

# The Effect of E-Service Quality and Perceived Value on Telkomsel's E-Customer Loyalty on Mytelkomsel App Users

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## Abstract

*This study aims to be able to explain how much influence e-service quality and perceived value have on Telkomsel's e-customer loyalty to MyTelkomsel App users in Bandung City. The research method used is descriptive using quantitative methods involving 400 respondents who use the MyTelkomsel App in Bandung City. The sampling technique used is non-probability sampling with a purposive sampling type. In this study, respondent data was processed using the SPSS 25 for Windows application. The results of the study based on descriptive analysis for the e-service quality variable are already in the excellent category by 89%, as well as for the perceived value variable is already in the excellent category by 90%, and the e-customer loyalty variable is already in the excellent category by 87%. E-customer quality and perceived value have a positive and significant effect on e-customer loyalty with a magnitude of influence of 51.5% and the remaining 48.5% influenced by other factors that were not studied.*

## Keywords

e-service quality; perceived value; e-customer loyalty



## I. Introduction

Indonesia has a population that is always increasing from year to year. Since the first population census was conducted in 1961, the graph of the population of Indonesia has always moved upwards every year. The total population of Indonesia from 1961 to 2020 was 173.18 million people. In 2020 alone, Indonesia's population has reached 170.20 million people with an average population growth rate of 1.25%.

Meanwhile, We Are Social and Hootsuite (2021), recorded that mobile phone users in Indonesia amounted to 345.3 million with a population of 274.9 million Indonesians. This means that every Indonesian resident has an average of more than one mobile phone. There are several cellular operator service provider companies in Indonesia with the most numbers, namely, PT Telekomunikasi Selular or Telkomsel, PT Indosat Tbk, Excelcomindo Pratama Tbk, Tri and Smartfren (Kemkominfo Indonesia, 2018).

Judging from several cellular operator services in Indonesia, Telkomsel is the cellular operator with the most number of subscribers. Reporting from katadata.com which displays data on the number of Telkomsel cellular operator users in 2019 reached 171.1 million subscribers followed by four other cellular operators, namely Indosat (59.3 million subscribers), XL Axiata (56.7 million subscribers), Hutchinson (30.4 million subscribers), and Smartfren (13.3 million subscribers). From this data, it can be seen that Telkomsel is the cellular operator that is most in demand by the Indonesian people.

The churn rate or customer movement was also experienced by the main players of cellular operators in Indonesia, namely Telkomsel, Telkomsel experienced a decrease in the number of subscribers. In the second quarter of 2020, the number of Telkomsel subscribers decreased by 1.50%, this percentage is equivalent to 2.49 million subscribers

compared to the first quarter of 2020 (teknologi.bisnis.com, 2020). The decrease in the number of customers was also followed by problems experienced by Telkomsel some time ago. Telkomsel became the most complained mobile operator in 2020. The Head of the YLKI Complaints Division revealed that Telkomsel is the cellular operator that has been complained about the most with a percentage of 29.7% (sindonews.com, 2021).

Based on the results of a pre-survey of each research variable, showing that there are problems with e-service quality, perceived value, and e-customer loyalty in MyTelkomsel App users in Bandung City, the results above can also be concluded that e-service quality and perceived value are important factors in realizing e-customer loyalty, this is in line with the results of previous research by (Budiman et al., 2020) which stated that e-customer loyalty has a positive effect and significant to e-customer loyalty, perceived value has a positive and significant effect on e-customer loyalty, other studies such as those conducted (Cuisson et al., 2021) resulted in the conclusion that perceived value significantly affects consumer satisfaction. According to Priansa in Nusjirwan (2020) "Implementation of communication activities to customers within the company is carried out formally, however, currently there are also companies that practice their communication activities to consumers in an informed manner so that they can explore in-depth information from customers". Regarding the background, this research considers the customer value as an important element for an industry, both in service and manufacture. Moreover, the maximum customer value can be made only if positive influence of marketing and individual environment association does exist (Kusumadewi, 2019). The quality of products that are in great demand by consumers can be seen from several factors including packaging, price, quality, and benefits obtained by consumers (Romdonny, 2019). Based on the description of the problem, the researcher is interested in conducting a study under the title "The Effect of E-Service Quality and Perceived Value on Telkomsel's E-Customer Loyalty on MyTelkomsel App Users".

### **1.1 Problem Formulation**

Based on the research background that has been described above, this study is intended to able to examine the extent of the influence of e-WOM and Discounts on purchasing decisions. The formulation of the problem in this study is. (1) How does e-service quality affect the e-customer loyalty of MyTelkomsel App users? (2) How does perceived value affect the e-customer loyalty of MyTelkomsel App users? (3) How do e-service quality and perceived value affect the e-customer loyalty of MyTelkomsel App users? (4) What are the e-service quality, perceived value, and e-customer loyalty given by Telkomsel to MyTelkomsel App users?

## **II. Review of Literature**

### **2.1 E-Service Quality**

According to Zeithaml et al., (2021), e-service quality is the ability to how effectively and efficiently an application or website can facilitate consumers in making transactions digitally. Meanwhile, according to Parasuraman et al., (in Budiman et al., 2020), e-service quality is one of the tools that can be used in measuring the level of customer satisfaction with an online-based service. According to Zeithaml et al., (2021) mentioned that there are seven dimensions of e-service quality which are described as follows: (1) Efficiency, (2) Fulfillment, (3) System Availability, (4) Privacy, (5) Responsiveness, (6) Compensation, and (7) Contact.

## **2.2 Perceived Value**

According to Syamsiah in Ciputra & Prasetya (2020), perceived value is a result of various benefits obtained by customers and their comparison is related to all costs incurred in the purchase process. Meanwhile, according to Kotler et al., (2020), customer perceived value is evaluated as a whole by consumers on the difference between the benefits obtained and all costs that have been incurred on competitors' offerings or similar services. Companies must try to provide consumers with the best service so that a good perception arises after using the product or service. Sweeney and Soutar (2021) mentioned that there are four dimensions of perceived value, namely follows (1) Emotional value, (2) Social value, (3) Quality / Performance Value, and (4) Price / Value of Money.

## **2.3 E-Customer Loyalty**

According to Griffin (in Budiman et al., 2020), e-customer loyalty is an attitude where consumers are not forced to use digital shopping services that encourage repeated use. Meanwhile, Anderson and Srinivasan (in Sasono et al., 2021) define e-customer loyalty as the repeated satisfaction of customers with certain e-commerce websites that make them come back to buy products or services. According to Prakosa & Pradhanawati (2020), there are four dimensions of e-customer loyalty, namely follows (1) Cognitive, (2) Affective, (3) Conative, and (4) Action.

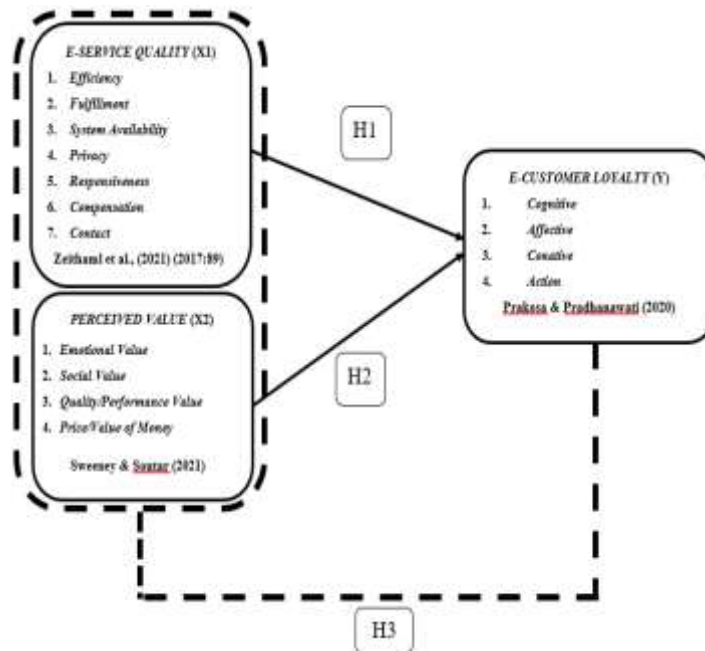
## **2.4 The Relationship between E-Service Quality and E-Customer Loyalty**

Customer loyalty can be seen if there are repeated purchases despite price changes or other elements. One of the factors that can create e-customer loyalty is e-service quality because if consumers feel that they have received online services that match their expectations, there will be repeated visits. This is confirmed by research (Cahaya & Siswanti, 2020) which explains that e-service quality has a positive and significant influence on e-customer loyalty, meaning that e-service quality has a significant role in the formation of e-customer loyalty in an online service. In addition, the picture in the book (Kotler et al., 2019) shows the relationship between e-service quality and e-customer loyalty.

## **2.5 The Relationship between Perceived Value and E-Customer Loyalty**

Perceived value is the perception generated by consumers after using a service or product, by comparing reality with the expectations they expect. A good perception of a product will cause repeated purchases because it causes a sense of pleasure in consumers. Repeated purchases indicate that there is consumer loyalty to a product or service. The previous statement is following the theory by Kotler (2019) namely "Whether the offer lives up to expectations affects customer satisfaction and the probability that the customer will become a repeat buyer" which shows the relationship between perceived value and e-customer loyalty. Based on research by Stefanie & Firdausy (2021) the results of the hypothesis test show that perceived value has a positive and significant effect on e-customer loyalty, meaning that perceived value has an important role in the formation of e-customer loyalty.

## 2.6 Research Conceptual Framework and Hypothesis Development



**Figure 1.** Conceptual Framework

In research on the effect of e-service quality (X1) and perceived value (X2) on e-customer loyalty (Y) on the application will be tested based on the literature of the previous theory, here are three hypotheses that can be formulated:

H1: E-Service Quality significantly affects Telkomsel's E-Customer Loyalty.

H2: Perceived Value significantly affects Telkomsel's E-Customer Loyalty.

H3: E-Service Quality and Perceived Value have a significant effect on Telkomsel's E-Customer Loyalty.

## III. Research Method

The research approach used is a quantitative method with multiple regression analysis techniques with the aim of seeing the influence between the variables of e-service quality, perceived value on e-customer loyalty with the SPSS25 analysis tool for Windows. The research sampling uses non-probability side with purposive sampling technique, which does not provide equal opportunities for the population and only customers who have used the MyTelkomsel App service in Bandung City. The sample size was calculated using Bernoulli's formula so that the overall sample taken was 400 respondents to be surveyed. The questionnaire used on the Linkert scale with a scale of 1-5 with a value of strongly disagreeing – strongly agreeing.

## IV. Discussion

### 4.1 Validity Test and Reliability Test

This study also presents validity and reliability tests by presenting the convergent validity of data as in table 1.

**Table 1.** Validity and Reliability Test Results

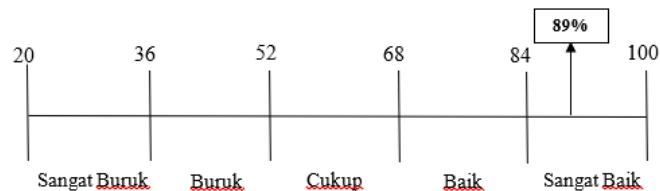
<b>Construct</b>	<b>Correlation Value</b>	<b>Description</b>	<b>Cronbach's Alpha</b>	<b>Description</b>
<b>E-Service Quality</b>				
X1.1	0.498			
X1.2	0.456			
X1.3	0.558			
X1.4	0.558			
X1.5	0.586			
X1.6	0.500	<b>Valid</b>	0,737	<b>Reliable</b>
X1.7	0.556			
X1.8	0.498			
X1.9	0.515			
X1.10	0.540			
X1.11	0,505			
<b>Perceived Value</b>				
X2.1	0.397			
X2.2	0.498			
X2.3	0.473			
X2.4	0.499			
X2.5	0.625	<b>Valid</b>	0,689	<b>Reliable</b>
X2.6	0.571			
X2.7	0.541			
X2.8	0.477			
X2.9	0.542			
X2.10	0.521			
<b>E-Customer Loyalty</b>				
Y1.1	0.354			
Y1.2	0.338			
Y1.3	0.440			
Y1.4	0.308			
Y1.5	0.363			
Y1.6	0.667	<b>Valid</b>	0,758	<b>Reliable</b>
Y1.7	0.671			
Y1.8	0.674			
Y1.9	0.717			
Y1.10	0.715			
Y1.11	0.643			

The results of the validity test processing of all statements in 32 statements from the variables e-service quality, perceived value, and e-customer loyalty are declared valid, this is because the validity criteria are determined by the Pearson Correlation value compared to the table value. If the rating value > label then it is declared valid and if the rating value < table then it is declared invalid. From the reliability test calculations using the SPSS 25

for Windows application, statements on the dimensions of the marketing mix and purchase decisions are considered reliable because of the value of Cronbach's Alpha  $\geq 0.6$ .

## 4.2 Descriptive Analysis

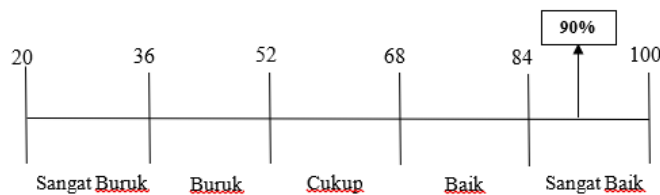
### a. E-Service Quality of MyTelkomsel App



**Figure 1.** *E-Service Quality Continuum Line*

Based on the figure above, which is a continuum line, states that the e-service quality (X1) variable has an average percentage of 89% which is indicated by an arrow in the continuum line. This figure was obtained from respondents' responses through eleven statements regarding e-service quality. An average of 89% indicates that respondents' responses fall into the range of 84% - 100% which means that the position of the e-service quality variable is rated As Excellent.

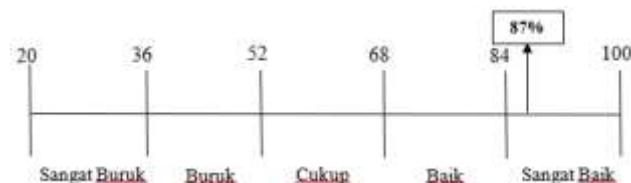
### b. Perceived Value of MyTelkomsel App



**Figure 2.** *Perceived Value Continuum Line*

Based on the figure above, which is a continuum line, states that the perceived value variable (X2) has an average percentage of 90% which is indicated by an arrow in the continuum line. This figure was obtained from respondents' responses through ten statements regarding perceived value. An average of 90% indicates that respondents' responses fall into the range of 84% - 100% which means the position of the perceived value variable in the excellent value.

### c. E-Customer Loyalty MyTelkomsel App



**Figure 3.** *E-Customer Loyalty Continuum Line*

Based on the figure above, which is a continuum line, states that the variable e-customer loyalty (Y) has an average percentage of 87% which is indicated by the arrow in



the continuum line. This figure was obtained from respondents' responses through eleven statements regarding e-customer loyalty. An average of 87% indicates that respondents' responses fall into the range of 84% - 100% which means that the position of the e-customer loyalty variable is rated Very Good.

#### d. Multiple Linear Regression Test

Multiple linear regression analysis is used to determine the functional relationship between the dependent variables associated with two or more independent variables so that the relationships it is obtained when only the other variables are known. This is shown in the following table:

**Table 2.** Multiple Linear Regression Analysis  
**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	27.318	3.005		9.091	.000
TOTAL_X1	.145	.069	.129	2.091	.037
TOTAL_X2	.290	.081	.220	3.576	.000

a. Dependent Variable: ABS\_RES

$$Y = a + bX1 + bX2$$

$$Y = 27,318 + 0,145 X1 + 0,290 X2$$

The results of the multiple linear regression equations will be described as follows:

- Y value is the amount of e-customer loyalty of MyTelkomsel App services in the city of Bandung.
- The value of a is the value of the constant in the regression equation. The constant in this study of 27,318 states that if the two free variables (X1 and X2) are equal to zero, which means that the e-customer loyalty value of the MyTelkomsel App service in Bandung city is without e-service quality and perceived value. The number 27,318 is divided by eleven items of questionnaire statements about e-customer loyalty to obtain a result of 27,318 if there are no variables, namely e-service quality and perceived value.

#### e. T test

The following are the results of the partial t-test conducted by the author which will be described in the following table:

**Table 3.** T test results  
**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	27.318	3.005		9.091	.000
TOTAL_X1	.145	.069	.129	2.091	.037
TOTAL_X2	.290	.081	.220	3.576	.000

a. Dependent Variable: ABS\_RES

Based on the results of the analysis in the table above, a value of 2,091 for the e-service quality variable (X1) and 3,576 for the perceived value variable (X2) or greater

than the table (1,962) was obtained. As for the table value obtained from the formula  $5\%:2 = 2.5\%$ ,  $df (n-1, 400-1 = 399)$ . The significant value generated in the table above shows a figure of 0.347 for the e-service quality variable and 0.747 for the perceived value variable. Thus it can be concluded that H1 and H2 are accepted. So, there is an influence between e-service quality (X1) on e-customer loyalty (Y) by H1 and there is an influence between perceived value (X2) on e-customer loyalty (Y) by H2.

#### f. Test f

The following are the results of the simultaneous f test conducted by the author which will be described in the table below:

**Table 4.** Test Result f  
**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	795,293	2	397,646	22,323	.000 <sup>b</sup>
	Residual	7071,747	397	17,813		
	Total	7867,040	399			

a. Dependent Variable: E\_CUSTOMER-VALUE

b. Predictors: (Constant), PERCEIVED\_VALUE, E\_SERVICE\_QUALITY

Based on the analysis in the table above, based on the calculated value and table, it is obtained  $F_{hitung} = 22,323 > F_{tabel} = 2.6049$ , the formula for finding  $F_{tabel}$  is 95%,  $\alpha = 5\%$ ,  $df 1 (4-1 = 3)$  and  $df 2 (n-k-1, 400-3-1 = 396)$ . So simultaneously e-service quality (X1) and perceived value (X2) individually or simultaneously affect e-customer loyalty (Y).

#### g. Coefficient of Determination Test

**Table 5.** Coefficient of Determination Test Results  
**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.820 <sup>a</sup>	0,672	0,669	1,38704

a. Predictors: (Constant), e-service quality, perceived value

From the results listed in the table above, it shows that the value of the coefficient of determination R square in this study is 0.515 or 51.5%, which means that e-customer loyalty is influenced by e-service quality and perceived value of 51.5%. While the remaining 48.5% or 0.485 was influenced by variables or other factors that were not studied.

## V. Conclusion

The results of the descriptive analysis show that the e-service quality (X1) variable on the MyTelkomsel App is considered to have entered the excellent category. This is



shown by the overall value of the e-service quality variable getting a score of 89%. Of the 11 questions, the e-service quality variable that got the highest score was the 11th statement with a percentage of 91%, while the state with the lowest value was the 5th statement with a score of 86%. The results of the descriptive analysis show that the perceived value (X2) variable on the MyTelkomsel App is considered to have entered the very good category. This is shown by the overall value of the perceived value variable getting a score of 90%. Of the 10 perceived value variable questions that get the highest score are the 18th statement and the 19th statement with a percentage of 92%, while the state with the lowest value is the 13th statement with a score of 87%. The results of the descriptive analysis show that the e-customer loyalty (Y) variable in MyTelkomsel App users is considered to have entered the very good category. This is shown by the overall value of the e-customer loyalty variable getting a score of 87%. Of the 11 e-customer loyalty variable questions that got the highest score was the 25th statement and the 26th statement with a percentage of 90%, while the states with the lowest score were the 27th statement with a score of 84%.

Based on the test results, it can be seen that e-service quality has a significant influence on e-customer loyalty. This can be seen from the statistical t value which is greater than 1.96, which is 2,091. Thus, the H1 hypothesis in the study was accepted. This shows that the higher the value of e-service quality, the more it will increase e-customer loyalty, and vice versa, if the value of e-service quality is low, it will reduce e-customer loyalty. The results of this study are following previous research by (Budiman et al., 2020) and (Cahaya & Siswanti, 2020) which resulted in the conclusion that e-service quality has a significant influence on e-customer loyalty.

Based on the test results, it can be seen that perceived value has a significant influence on e-customer loyalty. This can be seen from the statistical t value which is greater than 1.96, which is 3.576. Thus, the H2 hypothesis in the study was accepted. This shows that the higher the perceived value, the more it will increase e-customer loyalty, and vice versa, if the perceived value is low, it will reduce e-customer loyalty. The results of this study are following previous research by (Rizan et al., 2020) which resulted in the conclusion that perceived value has a significant influence on e-customer loyalty.

Based on the test results, it can be seen that e-service quality and perceived value have a significant influence on e-customer loyalty. This can be seen from the calculated Fhitung value which is greater than 2.60, which is 22.323. Thus, the H3 hypothesis in the study was accepted. This shows that the higher the value of e-service quality and perceived value, it will increase e-customer loyalty, and vice versa if the value of e-service quality and perceived value is low, it will reduce e-customer loyalty. The results of this study are following previous research (Guna, 2022) which resulted in the conclusion that e-service quality and perceived value have a significant influence on e-customer loyalty.

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