



The Impact Of Key Service Quality Factors On Customer Loyalty: A Study On Tokopedia

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Abstract: E-commerce transactions in Indonesia continued to increase starting in 2017 according to Bank Indonesia records. Moreover, during the Covid-19 pandemic, the use of digital media is increasingly widespread among the Indonesian community, as consumption on online marketplace platforms is increasing, one of which is a marketplace made by the nation's children, Tokopedia. This study was conducted to determine the effect on Customer Loyalty of Tokopedia users in Kediri with the aim to use the seven variables in identifying Customer Loyalty in Tokopedia. This study used SPSS 22.0 software. The sample used in this study is Tokopedia users aged 18-60 years, domiciled in Kediri, male or female, have installed applications in the last 6 months, have made purchases 2 times in the last 6 months, and have contacted Tokopedia customer service in the last 6 months. The number of respondents used as a sample of research is 130 by using the sampling method used is non-probability sampling.

Keywords: System Design, Fulfillment, Security, Customer Service, Customer Loyalty

INTRODUCTION

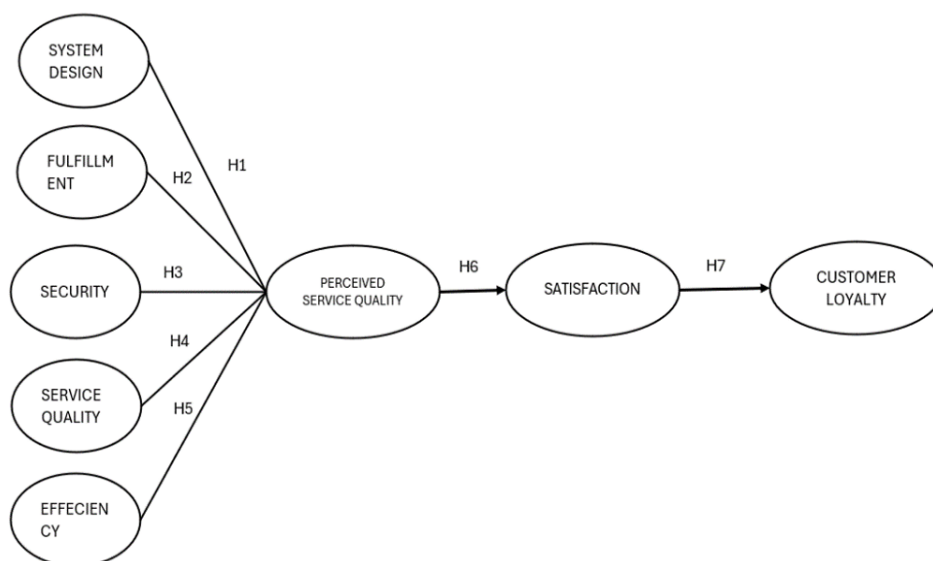
Online commerce or e-commerce is the buying and selling of products or services using the Internet. E-commerce enables online commerce and allows consumers to easily buy and sell products and services from different locations at different times. E-commerce has a long and complicated history. The history of electronic commerce began with electronic data interchange, which enabled the electronic processing of commercial transactions. EDI (Electronic Data Interchange) was used by large corporations and government financial institutions. Electronic commerce supported by EFT E (Electronic Fund Transfer) innovation enabled electronic money transfer and facilitated commercial transactions. With EFT (Electronic Fund Transfer), electronic commerce began to flourish. E-commerce has had a huge impact on the way people shop and do business. E commerce allows people to buy and sell goods online from different locations and at different times. This makes it easy and convenient for consumers to buy products online. In 2020, electronic commerce in the country continued to grow rapidly. Consumers started using e-commerce platforms to purchase everyday items. By conducting research on the impact of system design, fulfillment, security, customer service, and efficiency on Tokopedia's perceived service quality and customer satisfaction, the company can identify improvements and innovations needed to enhance the user experience.

This not only supports business growth but also helps build long-term customer loyalty in an increasingly competitive e-commerce market. E-commerce competition in Indonesia is intense and dynamic, with only a few large companies dominating the market. The level of internet and smartphone usage in Indonesia also affects the development of e-commerce in Indonesia. Indonesian government taxes and regulations can affect the development of e-commerce in the country. By 2024, Indonesia's e-commerce is expected to reach \$58.43 billion. By 2029, Indonesia's e-commerce is expected to reach \$95.84 billion. E-commerce in Indonesia has been developing since the 1990s and continues to grow rapidly. Factors such as convenience, internet and smartphones, taxes and regulations affect the development of e-commerce in Indonesia. One of the e-commerce companies that recorded sales growth during the pandemic is Tokopedia. Tokopedia is a unicorn company that recently merged with Go-Jek to become GoTo so that now the merged company has become a decacorn company. Decacorns are among the companies with a valuation of US\$10 billion. This achievement can be seen from Tokopedia's GMV value in 2021, which reached IDR 22.7 billion per hour and within a year reached US\$14 billion (Tokopedia, E-Commerce with the Largest Transaction Value, n.d.-a).

Tokopedia began entering the Indonesian computerized market, still the C2C commercial center business in 2009. The importance of this research is that Indonesian E-commerce has recorded significant growth, especially during the COVID-19 pandemic. As the predicted transaction value continues to increase, it is important to understand the factors that influence customer satisfaction and loyalty on platforms like Tokopedia. From the discussion above, it can be seen that competition in the ecommerce sector in Indonesia is very fierce. The promotional efforts made by ecommerce also tend to be similar to each other. Therefore, Tokopedia, as a homegrown e-commerce, should consider the factors that can influence users' repurchase desire to rely on new and loyal users. This study will explore the various factors that influence the desire to repurchase from Tokopedia users in Kediri. System Design, Fulfillment, Security, Customer Service, Efficiency, Perceived Service Quality, and Customer Satisfaction are the variables analyzed in this study that affect Customer Loyalty. These variables have an impact on the perceived value of Tokopedia users.

METHOD

The research method used in this research is quantitative method. This study uses two types of data, namely primary data and secondary data. Primary data is data obtained directly from researchers. Therefore, it can be said that primary data is obtained from the initial source while secondary data is data obtained from existing sources (Umar, 2013). The software used to analyze data is SPSS software. The characteristics of the respondents to be studied are Men and Women, Aged 18-60 years, Domiciled in Kediri, Have transacted on Tokopedia or for 2 times in the last 6 months and Have contacted Tokopedia customer service. The sample to be used in this study was 130 respondents. This research will be directed to analyze the effect of system design, fulfillment, security, customer service, efficiency, perceived service quality, on customer loyalty which is influenced by customer satisfaction on Tokopedia users with the following research model:



Source: (Puspitasari et al., 2023)

RESULTS AND DISCUSSION

Respondent Profile Analysis

The majority of respondents were male with a value of 84.62%, however there were also respondents with female gender, namely 15.38% of the total respondents. The data shows that users of the Tokopedia application, users of Tokopeida products include both men and women. Based on the age group, it can be seen that most of the respondents in this survey are between 18 to 35 years old, with a percentage reaching 83.85%. The second most common age group is respondents aged between 36 to 50 years old, reaching 13.85%, while respondents aged between 51-60 years old account for 2.31%.

Validity Test

Validity testing is carried out to ensure that each statement of each research variable can be understood by respondents properly. Testing uses the rcount value and the rtable value. The rcount value used is the corrected item-total correlation and the rtable value used is 0.1710. If the rcount value is higher than the rtable value, the indicator is said to be valid.

Reliability Test

This reliability test is carried out in order to assess the consistency of the answers given by respondents. to each statement. This test uses the Cronbach's alpha value, where each variable in this study must have a minimum value of 0.60. The results of the test are as follows:

Table 1. Reliability Test

No	Variables	cronbach alpha	Criteria	Description
1	System design	0,976	>0,60	Reliable
2	Fulfillment	0,977	>0,60	Reliable
3	Security	0,975	>0,60	Reliable
4	Customer Service	0,977	>0,60	Reliable
5	Efficiency	0,977	>0,60	Reliable
6	Perceived Service Quality	0,976	>0,60	Reliable
7	Customer Satisfaction	0,976	>0,60	Reliable
8	Customer Loyalty	0,975	>0,60	Reliable

Based on the test conditions, each variable in the study is declared reliable if the Cronbach alpha value is > 0.60 , this finding can be interpreted that each survey variable can maintain the consistency of respondents' answers, or the statements in the survey variables produce consistent responses among respondents.

Multicollinearity Test

Multicollinearity test is a test to ensure there is no relationship between independent variables. When independent variables have a relationship with each other, their ability to predict the dependent variable (Y) is reduced. This test uses the Variance Inflation Factor (VIF) value as a reference to identify the presence of multicollinearity. In the test criteria, a model is declared free from multicollinearity if the VIF value is less than 10. If the VIF value is greater than 10, it can indicate the presence of multicollinearity that needs further attention.

Table 2. Multicollinearity test

No	Variables	VIF	Criteria	Description
1	System design	5,699	$>0,60$	Multicoll-free
2	Fulfillment	5,389	$>0,60$	Multicoll-free
3	Security	7,331	$>0,60$	Multicoll-free
4	Customer Service	5,014	$>0,60$	Multicoll-free
5	Efficiency	5,032	$>0,60$	Multicoll-free

Based on the results of the regression variant inflation factor analysis, the VIF value of the system design variable is 5.699, the VIF value of the fulfillment variable is 5.389, the VIF value for security is 7.331, the VIF value for customer service is 5.014 and the VIF value for efficiency is 5.032. Based on the noncollinearity test rules, the VIF value of less than 10 indicates that there is no multicollinearity phenomenon between the independent variables in the study.

Multiple Linear Regression Equation

The multiple linear regression equation describes the nature of the positive or negative effect of each research variable on customer satisfaction. The coefficient value of the regression equation is based on the unstandardized coefficients value of multiple linear regression. Based on the multiple linear regression output, the equation is as follows: $CSA = 0.528C + 0.106SD + 0.104FU + 0.329SE + 0.273CS + 0.089EF + 0.887PSQ$ Using this equation, it can be explained that all independent survey variables have an impact on customer satisfaction. A positive impact means that a high rating on the independent variable causes an increase in user satisfaction, and a low rating on the independent variable causes a decrease in user satisfaction. Based on the coefficient value of each regression, it is known that the perceived service quality coefficient with the highest value, and it can be interpreted that perceived service quality is a variable that more strongly affects customer satisfaction than other independent variables.

Simple Linear Regression Equation

The simple linear regression equation describes the nature of the positive or negative effect of customer satisfaction on customer loyalty. The coefficient value of the regression equation is based on the unstandardized coefficients value of simple linear regression. Based on the simple linear regression output, the equation is as follows: $CL = 0.543C + 0.878CSA$ Based on this equation, it can be explained that customer satisfaction has a positive effect on customer loyalty. In other words, high user satisfaction increases user loyalty, and low user satisfaction decreases user loyalty.

F test

The purpose of the simultaneous test is to test whether all the independent variables described in the study are proven to affect the dependent variable. If it is proven to have an impact, then the model is accepted. The test and F test are carried out simultaneously, and if the significance level of $F < 0.05$ then the model is accepted.

Table 3. F Test

Research model	F	Sig	Description
Multiple linear regression	108,597	0,000	Accepted
Simple linear regression	419,927	0,000	Accepted

Based on the simultaneous test results above, it can be stated that the research model is accepted. Model acceptance means that the research model that describes the effect of each independent variable on the dependent variable is supported by the respondent's survey data.

The t test

The purpose of this t test is to test the effect of each independent variable on the dependent variable. T Test and Simultaneous Test Significance Level If $t < A$ value of 0.05 states that the variable being tested has a significant effect on the dependent variable. The results of testing the research hypothesis are as follows:

Table 4. t test

	Hypothesis	t	Sig.	Terms	Description
H1	System design – perceived service quality	1,268	0,000	Sig. <0,05	Accepted
H2	Fulfillment – perceived service quality	1,315	0,000	Sig. <0,05	Accepted
H3	Security – perceived service quality	3,823	0,000	Sig. <0,05	Accepted
H4	Customer Service – perceived service quality	3,485	0,000	Sig. <0,05	Accepted
H5	Effeciency– perceived service quality	1,196	0,000	Sig. <0,05	Accepted
H6	Perceived service quality – customer satisfaction	18,655	0,000	Sig. <0,05	Accepted
H7	Customer satisfaction – customer loyalty	20,492	0,000	Sig. <0,05	Accepted

Based on the table of partial test results above, it can be explained that all research hypotheses (H1 - H7) are accepted, which means that there is statistically significant support that the independent research variables have a significant influence on the dependent variable. H1 - The Effect of System Design on Perceived Service Quality The results of hypothesis testing prove that there is a significant effect of system design on perceived service quality H2 - The Effect of Fulfillment on Perceived Service Quality The results of hypothesis testing prove that there is a significant effect of fulfillment on perceived service quality H3 - The Effect of Security on Perceived Service Quality. The results of hypothesis testing prove that there is a significant effect of security on perceived service quality H4 - The Effect of Customer Service on Perceived Service Quality The results of hypothesis testing prove that there is a significant effect of customer service on perceived service quality H5 - The Effect of Effeciency on Perceived Service Quality The results of hypothesis testing prove that there is a significant effect of effeciency on perceived service quality. H6 - The Effect of Perceived Service Quality on Customer Satisfaction The results of hypothesis testing prove that there is a significant effect of perceived service quality on customer satisfaction H7 - The Effect of Customer Satisfaction

on Customer Loyalty The results of hypothesis testing prove that there is a significant effect of customer satisfaction on customer loyalty.

CONCLUSION

Testing the first hypothesis, namely the effect of system design on perceived service quality in Tokopedia, revealed that the system design variable has a significant effect on perceived service quality, therefore the system design variable has a significant effect on perceived service quality. The regression coefficient value of 0.106 (positive) indicates that the effect of system design on perceived service quality is positive, which leads to a decrease in perceived service quality. The significant effect of system design on perceived service quality is supported by the subtest (t test) with a t value of 1.268 at a significance level of 0.000. The results of this study are supported by Rita et al. (2019) which explains that system design has a positive and significant effect on perceived service quality as well as (Kaya et al., 2019) also emphasizes the importance of system design for users to understand and feel optimally comfortable, thereby increasing perceived service quality. Rationally, it can also be explained that experiences when using the application affect perceived service quality because with various experiences these experiences cause respondents to feel they are gaining knowledge. This condition causes respondents to feel satisfied because the new knowledge that comes from this experience causes them to feel that they can enjoy online shopping activities on Tokopedia.

Testing the second hypothesis, namely the effect of fulfillment on perceived service quality in Tokopedia, revealed that the fulfillment variable has a significant effect on perceived service quality, therefore the fulfillment variable has a significant effect on perceived service quality. The regression coefficient value of 0.104 (positive) indicates that the effect of fulfillment on perceived service quality is positive, which leads to a decrease in perceived service quality. The significant effect of fulfillment on perceived service quality is supported by the subtest (t test) with a t value of 1.315 at a significance level of 0.000. The results of this study are supported by (Rita et al., 2019) which explains that fulfillment has a positive and significant effect on perceived service quality as well as (Belanche et al., 2021b) also emphasizes the importance of fulfillment for retailers to optimize packaging and shipping so that buyers feel satisfied, so as to improve perceived service quality. Rationally, it can also be explained that experiences in shopping when using the application affect perceived service quality because these various experiences cause respondents to feel satisfied. This condition causes more optimization in the packaging and delivery of goods from this experience, causing them to feel that they can enjoy online shopping activities on Tokopedia.

Testing the third hypothesis, namely the effect of security on perceived service quality, states that security is significantly proven to affect perceived service quality. The regression coefficient value of the security variable is 0.329 (positive), which means that security has a positive influence on perceived service quality. The higher the level of transaction security that users feel through Tokopedia causes perceived service quality to be higher, and when the level of transaction security at Tokopedia is considered to be decreasing, it also causes a decrease in perceived service quality. The significant effect of security on perceived service quality is based on a partial test (t test) with a tcount value of 5.367 at the sig level. 0,000. The findings of this study are supported by (Belanche et al., 2021b) that transaction security in an electronic environment has also proven to be an important predictor of achieving user satisfaction. Likewise, research findings (Kaya et al., 2019a) also show that security guarantees play an important role in building user trust and satisfaction with online products by reducing user concerns about misuse of personal data and transaction data. The rational reason for this research finding is because online sales allow leaking of respondents' personal identity data to the detriment of users. With high security, respondents feel that there is a guarantee of security

regarding their personal data. This condition causes respondents to feel comfortable, not anxious so that they feel satisfied.

Testing the fourth hypothesis, namely the effect of customer service on perceived service quality, states that customer service is significantly proven to affect perceived service quality. The regression coefficient value of the customer service variable is 0.273 (positive), which means that customer service has a positive influence on perceived service quality. The better the service that users feel through Tokopedia causes perceived service quality to get higher, and when the service provided at Tokopedia is considered to be decreasing, it also causes a decrease in perceived service quality. The significant effect of customer service on perceived service quality is based on a partial test (t test) with a tcount value of 3,823 at the sig level. 0,000. The findings of this study are supported by (Wai Lai, 2019b) that good and fast customer service can help make users feel satisfied. Likewise, research findings (Molinillo et al., 2021) also show that good customer service plays an important role in building user trust and satisfaction with the application by reducing user concerns about problems that occur while using the application. The rational reason for the findings of this study is because online sales allow errors in user transactions. With good service and being able to help user problems while using the application causes respondents to feel there is a guarantee of security regarding the application used. This condition causes respondents to feel comfortable, not anxious so that they feel satisfied.

Testing the fifth hypothesis, namely the effect of efficiency on perceived service quality, states that efficiency is significantly proven to affect perceived service quality. The regression coefficient value of the efficiency variable is 0.089 (positive), which means that efficiency has a positive influence on perceived service quality. The more efficiency users feel through Tokopedia causes perceived service quality to get higher, and when the efficiency provided at Tokopedia is considered to decrease, it also causes a decrease in perceived service quality. The significant effect of efficiency on perceived service quality is based on a partial test (t test) with a tcount value of 1.196 at the sig level. 0,000. The findings of this study are supported by (Top & Ali, 2021b) that good and optimal efficiency services can help make users feel satisfied. Likewise, research findings (Belanche et al., 2021b) also show that good efficiency plays an important role in building user satisfaction with the application. The rational reason for this research finding is because the more efficient the search and purchase of products is faster. With good and optimal efficiency, it can help user problems in using the application, causing respondents to feel that the application is used. These conditions cause respondents to feel comfortable and satisfied.

Testing the sixth hypothesis, namely the effect of perceived service quality on customer satisfaction, states that perceived service quality is significantly proven to affect customer satisfaction. The regression coefficient value of the perceived service quality variable is 0.887 (positive), which means that perceived service quality has a positive influence on customer satisfaction. The higher the expectations that users expect on Tokopedia, the higher the customer satisfaction, and when the expectations that users want on Tokopedia are considered to have decreased, it also causes a decrease in customer satisfaction. The significant effect of perceived service quality on customer satisfaction is based on a partial test (t test) with a tcount value of 18,655 at the sig level. 0,000. The findings of this study are supported by (Phonthanukitithaworn et al., 2020) as a measure of the extent to which services meet or exceed customer expectations can make users feel satisfied. Likewise, research findings (Zaid et al., 2020) also show that the services provided are able to exceed expectations have an important role in building user satisfaction with the application. The rational reason for the findings of this study is because the services provided are able to exceed user expectations can build user customer satisfaction. This condition causes respondents to feel comfortable and satisfied.

Testing the seventh hypothesis, namely the effect of customer satisfaction on customer loyalty, states that customer satisfaction is significantly proven to affect customer loyalty. The regression coefficient value of the customer satisfaction variable is 0.878 (positive), which means that customer satisfaction has a positive influence on customer loyalty. The higher user satisfaction on Tokopedia causes higher customer loyalty, and when user satisfaction on Tokopedia is considered to be decreasing, it also causes a decrease in customer loyalty. The significant effect of customer satisfaction on customer loyalty is based on a partial test (t test) with a tcount value of 20.492 at the sig level. 0,000. The findings of this study are supported by (Dam & Dam, 2021b) when users are satisfied with the product or service they receive, respondents tend to continue using the product or service in the future and recommend it to others. Likewise, research findings (Haron et al., 2020a) also show that high customer satisfaction increases customer loyalty because satisfied customers tend to recommend brands and continue to use products and services. The rational reason for this research finding is because the satisfaction that users have is able to build user loyalty. This condition causes respondents to feel satisfied and have loyalty to Tokopedia.

REFERENSI

- Binnawas, M.S.H., Khalifa, G.S.A. and Bhaumick, A. (2020) 'Antecedents of Student's Behavioral Intentions in Higher Education Institutions', *International Journal of Psychosocial Rehabilitation*, 24(03), pp. 1949–1962. Available at: <https://doi.org/10.37200/ijpr/v24i3/pr200942>.
- Boonlertvanich, K. (2019) 'Service quality, satisfaction, trust, and loyalty: the moderating role of main-bank and wealth status', *International Journal of Bank Marketing*, 37(1), pp. 278–302. Available at: <https://doi.org/10.1108/IJBM-02-2018-0021>.
- Cristobal-Fransi, E. et al. (2019) 'Exploring service quality among online sharing economy platforms from an online media perspective', *Sustainability (Switzerland)*, 11(13). Available at: <https://doi.org/10.3390/su11133690>.
- Haron, R., Abdul Subar, N. and Ibrahim, K. (2020) 'Service quality of Islamic banks: satisfaction, loyalty and the mediating role of trust', *Islamic Economic Studies*, 28(1), pp. 3–23. Available at: <https://doi.org/10.1108/ies-12-2019-0041>.
- Mahmut Kaya and Hasan Sakir Bilge (2019) 'Deep Metric Learning : A Survey', *Symmetry*, 11.9, p. 1066.
- Park, M. et al. (2018) 'Patient- and family-centered care interventions for improving the quality of health care: A review of systematic reviews.', *International journal of nursing studies*, 87, pp. 69–83. Available at: <https://doi.org/10.1016/j.ijnurstu.2018.07.006>.
- Puspitasari, I. et al. (2023) 'Investigating the role of utilitarian and hedonic goals in characterizing customer loyalty in E-marketplaces', *Heliyon*, 9(8), p. e19193. Available at: <https://doi.org/10.1016/j.heliyon.2023.e19193>.
- Rita, P., Oliveira, T. and Farisa, A. (2019) 'The impact of e-service quality and customer satisfaction on customer behavior in online shopping', *Heliyon*, 5(10), p. e02690. Available at: <https://doi.org/10.1016/j.heliyon.2019.e02690>.
- Sumi, R.S. and Kabir, G. (2021) 'Satisfaction of E-Learners with Electronic Learning Service Quality Using the SERVQUAL Model', *Journal of Open Innovation: Technology, Market, and Complexity*, 7(4), p. 227. Available at: <https://doi.org/https://doi.org/10.3390/joitmc7040227>.
- Supriyanto, A., Wiyono, B.B. and Burhanuddin, B. (2021) 'Effects of service quality and customer satisfaction on loyalty of bank customers', *Cogent Business and Management*, 8(1). Available at: <https://doi.org/10.1080/23311975.2021.1937847>.

- Top, C. and Ali, B.J. (2021) 'Customer satisfaction in online meeting platforms: Impact of efficiency, fulfillment, system availability, and privacy', *Revista Amazonia Investiga*, 10(38), pp. 70–81. Available at: <https://doi.org/10.34069/ai/2021.38.02.7>.
- Wai Lai, I.K. (2019) 'Hotel image and reputation on building customer loyalty: An empirical study in Macau', *Journal of Hospitality and Tourism Management*, 38(September 2018), pp. 111–121. Available at: <https://doi.org/10.1016/j.jhtm.2019.01.003>.