

## **THE EFFECT OF PRODUCT QUALITY AND SERVICE QUALITY, CUSTOMER SATISFACTION ON CUSTOMER LOYALTY**

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### **ABSTRACT**

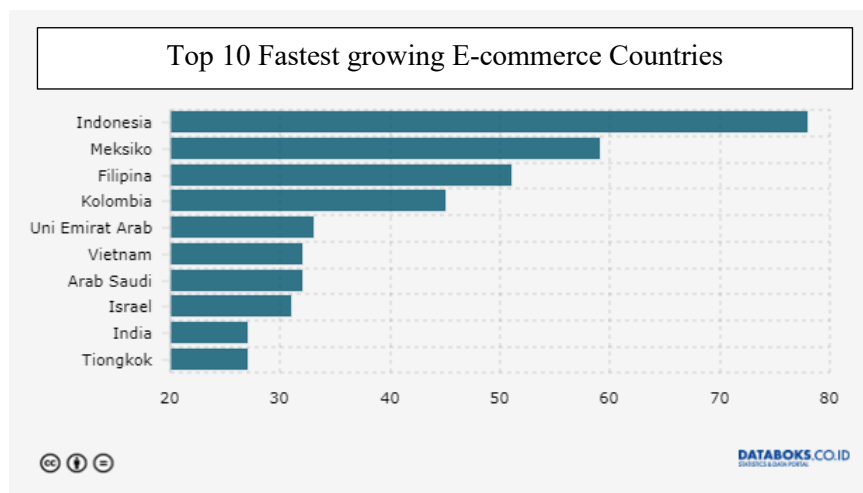
The purpose of this study was to determine the effect of product quality, service, and customer satisfaction on consumer loyalty. The method used is descriptive quantitative method. Data obtained by distributing questionnaires to the general public with 87 samples. The result showed that product quality had no effect on consumer loyalty, service quality had a significant positive effect on consumer loyalty of the F test show that all the independent variables in this study simultaneously affect consumer loyalty by 84.4%.

**Keywords:** Product Quality; Customer Satisfaction; Consumer Loyalty

## INTRODUCTION

The advancement of internet-based technology is followed by the emergence of various online shopping platforms that offer various conveniences for transactions. E-commerce is one of the internet-based online shopping platforms by utilizing various devices so that it is easily accessible anytime and anywhere. E-commerce can be interpreted as a meeting place for sellers and buyers, a place where transactions occur, the exchange of goods with money in cyberspace (Rerung, 2018). Arif (2020) in his research stated that e-commerce is an option that is widely chosen by business people today but must still be supported by good e-service quality in order to have a positive impact and influence consumer buying interest.

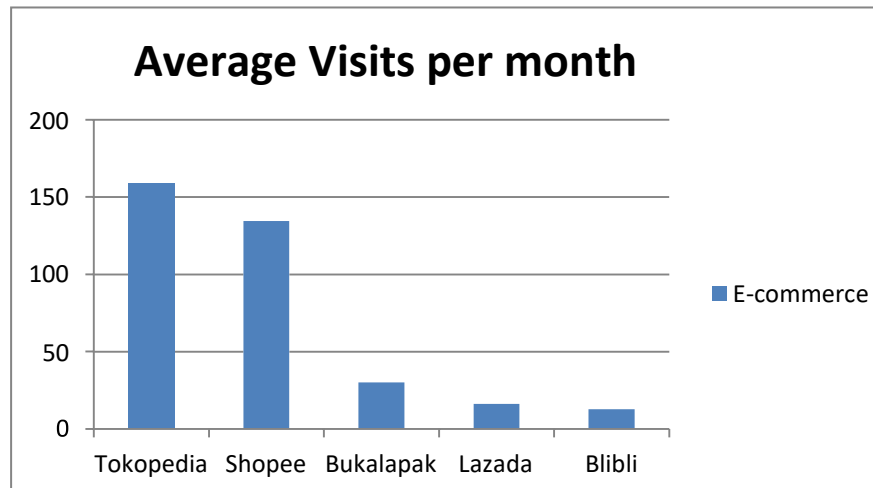
The internet network-based business mechanism is very helpful for companies in an effort to increase profit generation through sales, especially with market conditions and higher competition being the main background for changes in consumer behavior in making transactions. In the last 10 years, the development of e-commerce in Indonesia has increased very quickly. Databoks noted that the growth of e-commerce in Indonesia ranks first for the country with the fastest e-commerce growth in the world. This is supported by Indonesia's high population so that it becomes a potential market for business people. In addition, Indonesian society is adaptive to the development of information technology which makes Indonesia a good place for e-commerce growth.



**Figure 1. The fastest e-commerce growth**

Source: databoks.co.id (2022)

Based on the results of a survey conducted by the Creative Economy Agency (Bekraf), during 2019–2020 there was an increase in visits and transactions in e-commerce (Sunarto et al., 2021). This is due to the various conveniences and conveniences provided by each e-commerce. The main factor that attracts the public is the quality of service that causes loyal consumers to continue transacting on one of these e-commerce (Cardia et al., 2019). Indeed, every market player, especially market places or e-commerce, compete to offer various facilities and services to satisfy their customers (Jayani, 2021).



**Figure 2. Average monthly e-commerce visits**  
Source: databoks.co.id (2022)

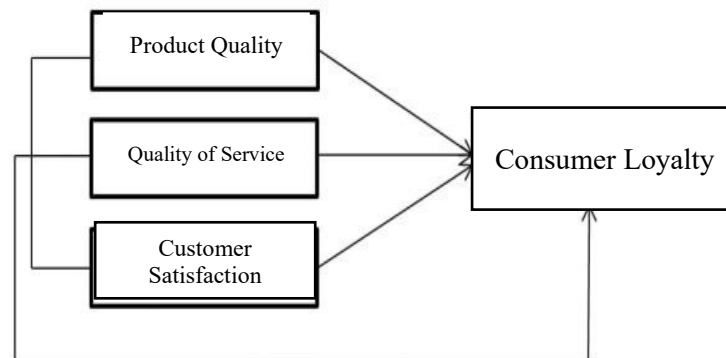
Based on figure 2, Tokopedia and Shopee are the dominant market places and are visited by many people to make transactions. From this data, it can be seen that Shopee exists and competes with start ups created by the nation's children. This certainly cannot be separated from Shopee's efforts in maintaining consumer loyalty. Consumer loyalty is synonymous with repeat purchases in the same place. These two things are closely related and become the main indicators in measuring consumer loyalty, because they reflect commitment to certain goods, brands or repeat purchases occur because consumers are very satisfied with the service where they shop. So repeat purchases are not just about certain goods or brands, because many elements that affect consumer loyalty include product quality and service quality that makes consumers satisfied and become loyal customers (Cardia et al., 2019). Product quality is the ability of goods or services to display their function, durability, accuracy, durability, and other attributes so that the product can be different from other products (Phillip & Keller, 2016). This condition provides information that an item or product has good quality, so that it can satisfy consumers when using it (Laetitia et al., 2021). Consumer satisfaction can be measured by 5 important indicators including: 1) product quality 2) service quality 3) price 4) ease of access 5) advertising.

Speaking of e-commerce, good service quality is one effective way to survive business competition (Widyanita, 2021). Likewise with what Shopee does, various services are offered to create customer satisfaction for the long term. The forms of services offered by Shopee include a choice of payment methods, ease of transactions, providing several courier options including Shopee express and live chat with customer services that are active for 24 hours. Excellent service quality is the main capital for every company that has an impact on consumer loyalty so that it will maximize the financial performance of the company (Laetitia et al., 2021). Service is quality or appearance, difficult to understand and soon lost . However, service can be perceived beyond what is owned so that buyers can be interested during the time spent consuming goods and products. Service is mostly an activity provided by one party to another, which is formless and does not give rise to ownership (Phillip & Keller, 2016). Service quality is an important part that must not only be considered, but also maximized, and maintained to maintain consumer loyalty.

Service quality includes the extent to which the outlet's ability to provide everything expected by consumers, including ease of transaction (Patmala & Fatihah, 2021). The rest of the consumer satisfaction that arises due to good service quality in addition to encouraging

purchasing decisions will also be a strong reason for a consumer to become a loyal customer (Arianto, 2019). Service quality can be determined through the actual service expected by the service received (Saputra & Wongsosudono, 2017).

Based on the description in the background above, a research framework and hypotheses can be made as follows:



**Figure 3. Research Framework Drawing**

Research hypothesis:

H1= Product Quality Affects Consumer Loyalty

H2= Service Quality Affects Consumer Loyalty

H3= Consumer Satisfaction Affects Consumer Loyalty

## RESEARCH METHOD

This study used quantitative strategies. Is a study based on positivist thinking patterns, used to see examples in a particular population, various data obtained using research instruments. By using quantitative exploration techniques, it tends to be seen that the relationship between factors and items under study is more mutually influencing between independent and dependent variables. Quantitative data is data that can be estimated or determined directly, data in the form of numbers (CresWell, 2016).

### Population and Sample

The population used is the community of e-commerce application users, while the sample used is the community of Shopee application users.

### Data Types and Sources

The type of data used in this study is primary data. Primary data were obtained through questionnaires distributed online to the public.

### Operational Variables

**Table 1. Operational Variables**

Variable	Indicators	Reference	Measuring Instruments	Scale
Product Quality	- Price compliance - Durability - Benefit - Reliability	Laetitia et al., 2021	Questionnaire (Likert Scale)	Ordinal

Quality of service	- Reliability - Responsiveness - Tangible - Empathy - Assurance	Phillip & Keller, 2016	Questionnaire (Likert Scale)	Ordinal
Customer satisfaction	- Purchase decision - Quality on price - Benefit - Satisfaction with service	Muslima & Ernawati, 2020	Questionnaire (Likert Scale)	Ordinal
Consumer loyalty	- Recurring purchases - Recommend - Buy a specific brand - Not switching	Cardia et al., 2019	Questionnaire (Likert Scale)	Ordinal

### Normality Test Data Analysis Techniques

Conducted to test the inner model in research whether it is normally distributed or not (Ghozali, 2018). Arguably feasible if a model has a normally distributed basis, there are two methods to distinguish regardless of whether residues are usually delivered, in particular by graphical examination and factual investigation.

### Multiple Regression Analysis

Done to understand the relationship between at least two factors in an equation. Sugiyono (2016) says that many regression analyses will be performed assuming the sum of its free variabels is like two. The goal is to understand the relationship between at least two variables and anticipate or forecast future circumstances. Here, multiple regression was used to test store atmosphere, retail service, and hedokin value against impulse buying. The regression formula is:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Description:

Y = Consumer Loyalty

X1 = Product Quality

X2 = Service Quality

X3 = Consumer Satisfaction

$\alpha$  = Constant

e = Error Analisis Koefisien Determinasi ( $R^2$ )

The value of the coefficient of determination is in the range of zero and one. The value of  $R^2$  implies that the capacity of the independent variable in understanding the dependent variable is very limited (Ghozali, 2018). Approaching one means that the independent variable provides almost all the data necessary for the dependent variable.

### Autocorrelation Test

Conducted to test for possible correlation of errors in the disruptive period and before. If there is a correlation error.

### Model Feasibility Testing (Test F)

To test the simultaneous effect of all independent variables on the dependent variable

(Ghozali, 2018). Test F or Test Anova using a confidence standard of 0.05

### Validity Test Results

#### T Test

To test one independent variable and its effect on the dependent variable with a significant degree of 5% (0.05)

- A significant value of  $<0.05$ , independent variables individually correspond to the dependent variable
- Significance value  $>0.05$ , independent variables individually have no effect on the dependent variable

## RESULTS AND DISCUSSION

### Instrument Test Results

Based on questionnaires distributed online to the general public, a sample of 87 respondents using the Shopee application was obtained, with the following information:

**Table 2. Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Product Quality	55.4598	32.693	0.542	0.295	0.790
Quality of Service	53.9195	32.982	0.641	0.428	0.731
Customer Satisfaction	59.4828	37.601	0.639	0.416	0.742
Consumer Loyalty	59.0345	33.941	0.649	0.438	0.727

The result of the validity test shows the R count from

**Table 3. Respondent Information Table**

Respondent Information		
Gender	Male	36 people
	Woman	51 people
Age	20–30 years	13
	31–40 years	49

	41–50 years	17
	>50 years	8
Number of Research Resnpondents		87 People

Source: processed data (2022)

Based on the table, it can be seen that the number of respondents involved in this study was 87 people, including 36 men, 51 women with the age of 20–30 years as many as 13 people, 31–40 years as many as 49 people, 41–50 years as many as 17 people and >50 years as many as 8 people. So it can be concluded that Shopee application users are dominated by women in the age group of 31–40 years, each independent variable is more than the R table. So it can be concluded that the research instrument used is valid.

## Reliability Test Results

**Table 4. Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.897	0.706	4

Cronbach's Alpha value was 0.897. The value is in the Alpha value category of 0.70–0.90, hence the quality of high reliability.

## Classical Assumption Test

### Normalitas

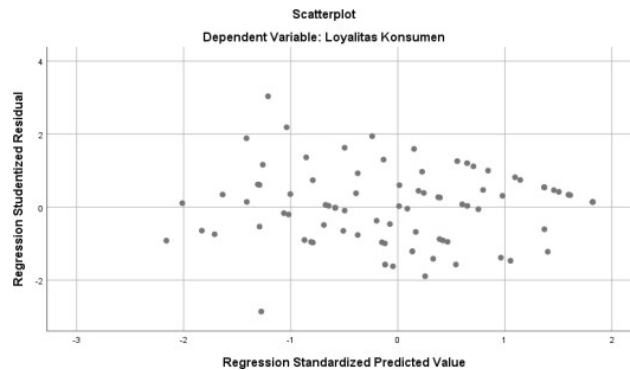
**Table 5. Normality Test Results Table**

One-Sample Kolmogorov-		
		Unstandardized Residual
N		87
Normal Parameter s <sup>a,b</sup>	Mean	0.0000000
	Std. Deviation	1.75523699
Most Extreme Difference s <sub>c</sub>	Absolute	0.087
	Positive	0.060
	Negative	-0.087
Test Statistic		0.087
Asymp. Sig. (2-tailed)		.105 <sup>c</sup>

Source: processed data (2022)

The normality test results show an Asymo.sig value of 0.105, or sig > alpha. This means that the data contained in this study have a normal distribution.

### Heteroscedasticity



**Figure 4. Scarlet plot chart**  
 Source: processed data (2022)

The graph above shows the points spread and does not form a certain pattern, so it can be concluded that no symptoms of heteoscedasticity are detected.

### Multicollinianity

**Table 6. Multicolliniarity Test Results Table**

Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.119	1.980		0.565	0.574		
	Kualitas Produk	0.140	0.082	0.164	1.704	0.092	0.730	1.370
	Kualitas Pelayanan	0.325	0.097	0.341	3.344	0.001	0.649	1.540
	Kepuasan Konsumen	0.350	0.121	0.297	2.892	0.005	0.643	1.555

Source: processed data (2022)

The test results show that each variable has a beta coefficient value of less than one. X1 = 0.140, X2 = 0.325 & X3 = 0.350. Standard error value x1= 0.082, X2 = 0.097 & X3= 0.121.

This means that the error standard is low and multicollinearity is not detected.

### Autocorrelation

**Table 7. Autocorrelation Test Results Table**

Model Summary <sup>b</sup>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.662 <sup>a</sup>	0.844	0.418	1.78668	2.031

Source: processed data (2022)



The calculated DW value is 2.031 with the DU table of 2.4433. because  $DU > DW$  DW then it can be concluded that there is no Autocorrelation problem.

### Test the hypothesis

#### Multiple Regression Analysis

**Table 8. Multiple Regression Test Results**

Type		Coefficients <sup>a</sup>						
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.119	1.980		0.565	0.574		
	Product Quality	0.140	0.082	0.164	1.704	0.092	0.730	1.370
	Quality of service	0.325	0.097	0.341	3.344	0.001	0.649	1.540
	Customer satisfaction	0.350	0.121	0.297	2.892	0.005	0.643	1.555

Source: processed data (2022)

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon \quad Y = 1.119 + 0.140 X_1 + 0.325 X_2 + 0.350 X_3 + \varepsilon$$

- If all independent variables are 0 (zero), then the value of the bound variable is 1.119
- $X_1$  (product quality) against  $Y$  (consumer loyalty).
- The value of the  $X_1$  coefficient is 0.140, meaning that every one unit increase in  $X_1$  will be followed by a  $Y$  increase of 0.140. Assuming that the other independent variables in the regression are constant.
- $X_2$  (quality of service) to  $Y$  (customer loyalty)  
 The value of the coefficient  $X_2$  (quality of service) is 0.325. This means that every increment of one unit in  $X_2$  will be followed by an increase in  $Y$  of 0.325, assuming that

the other independent variables in the regression are constant.

e. X3 (consumer satisfaction) to Y (consumer loyalty)

The value of the coefficient X3 () is 0.350. This means that each increment of one unit in X3 will be followed by an increase in Y of 0350, assuming that all independent variables in the regression are constant.

### Coefficient of Determination R

**Table 9. Coefficient of Determination Test Results**

Model Summary <sup>b</sup>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.662 <sup>a</sup>	0.844	0.418	1.78668	2.031

Source: processed data (2022)

Based on the test results, an R Square of 0.844 was obtained. This means that the variables of product quality, service quality and customer satisfaction have an effect of 84.4% on consumer loyalty. The remaining 15.6% were influenced by other variables that were not studied.

### Partial Test t

Table 10. t Test Results

Coefficients <sup>a</sup>								
Type		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.119	1.980		0.565	0.574		
	Product Quality	0.140	0.082	0.164	1.704	0.092	0.730	1.370
	Quality of service	0.325	0.097	0.341	3.344	0.001	0.649	1.540
	Customer satisfaction	0.350	0.121	0.297	2.892	0.005	0.643	1.555

Source: processed data (2022)

The results of the t-test show that:

- Product quality variables, t count (1.704), sig (0.730)
- Service quality variables t hiutng (3.344), sig (0.001)
- Consumer satisfaction variables t count (2.892), sig (0.005)

### Simultaneous Test F

Table 11. F Test Results

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	206.633	3	68.878	21.577	.000 <sup>b</sup>
	Residual	264.954	83	3.192		
	Total	471.586	86			

Source: processed data (2022)

Based on the results of the F test, F is calculated (21.577) with a Significance value of (0.000)

## DISCUSSION

### **The effect of product quality on consumer loyalty**

Hypothesis test results for product quality variables, t count (1.704), sig (0.730) or T count (1.794) < t table (2.63637) with sig (0.730) > alpha (0.005). These results show that product quality has no effect on consumer loyalty. Product quality variables are not the only factor that affects loyalty, so the results of the study are contrary to the results of previous studies which stated that product quality affects consumer loyalty (Muslima & Ernawati, 2020; Kumala & Widodo, 2019) which stated that good product quality and according to consumer expectations will support and increase consumer loyalty.

### **The effect of service quality on customer loyalty**

The results of the hypothesis test obtained a calculated t value of (3.344) with a sig value (0.001) or calculated T (3.344) > t table (2.63637), sig (0.001) < Alpha (0.005). It can be concluded that the quality of service has a significant positive effect on consumer loyalty. The better and better the service provided, it will greatly affect the increase in consumer loyalty. In line with the results of research (Arianto, 2019) which states that the better the consumer assessment of the services provided, it will be able to increase consumer loyalty.

### **The effect of consumer satisfaction on**

The results of the hypothesis test for consumer satisfaction variables obtained t count (2.892), sig (0.005) or T count (2.892) > t table (2.63637) with sig (0.005) ≤ alpha (0.005) values. So it can be concluded that consumer satisfaction has a significant positive effect on consumer loyalty. This finding is in line with research (Arianto, 2019) which states that the better and increased consumer satisfaction will be followed by an increase in consumer loyalty.

## CONCLUSION

Based on the results of the discussion, it can be concluded that:

1. Product quality has no effect on consumer loyalty.
2. Service quality has a positive and significant effect on consumer loyalty.
3. Consumer satisfaction has a positive and significant effect on consumer loyalty.

### **Suggestion**

Based on the results of this study, here are some suggestions that researchers can convey, including:

1. With the growing e-commerce competition in Indonesia, Shopee can make various breakthroughs related to service and product quality to increase consumer satisfaction.
2. For further research, it is recommended to add several other variables such as price variables, promotions or advertisements from the e-commerce
3. For consumers and the general public, if you can be wiser in making online transactions in the market place. Consumers are expected to consider various important factors before making transactions.

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