

# Analysis of the Effect of Service Quality, Rest Area Facilities, and Perceived Price on Customer Satisfaction at The Cipali Toll Road

Reka Harjuna Pratama, Mudji Sabar  
Mercu Buana University  
Jakarta, Indonesia

**Abstract**—This research is aimed analyze the effect of service quality, rest area facilities, and perceived price on customer satisfaction Cipali Toll Road. The sample size in this research was 264 respondent who were collected using random sampling technique. Respondents were private car drivers who pass Cipali Toll Road. This research uses quantitative method with multiple linear regression analysis which is processed using SPSS 24.0. The results showed that toll road service quality, rest area facilities, and perceived price partially and simultanously had a positive and significant effect on customer satisfaction of the Cipali Toll Road.

**Keywords:-** Service Quality, Rest Facilities, Perceived Price, and Customer Satisfaction.

## I. INTRODUCTION

The growth of road infrastructure has become an urgent need, especially for areas where the flow of vehicles is congested, such as in Jabodetabek. Based on data from Badan Pusat Statistic (BPS), the population of cars, buses, and freight transportations reached 21.2 million units in 2014. Moreover, throughout 2015-2016, sales of cars, buses, and freight transportations reached 2.1 million units. Thus, the total population of cars, buses and transportation of goods reached 23.3 million units. And it is estimated that four-wheeled vehicles will increase.

Types of Motorized Vehicles	2012	2013	2014	2015	2016
Private Cars	10,432,259	11,484,514	12,599,038	13,480,973	14,580,666
Buses	2,273,821	2,286,309	2,398,846	2,420,917	2,486,898
Freight Transportations	5,286,061	5,615,494	6,235,136	6,611,028	7,063,433
<b>Total</b>	<b>17,992,141</b>	<b>19,386,317</b>	<b>21,233,020</b>	<b>22,512,918</b>	<b>24,130,997</b>

Table 1:- Development of the Number of Motor Vehicles 2014-2016

Source : Badan Pusat Statistik Republic Indonesia

It is expected that toll roads can provide better services in the form of shorter travel times, better traffic conditions, and shorter travel distances than non-toll roads.

Along with the increasing mobility of urban communities and the high expectations of toll road users on service quality, Cipali Toll Road manager, PT. Lintas Marga

Sedaya should be able to provide the best service to its customers. In addition, the services provided by PT. Lintas Marga Sedaya must be able to offer decent benefits to the company while also meeting customer needs. For this reason, identification of factors and attributes is very important in influencing customer satisfaction, so that the satisfaction of users of Cipali Toll Road services can increase.

### A. Research Purpose

The purpose of this study are: 1) To measure the effect of toll road service quality on the satisfaction of Cipali Toll Road users 2) To measure the effect of rest facilities on Cipali Toll Road user satisfaction 3) To measure the effect of perceived price on the satisfaction of Cipali Toll road users.

## II. THEORETICAL FRAMEWORK

### A. Toll Road Quality Service

Measurement of service quality can be done using the Service Quality Scale (SERVQUAL) suggested by Parasuraman et. al. (1988) with 5 dimensions, namely Tangible, Assurance, Reliability, Responsiveness, and Empathy. In the operation of toll roads, there is a standards reference for toll road services regulated by the government in Minister of Public Works Regulation Number 16 / PRT / M / 2014 about Toll Road Minimum Service Standards. The Toll Road Minimum Service Standart (MSS Toll Road) are the types of basic service quality that must be achieved in implementing toll road operations which include: a) Toll road conditions; b) Average speed; c) Accessibility; d) Mobility; e) Safety; f) Rescue unit and relief service; g) Environment, and h) Rest area. The MSS Toll Road is intended as a reference for Toll Road Business Entities in providing services to toll road users.

### B. Rest Area Facility

In the opinion of Kotler and Keller (2016), facilities are everythings related to physical equipment provided by the seller to support consumer convenience. Based on Government Regulation No. 15 of 2015 concerning Toll Road, rest area facilities are defined as resting places to relieve fatigue, boredom, or use toilets when traveling long distances using the toll road.

### C. Perceived Price

In a narrow sense, price is the amount of money charged for a product or service. More broadly, price is the sum of all the values that customers submit to get the benefits of owning or using a product or service (Kotler &

Armstrong, 2018). Price is a key role in creating value to customers and building relationships with customers. Dimensions of perceived price according to Stanton (2009) are affordability, price competitiveness, price compatibility with benefits, and price compatibility with quality.

**D. Customer Satisfaction**

Customer satisfaction can be perceived after customers compare their experience in purchasing goods/services from sellers or suppliers of goods/services with their expectations.

**III. METHOD**

This study is a causality research which is used to prove the cause effect between several variables. In this research there are three independent variables, namely the Quality of Toll Road Services (X1); Rest Area Facilities (X2); and Perceived Price (X3). In addition, this study has one dependent variable, namely Customer Satisfaction (Y). In this study, the ideal population is toll road users who have used the Cipali Toll Road and have received services on the Cipali Toll Road. The sample used in this study amounted to 264 respondents who are private car users and must have used the Cipali Toll Road and Rest Area Facilities on the Cipali Toll Road. Therefore, sampling will be carried out in several Rest Area Facilities on the Cipali Toll Road. Data analysis method used in this research is a statistical calculation using SPSS 24.0 to test established hypotheses whether they can be accepted or rejected.

**IV. RESULT**

In this section, statistical results are presented regarding the effect of service quality, rest facilities, and perceived price on customer satisfaction on Cipali Toll Road.

Independent Variable	Dependent Variable	Unstandardized Coefficients	Standardized Coefficients	t count	Sig
Service quality	Customer satisfaction	0,199	0,539	9,937	0,000
Rest facility		0,046	0,135	2,546	0,011
Perceived price		0,195	0,230	4,828	0,000
a		8,368			
R		0,802			
R <sup>2</sup>		0,642			
R Adjusted		0,638			
F <sub>count</sub>		155,695			
α		5%			
n		264			

Table 2:- Source : Processed Primary Data, 2019

Based on the results of the regression analysis, a multiple regression equation can be formulated as follows:

$$Y = 8,368 + 0,199X1 + 0,046X2 + 0,195X3$$

**A. The results of Partial Linear Regression Analysis**

The independent variables which include service quality (X1), rest area facilities (X2), and perceived price (X3) influence the customer satisfaction of Cipali Toll Road (Y). With the following coefficients:

Based on the calculation results, it turns out that service quality (X1) can have a positive and significant impact on customer satisfaction at Cipali Toll Road (Y) at alpha 0.05 so that Ho is rejected and Ha is accepted . This is evidenced by the magnitude of the regression coefficient (b1) of 0.199.

Based on the calculation results, it turns out that rest area facility (X2) has a positive and significant impact on customer satisfaction at Cipali Toll Road (Y) at alpha 0,05 so that Ho is rejected and Ha is accepted . This is evidenced by the magnitude of the regression coefficient (b2) of 0.046.

Based on the calculation results, it turns out that perceived price (X3) has a positive and significant effect on customer satisfaction at Cipali Toll Road (Y) at alpha 0.05 so that Ho is rejected and Ha is accepted. This is evidenced by the magnitude of the regression coefficient (b3) of 0.195

**B. Determination Coefficient (R2)**

The calculation of multiple linear regression analysis produces a coefficient of determination (R2) that is equal to 0.642 which indicates that the influence of independent variables namely service quality (X1), rest area facilities (X2), and perceived price (X3) on the dependent variable, namely customer satisfaction Cipali Toll Road is accurate by 64,2%, while the remaining 35.8% is explained by other variables not included in this research.

**C. F Test Result**

The result of the analysis can be presented in the following table:

Alternative Hypothesis (H <sub>a</sub> )	F <sub>Table</sub>	Information
There are significant simultaneous effect Service Quality, Rest Area Facilities, and Perceived Price on Customer Satisfaction on Cipali Toll Road (Y)	F <sub>count</sub> = 155,695 F <sub>table</sub> = 2,479 Sig. F = 0,000	H <sub>a</sub> accepted/ H <sub>o</sub> rejected

Table 3:- F test

The results of multiple regression analysis using Df1 = 3 and Df2 = 57 at alpha of 5% obtained F Table of 2.479 while F calculated obtained at 155.695 so from the above calculations can be seen that F<sub>count</sub> > F<sub>Table</sub>, so Ho is rejected and Ha is accepted , with Thus it can be said that simultaneously the Service Quality, Rest Area Facilities, and Perceived Price variables influence of Customer Satisfaction on Cipali Toll Road (Y).

**D. t Test Result**

To determine the effect of each independent variable, i.e the Electronic Word-of-Mouth (eWOM) variable and the Instagram account partially influence the purchase intention, the t-test used:

Variable	value	
Service Quality variables significantly influence of Customer Satisfaction	t count = 9,937 Sig. t = 0,000	Significant
Rest Area Facilities significantly influences of Customer Satisfaction	t count = 2,546 Sig. t = 0,011	Significant
Perceived Price significantly influences of Customer Satisfaction	t count = 4,828 Sig. t = 0,000	Significant

Table 4:- tcount with ttable

1. The effect of Service Quality variable (X1) on Customer Satisfaction (Y). The result of partial calculations shows that at the 5% significance level (= 0.05) with a 95% confidence level obtained value of 9,937 with significant level 0,000, it can be concluded that the Service Quality (X1) variable partially has a significant effect on Customer Satisfaction.
2. The effect of Rest Area Facilities variable (X2) on Customer Satisfaction (Y). The result of partial calculations shows that at the 5% significance level (= 0.05) with a 95% confidence level obtained value of 2,546 with significant level 0,011, it can be concluded that the Rest Facilities (X2) variable partially has a significant effect on Customer Satisfaction.
3. The effect of Perceived Price variable (X3) on Customer satisfaction (Y). The results of partial calculations shows that at the 5% significance level (= 0.05) with a 95% confidence level obtained value of 4,828 with significant level 0,000, It can be concluded that the Perceived Value (X3) variable partially has a significant effect on Customer Satisfaction.

As for knowing the magnitude of the effect of independent variables on the dependent variable it can be seen from the results of the comparison of the regression coefficients of each variable. By using standardized coefficient beta, it is able to eliminate differences in unit sizes of independent variables consisting of variables. Based on Standardized Coefficients Beta, the coefficient of road service quality (0.539) is greater than the rest area facility (0.135) and perceived price (0.230) in influencing customer satisfaction at the Cipali Toll Road. Thus the quality of road services has a dominant effect on customer satisfaction at the Cipali Toll Road.

*E. Independent Variables That Have Dominant effect*

As for knowing the influence of independent variables on the dependent variable, it can be seen from the results of the comparison the regression coefficients of each variable. By using standardized coefficient efficient, it is able to eliminate the difference in unit size on independent variables which consists of Service Quality, Rest Area Facilities, and Perceived Price.

Variable	Standardized Coefficient Beta
Service Quality	0,539
Rest Arae Facilities	0,135
Perceived Price	0,230

Table 5:- Standardized Coefficient Beta

The results of the regression coefficients (b) each of the Service Quality variables has a dominant effect on purchase intention, because the regression coefficient (Standardized Coeffucients Beta) on this variable has the greatest value when compared to the Rest Facilities and Perceived Price variable.

*F. The Result Research*

➤ *Effect of service quality on customer satisfaction Cipali Toll Road*

The analysis shows that there is a significant effect between service quality on customer satisfaction at the Cipali Toll Road. This significant influence shows that with better service quality, customer satisfaction will increase. Service quality has an important role in creating customer satisfaction. Correlation analysis results between dimensions show that the efforts of Cipali toll road operators in providing services as promised are able to provide the strongest relationship to customer satisfaction.

The results of this study are in accordance with research conducted by Suthatip Suanmali, Chidao Kasidis, Paphitchaya Korbsanthia, and Veeris Ammarapala (2015); Herry T. Zuna and Argashadha Retapranada (2015); Gede Mahatma Yuda Bakti, I., & Sumaedi, S. (2013); Samuel Famiyeh, Amoako Kwarteng, and Disraeli Asante-Darko (2016), who have examined the existence of a positive and significant influence between service quality on customer satisfaction.

➤ *Effect of rest area facilities on customer satisfaction Cipali Toll Road*

From the analysis conducted, there is a significant influence between rest area facilities and customer satisfaction at Cipali Toll Road. These results can be interpreted that the better the rest area facility, the customer satisfaction will increase. Besides good service quality, facilities also play a role in attracting customers. Facilities become one of the customer's considerations in making choices. At almost the same price level, the more complete the facilities provided, the more satisfied the customer will be and he will continue to choose the company as a priority choice based on perceptions obtained on the available facilities.

The result of thid study support research conducted by Suthatip Suanmali, Chidao Kasidis, Paphitchaya Korbsanthia, and Veeris Ammarapala (2015); Eddie C.M. Hui, Pei-hua Zhang and Zian Zheng (2013); shows that rest area facilities have a significant effect on customer satisfaction.

➤ *Effect of perceived price on satisfaction Cipali Toll Road*

After analyzing customer satisfaction, it can be concluded that the better perceived price, customer satisfaction will also increase significantly. This shows a positive and significant effect. Price of one of the variables that can be controlled and determines whether or not a service is received by consumers. However, for toll road services, the price is not only determined by the toll road operator, but is also determined and determined by the Government. In applying the price of goods or services, the company must always pay attention to the extent of consumer expectations of the benefits / services received by consumers. If the price of a product or service is higher, the higher the expectations that must be met by the company.

The results of this research support several researchers who have tested the effect of price perception on satisfaction, including Narteh, B. (2018); Vinita Kura, Ch. S. Durga Prasad, and Sourabh Sharma (2015); shows that price perception greatly affects customer satisfaction

## V. CONCLUSION

The conclusion that can be drawn from the results of research and discussions that have been done, explains that:

- The Quality of Toll Road Services affects the Satisfaction of Cipali Toll Road Users. This means that with a better quality of toll road services in this case concerning tangibility, reliability, responsiveness, and guarantees, Satisfaction of Cipali Toll Road Users will increase
- Rest Area Facilities affect Satisfaction of Cipali Toll Road Users. This means that with the addition of rest area facilities in this case the availability of basic facilities, the availability of supporting facilities, rest area conditions and rest area staff, Cipali Toll Road User Satisfaction will increase
- This means that affordable tariffs, price compatibility with benefits, and price compatibility with quality will increase Cipali Toll Road User Satisfaction
- Quality of Toll Road Services, Rest Area Facilities, and Prices Perceived together affect Satisfaction of Satisfaction of Cipali Toll Road Users . This influence shows that with changes in the quality of toll road services, rest facilities, and perceived prices, Cipali Toll Road User Satisfaction will change.

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