THE EFFECT OF SERVICE QUALITY AND SYSTEM QUALITY ON CONSUMER SATISFACTION IN THE TOKOPEDIA E-COMMERCE APPLICATION

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2nd ICOERESS (25-09-2025)
Submission: (01-09-2025)
Published: (28-06-2026)

ABSTRACT
This study aims to analyze the influence of service quality and system quality on customer satisfaction in the Tokopedia e-commerce application. The research method uses a quantitative approach with a survey technique on 250 respondents who are active users of the Tokopedia application. Data were analyzed using SPSS 26 with multiple linear regression analysis techniques. The results show that service quality has a significant positive effect on customer satisfaction ($\beta = 0.487$, $p < 0.001$), and system quality has a significant positive effect on customer satisfaction ($\beta = 0.351$, $p < 0.001$). Simultaneously, service quality and system quality are able to explain 68.4% of the variation in customer satisfaction ($R^2 = 0.684$). Service quality has a more dominant influence than system quality. This study provides managerial implications for Tokopedia to continue to improve the quality of customer service and technology systems to maintain customer satisfaction in the era of increasingly tight e-commerce competition.

Keywords: Service Quality, System Quality, Consumer Satisfaction, E-commerce, Tokopedia

BACKGROUND

The e-commerce industry in Indonesia has experienced rapid growth in recent years. According to data from the Indonesian E-commerce Association (idEA), the value of Indonesia's e-commerce transactions reached USD 70 billion in 2023 and is projected to continue growing to USD 130 billion by 2025. Tokopedia, as one of the largest e-commerce platforms in Indonesia, has more than 100 million monthly active users and over 11 million registered merchants. In a highly competitive digital business environment, customer satisfaction is a crucial factor that determines the success of an e-commerce platform. Customer satisfaction not only affects customer loyalty but also has an impact on positive word-of-mouth and customer retention rates. Therefore, e-commerce companies need to understand the factors that influence customer satisfaction in order to design effective strategies.

Two main factors that are suspected to have a significant influence on customer satisfaction in the context of e-commerce are service quality and system quality. Service quality includes aspects such as responsiveness, reliability, assurance, empathy, and tangible evidence in service delivery to customers. Meanwhile, system quality covers technical aspects such as ease of use, access speed, system security, and application functionality. This research is important to conduct because there are still few studies that specifically analyze the influence of service quality and system quality on customer satisfaction on the Tokopedia platform. The results of this study are expected to provide theoretical contributions in the field of digital marketing and offer practical recommendations for Tokopedia's management in improving customer satisfaction.

RESEARCH METHOD

This study uses a quantitative approach with an explanatory research design, aiming to explain the causal relationship between the independent variables (service quality and system quality) and the dependent variable (customer satisfaction).

Population and Sample

The population in this study consists of all active users of the Tokopedia application in Indonesia. The sampling technique used is purposive sampling with the following criteria:

a. Active Tokopedia users for at least the past 6 months
b. Have made at least 3 transactions in the last 3 months
c. Aged between 18–50 years
d. Residing in major cities in Indonesia

Based on the Slovin formula with a 5% margin of error, the sample size used is 250 respondents.

Data collection technique

Data was collected through an online questionnaire using Google Forms distributed via social media and email. The questionnaire used a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree).

Data Analysis Technique

Data analysis was conducted using SPSS 26 with the following steps:

1. Descriptive analysis
2. Validity and reliability tests
3. Classical assumption tests (normality, multicollinearity, heteroscedasticity)
4. Multiple linear regression analysis
5. Hypothesis testing (t-test and F-test)
6. Coefficient of determination (R^2)

The regression model used: $\mathbf{Y = \alpha + \beta 1X1 + \beta 2X2 + \varepsilon}$ Where:

- Y = Customer Satisfaction
- X1 = Service Quality
- X2 = System Quality
- α = Constant
- β1, β2 = Regression coefficients
- ε = Error term

RESEARCH FINDINGS

Validity and Reliability Test

Table 1. Results of Validity and Reliability Test

Variable	Item	Pearson Correlation	Cronbach's Alpha
Service Quality (X1)	X1.1	0.756	0.892
	X1.2	0.823	
	X1.3	0.789	
	X1.4	0.734	
	X1.5	0.678	
System Quality (X2)	X2.1	0.798	0.885
	X2.2	0.812	
	X2.3	0.756	
	X2.4	0.723	
	X2.5	0.689	

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	X2.6	0.745	
Consumer Satisfaction (Y)	Y1	0.834	0.901
	Y2	0.856	
	Y3	0.798	
	Y4	0.823	

Based on Table 1, The results of the validity test show that all items have correlation values greater than 0.30 and are significant at the 0.01 level, indicating that all items are valid. The Cronbach's Alpha values for all variables are above 0.70, indicating that the research instrument is reliable.

Respondent Characteristics

Table 2. Respondent Characteristics

Characteristics	Category	Frequency	Percentage (%)
Gender	Male	112	44.8
	Female	138	55.2
Age	18-25 year	89	35.6
	26-35 year	96	38.4
	36-50 year	65	26.0
Education	SMA/SMK	45	18.0
	Diploma	52	20.8
	Bachelor	125	50.0
	Postgraduate	28	11.2
Frequency of Use	1-2 times/month	63	25.2
	3-5 times/month	98	39.2
	>5 times/month	89	35.6

Based on Table 2, the respondent characteristics are dominated by females aged 26–35 years, holding a Bachelor's degree, and regularly using the service 3–5 times per month.

Classical Assumption Test

Table 3. Results of Classical Assumption Test

Test	Results	Conclusion
Normality (Kolmogorov-Smirnov)	Sig. = 0.089	Data is normally distributed
Multicollinearity	VIF < 10, Tolerance > 0.10	There is no multicollinearity
Heteroscedasticity (Glejser)	Sig. > 0.05	There is no heteroscedasticity

Descriptive Analysis

Table 4. Descriptive Statistics of Research Variables

Variable	Mean	Std. Deviation	Interpretation
Service Quality (X1)	3.78	0.642	Tall
System Quality (X2)	3.85	0.598	Tall
Consumer Satisfaction (Y)	3.82	0.687	Tall

Based on Table 4, The results of the descriptive analysis show that respondents' perceptions of service quality, system quality, and customer satisfaction fall into the high category, with mean values ranging from 3.78 to 3.85.

Multiple Linear Regression Analysis

Table 5. Results of Multiple Linear Regression Analysis

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	
(Constant)	0.234	0.198		1.182
Service Quality	0.521	0.067	0.487	7.776
System Quality	0.403	0.072	0.351	5.597

Regression Equation: Y = 0.234 + 0.521X1 + 0.403X2

Hypothesis Testing

Table 6. Results of t-Test (Partial)

Hypothesis	t- count	t- table	Sig.	Decision
H1: X1 → Y	7.776	1.969	0.000	H1 Accepted
H2: X2 → Y	5.597	1.969	0.000	H2 Accepted

Table 7. Results of F-Test (Simultaneous)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	85.234	2	42.617	267.891	0.000[b]
Residual	39.321	247	0.159		
Total	124.555	249			

Since the calculated F-value (F-count) = 267.891 is greater than the critical F-value (F-table) = 3.04, and the significance value (Sig.) = 0.000 is less than 0.05, H3 is accepted.

Table 8. Coefficient of Determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.827[a]	0.684	0.681	0.399

DISCUSSION

The Effect of Service Quality on Customer Satisfaction

The analysis results show that service quality has a positive and significant effect on customer satisfaction, with a regression coefficient of 0.521 and a significance value of 0.000 < 0.05. This means that every one-unit increase in service quality will increase customer satisfaction by 0.521 units. This finding is consistent with the study by Kumar and Singh (2023), which found that service quality is a primary predictor of e-commerce customer satisfaction.

In the context of Tokopedia, good service quality is reflected in the responsiveness of customer service in handling complaints, reliability in processing orders, assurance of transaction security, empathy in serving customers, and tangible aspects such as an attractive application interface. The responsiveness dimension contributes the most to service quality, indicating that customers highly value Tokopedia's quick response in addressing various issues.

The Effect of System Quality on Customer Satisfaction

System quality is proven to have a positive and significant effect on customer satisfaction, with a regression coefficient of 0.403 and a significance value of 0.000 < 0.05. Every one-unit increase in system quality will increase customer satisfaction by 0.403 units. This result supports the study by Venkatesh et al. (2023), which states that technology system quality is a critical factor in determining e-commerce user experience.

Tokopedia's high system quality is evident from the ease of app navigation, fast loading speed, secure payment system, comprehensive features, system stability, and good interactivity. The security dimension has the highest score, indicating that customers feel safe conducting transactions through the Tokopedia application.

Simultaneous Effect of Service Quality and System Quality

Simultaneously, service quality and system quality have a significant effect on customer satisfaction, with an F-value of 267.891 and a significance level of 0.000 < 0.05. Together, these two variables explain 68.1% of the variation in customer satisfaction, indicating that the combination of service quality and system quality is a strong determinant in shaping customer satisfaction.

Service quality has a more dominant influence ($\beta = 0.487$) compared to system quality ($\beta = 0.351$). This suggests that although technological aspects are important, the human touch in service remains the top priority for Indonesian consumers. This finding aligns with Indonesian cultural characteristics, which emphasize relational aspects in interactions.

CONCLUSION

Based on the results of the analysis and discussion, it can be concluded that both service quality and system quality have positive and significant effects on customer satisfaction in the Tokopedia application. Service quality has a positive and significant influence on customer satisfaction, as evidenced by a regression coefficient of 0.521 and a significance value of 0.000, confirming that the first hypothesis (H1) is accepted. This finding indicates that improvements in service quality directly contribute to higher levels of customer satisfaction. Similarly, system quality also has a positive and significant effect on customer satisfaction, with a regression coefficient of 0.403 and a significance value of 0.000, supporting the acceptance of the second hypothesis (H2). This demonstrates that a reliable and efficient system significantly enhances customers' satisfaction with the Tokopedia application. Furthermore, service quality and system quality simultaneously have a positive and significant effect on customer satisfaction, as indicated by an F-value of 267.891 and a significance value of 0.000, confirming the acceptance of the third hypothesis (H3). Together, these two variables explain 68.1% of the variation in customer satisfaction, while the remaining 31.9% is influenced by other factors not included in this study. Among the two independent variables, service quality has a more dominant influence on customer satisfaction than system quality, as reflected by its higher standardized coefficient (0.487 compared to 0.351), suggesting that enhancing service quality should be prioritized to maximize customer satisfaction.

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