

# The Effect of Service Quality and Perceived Value on Service User Satisfaction and Impact on Loyalty Jabodetabek Commuterline Train

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**Abstract:- Policies on service quality and perceived value can affect the loyalty of jabodetabek Commuter line service users . This research aims to analyze the effect of service quality and perceived value on the loyalty of Jabodetabek commuter line service users, both simultaneously and partially. The method used in this study is a quantitative method that is descriptive and verification, with a population size of 100 respondents with probability sampling techniques. Data processing uses multiple linear regression analysis and path analysis with a coefficient of determination at a significant level of 5 percent. The data collection results used in this study are valid and reliable. Data processing results prove that service quality and perceived value have an influence on service user satisfaction. While the quality of service has no influence on the loyalty of service users. Furthermore, the results of data processing also prove that the perceived value and satisfaction of service users have an influence on the loyalty of service users.**

**Keywords:-** service quality; perceived value; satisfaction of service users; loyalty of service users.

## I. INTRODUCTION

Transportation is an integral part of everyday life and includes needs that must be met. Transportation is important, it is reflected by the improvement of transportation services needed for community mobility and is the impact of settlement development and population increase in major cities, especially in Jakarta, where the main problem of transportation is that congestion is a lot of obstacles to people in their activities. Thus, rail transportation is one type of transportation that can be used as an alternative to overcome these problems.

State-Owned Enterprises that become providers, managers and regulators of railway services in Indonesia is PT Kereta Api Indonesia (Persero) which is next named PT KAI (Persero). Then formed a subsidiary by PT KAI one of them is PT Kereta *Commuter* Indonesia or known as PT KCI. The main task of PT KCI is to organize the business of commuter rail transportation services using electric railway facilities in Jakarta, Bogor, Depok, Tangerang, and Bekasi (Jabodetabek) and surrounding areas and business in the field of non-passenger transportation business.

In March 2020, the State of Indonesia was faced with a global pandemic, namely the spread of the *Covid-19* virus or *Corona virus*. *Covid-19* is one of the newest viruses with the respiratory system as its target. The spread of this virus

causes restrictions on social and economic activities of the community because the community is required to keep their distance, avoid crowding, and carry out work from *home*.

One of the regulations governing the restrictions is contained in the Decree of the Head of Transportation Office of DKI Jakarta Province Number 156 of 2020 which provides rules limiting the number of service users, health protocols, and operational time, which must be applied in many modes of transportation throughout the implementation of psbb. But after the PSBB was completed, the government made a transition of economic activities that adjusted to the *Covid-19* pandemic. Therefore, since October 2020 people began to carry out economic activities and returned to work in offices with a limited and supervised number of employees so as not to bring up too many crowds in the workplace.

Tahun	2015	2016	2017	2018	2019	2020
Jumlah Pengguna Jasa (dalam ribu)	257,531	280,589	315,854	336,799	336,047	154,600

Table 1: Number of KRL service users from 2015-2020

Source: <https://www.bps.go.id>

The number of *Commuterline* users in 2020 decreased compared to the number of *Commuterline* users the previous year due to restrictions on activities and travel, especially during psbb (large-scale social restrictions). Although the number of service users has decreased due to the pandemic, *Commuterline* trains are still a favorite mode for Jabodetabek people to travel.

Facing the Covid-19 outbreak, the Company took various measures so that KAI customers and employees avoid exposure to the virus. Socialization continues to be carried out intensively in all stations in Indonesia. The Company also disciplinedly implements health protocols that refer to government instructions such as body temperature checks, mandatory wearing of masks, provision of hand washing facilities, restrictions on distance between individuals in the station area, and restrictions on passenger capacity. PT KCI as one of the companies engaged in organizing transportation services is required to continue to improve in an effort to improve its service to the community in order to produce maximum satisfaction for service users or customers.

Behind the strategic function of *Commuterline* train as a type of transportation service that is much in demand by the

public, there are still many disadvantages of *Commuterline* users including: (1) the number of passengers who exceed capacity so that it is still far to create a sense of comfort; (2) there is often a good service caused by disruption of infrastructure facilities and technical problems so that the schedule of departure and arrival becomes often inappropriate so that it is still not able to provide timely service services; (3) there are still encounters of train accidents both caused by *human errors* and technical errors so that they are also not able to provide safe services; (4) The lack of response of *Commuterline* officers to complaints from *Commuterline* train users makes *Commuterline* train users feel less satisfied.

In addition, the problems that need to be solved by *Commuterline* operators are related to the quality of service in the train or in the station area and travel to the destination. In the service industry, quality of service plays an important role in adding value to the overall service experience. A customer will evaluate the quality of service based on their perception.

PT KCI strives continuously to improve services, such as improving a number of station facilities, revamping public facilities by prioritizing cleanliness in trains and stations, improving and extend the platforms at a number of stations, continuity of information on the existence of the circuit, to the history of the train.

With the quality of service and the value of service users (*perceived value*) is good, it will create consumer satisfaction, that the level of satisfaction of service users from a service depends on the *value* received by service users. If the *value* obtained by service users is higher, the satisfaction of service users will increase so that consumers who feel very satisfied will repurch buy and make themselves as "loyal" consumers or called consumer *loyalty* (Gerson, 2002).

Consumer loyalty is needed for all companies, because the nature of loyalty itself has a long impact on a company. Which means, the longer consumers are loyal to a service product from the company, the company will make a large profit (Griffin, 2022). Loyal *Commuterline* train users will create new customers. They will make recommendations for family, friends and co-workers about their experience when using the services of PT KCI. This is important for evaluation considering that *Commuterline* trains are one of the railway operators in the Jabodetabek region.

## II. RESEARCH METHODS

This research uses quantitative research methods whose research categories use research designs sourced in statistical procedures or with other quantification methods to measure research variables. With *non probability* research methods the author intends to collect information and observe carefully related to certain aspects that are closely related to the problems studied. , so that information can be obtained that supports the preparation of research reporting.

The essence of this research is to look at the relationship of exogenous variables namely Quality of Service (X1) *Perceived Value* (X2), and User Satisfaction (Y) which will affect endogenous variables namely User Loyalty. Service (Z), to find out how much direct causal influence, indirect causal, or simultaneous set of exogenous variables to endogenous variables.

The target population in this study is the use of *Commuterline* services that will be used as the target population, while the affordable population as a sample framework is the large number of KCI service users per year 2019 with a total of 336,047,000 people, which will be used to take into account the size of the KCI service. sample using the Slovin method formulated as follows:

$$n = \frac{N}{1 + (N \times e^2)}$$

Desc:

n : Sample size

N : Population size (*Commuterline* service users)

Based on the results of these calculations can be known the number of study samples as many as 100 respondents, which were taken randomly and simply through questionnaires.

To collect the necessary information and data, the author will use several data collection techniques, namely the acquisition of primary data done through questionnaires (questionnaires) in the form of *google form*. sent to the whatsapp number of the known *Commuterline* users, and then ask them to spread to their friends and family who meet the terms and conditions to fill out this questionnaire, until the number of respondents and the desired data is reached. Furthermore, the results of the questionnaire answers obtained were processed by researchers for analysis.

## III. RESULT

The data in this study was obtained by giving questionnaires to *Commuterline* service users, with the spread of 100 samples, which were taken randomly.

Data testing is done by path analysis, which tests relationship patterns that reveal the influence of a variable or a set of variables on other variables , both direct and other influences. indirect influence, using SPSS version 25. The results of the path analysis are carried out with the stages detailed as follows:

A. *Quality of Service (X1) and Perceived Value (X2) influence simultaneously/together on Satisfaction (Y) based on Simultaneous SubStructure Test 1*

Simultaneous test results of substructure 1 structure showed that the test together / Test F obtained a sig value of 0.000. Where the sig value of 0.000 is smaller than 0.05 or [0.000 < 0.05], the path analysis coefficient is significant. Thus, the quality of service and *perceived value* have a significant effect together on the satisfaction of service users.

**B. Quality of Service (X1) affects Satisfaction (Y) based on Simultaneous Sub Structure Test 1**

Simultaneous test results of substructure 1 structure showed that the test results individually (partial)/ test t obtained a sig value of 0.026. Where the value of 0.026 is smaller than 0.05 or  $[0.026 < 0.05]$ , the path analysis coefficient is significant. Thus, the quality of service has a positive and significant effect on the satisfaction of service users. The large direct influence of service quality on the service user satisfaction process is performed is with a beta value of -0.137 or -13.7 percent.

**C. Perceived Value (X2) affects simultaneously/ together on Satisfaction (Y) based on Simultaneous SubStructure Test 1**

Simultaneous test results of substructure 1 structure showed that the test individually (partially)/ test t obtained a sig value of 0.000. Where sig 0.000 is smaller than 0.05 or  $[0.000 < 0.05]$ , the coefficient of path analysis is significant. Thus, *perceived value* has a positive and significant effect on the satisfaction of service users. The large *perceived value* influence on service user satisfaction is performed is with a beta value of 0.860 or 86 percent.

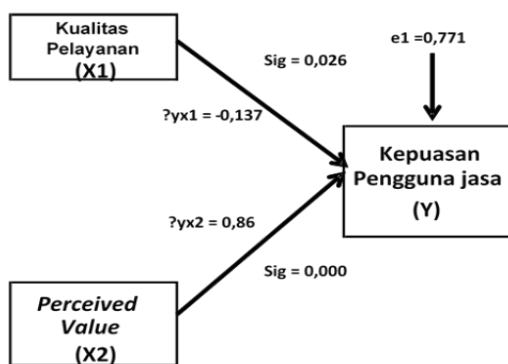


Fig. 1: Sub-Structure Path Analysis 1

**D. Service Quality (X1), Perceived Value (X2) and Service User Satisfaction (Y) influence simultaneously/ together on Service User Loyalty (Z) based on Simultaneous SubStructure Test 2**

Simultaneous test results of substructure 2 structure show that the test together / Test F obtained a sig value of 0.000. Where the sig value of 0.000 is less than 0.05 or  $[0.000 < 0.05]$ , the path analysis coefficient is significant. Thus, the quality of service, *perceived value* and satisfaction of service users have a significant effect together on the loyalty of service users.

**E. Quality of Service (X1) affects Service User Loyalty (Z) based on Simultaneous SubStructure Test 2**

Simultaneous test results of substructure 2 structure showed that the test individually (partially)/ test t obtained a value of Sig 0.889., where the value sig 0.889 is greater than 0.05 or  $[0.889 > 0.05]$ , then the coefficient Path analysis is insignificant. Thus, the quality of service does not have a positive and insignificant effect on the loyalty of service users. The large direct influence of service quality on the loyalty of service users is shown to be with a beta value of 0.009 or 9 percent.

**F. Perceived Value (X2) affects Service User Loyalty (Z) based on Simultaneous Sub-Structure 2 Test**

Simultaneous test results of substructure 2 structure showed that the test individually (partially)/ test t obtained a sig value of 0.044., where the value sig 0.044 is smaller than 0.05 or  $[0.044 < 0.05]$ , then the coefficient Path analysis is significant. Thus *perceived value* has a positive and significant effect on the loyalty of service users. The large *perceived value* influence on the loyalty of service users shown is with a beta value of 0.232 or 23.2 percent.

**G. Service User Satisfaction (Y) affects Service User Loyalty (Z) based on Simultaneous Sub-Structure Test 2**

Simultaneous test results of substructure 2 structure show that the test individually (partially)/ test t obtained a sig value of 0.000., where the sig value of 0.000 is smaller than 0.05 or  $[0.000 < 0.005]$ , so the coefficient of path analysis is significant. Thus, the satisfaction of service users has a positive and significant effect on the loyalty of service users. The large influence of service user satisfaction on the loyalty of service users shown is with a beta value of 0.598 or 59.8 percent.

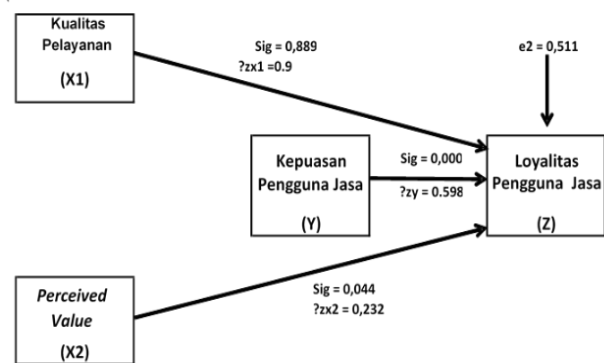


Fig. 2: Substructure Path Analysis 2

**H. Mediation Test Influence of Service Quality on Service User Loyalty through Service User Satisfaction based on Mediation Test with Sobel Test**

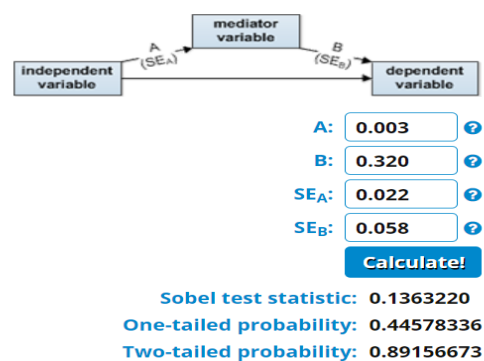


Fig. 3: Sobel Test Model 1

The results of the *sobel test* showed a *one-tailed probability* result of 0.44578336., where the value of  $0.44578336 > 0.05$ ., which means that the service user satisfaction variable cannot function as a mediator or is unable to mediating the indirect influence of service quality on the loyalty of service users.

**I. Perceived Value Influence Mediation Test on Service User Loyalty through Service User Satisfaction based on Mediation Test with Sobel Test**

The results of the *sobel test* showed a *one-tailed probability* result of 0.02807587., where the value of  $0.02807587 < 0.10.$ , so it can be concluded that the service user satisfaction variable can serve as a mediator or able to mediating the indirect *perceived value* of service user loyalty.

**J. Pengujian Kesesuaian Model (Goodness of fit test)**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.800 <sup>a</sup>	.640	.629	1.648
a. Predictors: (Constant), KUALITAS PELAYANAN, KEPUASAN PENGGUNA JASA, PERSEPSI NILAI				

Fig. 4: R Square SubStructure 1

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.800 <sup>a</sup>	.640	.629	1.648
a. Predictors: (Constant), KUALITAS PELAYANAN, KEPUASAN PENGGUNA JASA, PERSEPSI NILAI				

Fig. 5: R Square SubStructure 2

The *results of the model conformity test (goodness of fit test)* using SPSS software version 25 produce a total diversity of data that can be explained by the model conformity testing as follows:

$$R^2_m = 1 - (1 - R^2)^{2p} \dots (1 - R^2)^{2p}$$

$$R^2_m = 1 - (0.681) \times (0.640)$$

$$R^2_m = 0.56416$$

With this, the  $R^2_m$  obtained is 0.56416 which means the diversity of data that can be explained by the model is 56.416 percent, while the rest is 43.584 percent explained by other variables outside the model. Thus the research model has a high predictive ability for the behavior of various dependents which is determined by the high coefficient of determination above 50 percent.

**IV. CONCLUSION**

Based on the results of research and overall data analysis that has been done, it can be taken some conclusions as follows:

- The test results show that the quality of the service has a positive and significant effect together on the satisfaction of the use of jasa, this is evidenced by the results of the test together / test F with the acquisition of sig value 0.000, where the value of Sig 0.000 is smaller than 0.05 or  $[0.000 < 0.05]$  which means that the coefficient of track analysis is significant, then the test results individually (partial)/ test t obtained a value of Sig 0.026, where Sig 0.026, smaller than 0.05 or  $[0.026 < 0.05]$  which means the coefficient of path analysis on the t test is also significant;
- Individual (partial)/ test results on *perceived value* against the satisfaction of the use of jasa obtained a sig value of

0.000, where the sig value of 0.000 is smaller than 0.05 or  $[0.000 < 0.05]$ , which means the coefficient of path analysis is significant. Thus, it can be interpreted that *perceived value* has a positive and significant effect on the satisfaction of service users;

- The test results showed that the quality of the service had no positive and significant effect on the loyalitas of the user, this is evidenced by the results of the test individually (partial)/ test t with the acquisition of Sig value 0.889, where the value of Sig 0.889 is greater than 0.05 or  $[0.000 > 0.005]$ , which means that the coefficient of path analysis is insignificant;
- Test results show that perceived value has a positive and significant effect on the loyalitas of Jjsa users, this is evidenced by the results of individual (partial) tests with a value of Sig. 0.044, where the value of Sig 0.044 is smaller than 0.05 or  $[0.044 < 0.05]$  which means the coefficient of track analysis is significant;
- Individual (partial)/ test results on the user satisfaction against user loyalty obtained sig value 0.000, where the sig value of 0.000 is smaller than 0.05 or  $[0.000 < 0.05]$ , which means the coefficient of path analysis is significant. Thus, it can be interpreted that the satisfaction of user has a positive and significant effect on the loyalitas of service users;
- The test results indicate that the satisfaction user has not been able to function as a mediator or is unable to mediate the influence of the quality of service to the loyalitas pengguna jasa, this is evidenced by the results of *the sobel test* conducted with a value of 0.44578336, where the acquisition of values obtained is greater than 0.05 or  $[0.44578336 > 0.05]$ ;
- Test results show that the kepuasan pengguna jasa is able to function as a mediator or able to mediate the influence of perceived value on loyalitas pengguna jasa, this is evidenced by the results of *the sobel test* conducted with a value of 0.02807587, where the acquisition of values obtained is less than 0.15 or  $[0.02807587 > 0.10]$

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