Interestingly, customer satisfaction did not significantly influence customer loyalty. This result differs from several previous studies that positioned satisfaction as a key determinant of loyalty (Huda & Citrasari, 2025; Setiawan et al., 2022). One possible explanation is that continued use of mobile financial services may also be shaped by functional usefulness and habitual behavior rather than satisfaction alone. Previous research has shown that repeated mobile payment usage can develop into habitual behavior and contribute to users' continuance usage (Handarkho et al., 2021). In the case of myBCA, users may therefore continue using the application because it has become part of their daily financial routine and supports their transaction needs, even when satisfaction does not directly translate into loyalty.

The mediation analysis further reinforces these findings. Since customer satisfaction did not significantly influence customer loyalty, it was unable to transmit the effects of the e-SQ dimensions to customer loyalty, resulting in insignificant indirect effects. This suggests that customer satisfaction does not function as the mechanism through which e-SQ influences customer loyalty among myBCA users. Instead, customer loyalty appears to be established primarily through users' direct evaluations of the application's functional service quality. This finding implies that, in the context of myBCA, users may remain loyal because the application consistently supports their daily financial activities and transaction needs, rather than because they are satisfied with the service. Nevertheless, this interpretation should be viewed cautiously, as other post-adoption factors such as habit, trust, or switching costs were not examined in the present study.

4. CONCLUSION

This study examined whether customer satisfaction mediates the relationship between e-SQ and customer loyalty among myBCA users in Indonesia. The analysis focused on four e-SQ dimensions, namely efficiency, fulfillment, system availability, and privacy, to understand how each dimension influences customer satisfaction and loyalty in the mobile banking context.

The results show that efficiency and fulfillment significantly influence customer satisfaction, while system availability and privacy do not have significant effects on satisfaction. Among these dimensions, fulfillment had the strongest influence, indicating that accurate transaction completion and reliable service delivery are important factors in shaping satisfaction among myBCA users. In addition, all four e-SQ dimensions were found to have significant positive effects on customer loyalty. This means that users' loyalty toward myBCA is directly associated with their evaluation of the application's efficiency, service fulfillment, system reliability, and privacy protection.

Another important finding is that customer satisfaction does not significantly influence customer loyalty. Consequently, customer satisfaction does not mediate the relationship between e-SQ dimensions and customer loyalty. This result indicates that loyalty among myBCA users is not primarily formed through satisfaction as an intervening variable, but rather through direct perceptions of the functional quality of the application. Therefore, the main research question of this study is answered by confirming that customer satisfaction does not act as a mediator in the relationship between e-SQ and customer loyalty in the case of myBCA users.

Theoretically, this study contributes to digital banking research by showing that the satisfaction-mediated mechanism does not always explain customer loyalty in mobile banking services. Practically, the findings suggest that BCA should continue prioritizing the improvement of myBCA's core service performance, especially transaction accuracy, ease of use, application stability, and privacy protection. Since these dimensions directly influence loyalty, maintaining consistent digital service quality is essential for encouraging long-term user retention.

This study has several limitations. First, the use of purposive sampling may limit the generalizability of the findings to the entire population of myBCA users. Second, the respondents were dominated by young users and students, which may not fully represent all mobile banking user segments. Third, the study relied on self-reported questionnaire data, which may be influenced by respondents' subjective perceptions. In addition, although the system availability construct met the recommended Composite Reliability and AVE thresholds, its Cronbach's Alpha value was slightly below the commonly accepted threshold of 0.70, indicating that the internal consistency of this construct could still be improved in future studies (Hair et al., 2022). Future research is therefore encouraged to refine the measurement items for system availability, involve more diverse respondent groups, compare different mobile banking applications, and examine additional variables such as

trust, perceived value, habit, switching cost, or user experience to provide a broader understanding of customer loyalty in digital banking.

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