ANALYSIS OF THE EFFECT OF CUSTOMER SATISFACTION TO LIGHT RAIL TRANSIT (LRT) SERVICE QUALITY IN JAKARTA

Muhammad Raca Alfazri [1], Fathur Martin[2], Yuwono Dwisilo Sucipto[3], Sonya Sidjabat[4]

[1, 2, 3, 4] Institut Transportasi dan Logistik Trisakti, Jakarta, Indonesia
Corresponding author: racathalib@gmail.com

Abstract: This research was conducted on customers who use LRT Jakarta.. The study used a quantitative approach, and the application of SPSS Version 25 to analyze data. The data were collected by distributing 150 questionnaires to customers of LRT Jakarta. In this study, researchers conducted validity tests, reliability tests,simple linear regression tests, and hypothetical tests. The purpose of this study was to analyze the effect of customer satisfaction on the quality of LRT Jakarta services during the Covid-19 pandemic. The results of this study indicate that customer satisfaction has a positive and significant effect on service quality.

Keywords: COVID-19, Customer satisfaction, Service Quality

1. Introduction

Big cities in Indonesia today have experienced many changes and development socio-cultural, political, economy, and transportation sectors which also have impacts on human change. Every society always experiences changes from traditional to modern one, this is caused by the development in particular transportation development. Transportation is an important essential object in people's lives. Transportation has important role because with the existence of means of transportation people carrying out daily activities easily. Therefore transportation has become a primary need for everyone.

Human needs and lifestyles that continue to develop will increase demand in transportation. Congestion is a prevailing to urban areas in developing countries, especially in Jakarta. A population survey in Jakarta predicted that there is an increase from 72 to 10.57 milion.

Congestion is inevitable due to the dense population in Jakarta.. This problem requires new solutions in urban transportation problems.

As the capital city of Indonesia, Jakarta through the Provincial Government has built the Jakarta Integrated Railroad Project or LRT Jakarta. As a mode of transportation LRT Jakarta comes with a special lane which of course avoids traffic congestion making it easier for people to arrive on time to their destination. LRT Jakarta is a fast transportation system with light rail. LRT Jakarta began construction of corridor one, Kelapa Gading-Veldrome (Rawamangun) on June 22, 2016 and officially operated commercially from December 1, 2019. The fare charged to passengers is IDR 5,000 for both short and long distances. Service Customer satisfaction of of LRT's users greatly affects their perceptions and encourages consumers to return to using LRT services so that they have a positive impact on LRT services.

With the outbreak of the Corona COVID-19 Virus epidemic worldwide that has now roamed Indonesia, has pushed PT LRT Jakarta to take preventative or mitigating measures in its work environment and in the stations. Coronavirus novel (2019-nCoV) is a new virus from the corona family which cause severe pneumonia and has been confirmed to be contagious between humans and threatens life safety. The existence of Covid19 will greatly affect the quality of service and customer satisfaction over PT LRT Jakarta, and as a company they of course will also strive to provide good service and ensure the fulfillment of customer satisfaction. The purpose of this study was to analyze the effect of customer satisfaction on the quality of LRT Jakarta services during the Covid-19pandemic. Services must be improved beside improving service,preventing COVID-19 outbreak is mandatory to LRT Jakarta.

2. Literatur Review

2.1 Customer Satisfaction

The level of consumer feelings after comparing between what is received and expectations is a form of customer satisfaction. Customers are satisfied with the value provided by the service or product, it is very likely to be a customer for a long time. The key to the business strategy that determines the direction of service performance is customer satisfaction. Some customer satisfaction is given a definition that used under various circumstances and they are constantly identified with products and services(Alan, Valarie A., Mary Jo, & Dwayne D., 2012) revealed that customer satisfaction is recheck to be connected between the need of customer and customer expectation.

As indicated by them, there are variables that affect customer satisfaction, for example, product / service quality, perceived value or fairness, values, individual elements (customer mindset or passionate state), and different customers and so on. Sonya Sidjabat (2017) revealed that consumer satisfaction will indirectly affect loyalty as evidenced by product repeated purchases at the same company. The high level company has made every attempt to meet customer needs so that customer satisfaction can be achieved.

2.2 Service Quality

(Moenir, 2010) said that service emerges when there is a demand, thus there is a supply to provide services. Sinambela (2010) pointed out that each person gives and takes a service. It is a popular and long-lasting activity.

The level of service related to the expectations and needs of customers or users is the meaning of Quality of service. Sidjabat(2017) revealed that service quality means that consumers are not disappointed and turn to other companies. The quality of service contributes to customer satisfaction. If service quality were good and satisfying the service will meet customer expectation, so that it will have an impact on increasing consumer loyalty levels. Conversely, if the service quality were bad It will reduce customer trust and eventually the level of customer loyalty.2.3 LRT (Light Rail Transit)

Febrianda & Herijanto (2013) revealed that LRT or Light Rail Transit is one of electricity public transports powered by electricity, large in capacity and has its own lane.

2.4 Hypotheses

Costumer Satisfaction X	→	Service Quality Y

Figure 2. *Hypotheses*

X : Significant affect is expected on customer satisfaction

Y : Significant affect is expected on service quality

The questionnaire (item-scale) is presented in a five-point Likert ranking scale with 5 = "strongly agree" and 1 = "very strongly disagree" at both extremes. The Likert ranking scale is used because it is most suitable for design research that uses self-managed surveys (Hair et al., 2006). In its own part, a five-point Likert points scale is common because of its ability to provide participants with expanded options; and literature also supports the view that there is a positive relationship between the number of scale points and scale reliability.

In this study, the variables to be scaled are customer satisfaction and service quality dimensions. Dimensions of customer satisfaction include: good service, added value, exceeding customer expectations. While the dimensions of service quality include: reliability, responsiveness, empathy, assurance and tangibles. The indicators used in determining these variables are referred to as following:

Table 1 The Operational Table of Research Variables

Variable	Indicator	Statement	Code	Scala	Sources
Customer Satisfaction	Good Service	PT LRT Jakarta provide the good service	S1	Likert	Kuo (2009)
	Good Service	The employees of PT LRT Jakarta is very kind to customer	S2	Likert	Kuo (2009)
	Point Plus	PT LRT Jakarta provide the good service to customer that becomes the point plus	V1	Likert	Kuo (2009)
	Surpass the customer expectations	The service provided by PT LRT Jakarta is much better than what customer think	H1	Likert	Kuo (2009)

Table 2 The Operational Table of Research Variables

Variable	Indicator	Statement	Code	Scala	Sources
Service Quality	Reliability	PT LRT Jakarta is reliable in serving passengers according to the specified time	R1	Likert	Riding, et.al (2002)
		PT LRT Jakarta has reliability in terms of serving passengers	R2	Likert	Riding, et.al (2002)
	Responsiveness	The employees of PT LRT Jakarta provide Passengers with information about health protocols by using masks, washing their hands and keeping their distance	RES 1	Likert	Krauss (1998)
		The employees of PT LRT Jakarta inform the method of paying passengers in sequence or queued to enter the waiting room	RES 2	Likert	Krauss (1998)
	Empathy	The employees of PT LRT Jakarta have an effort to understand the needs of passengers	EM 1	Likert	Riding, et.al (2002)
		The employees of PT LRT Jakarta always giving attention to passengers	EM 2	Likert	Riding, et.al (2002)
		The employees of PT LRT Jakarta see the comfort of passengers when entering the train	EM 3	Likert	Riding, et.al (2002)
		The employees of PT LRT Jakarta always well behaved to passengers	EM 4	Likert	Riding, et.al (2002)
		The employees of PT LRT Jakarta respond to every question every passenger who asks	EM 5	Likert	Riding, et.al (2002)
	Assurance	PT LRT Jakarta provides guarantees for all LRT users	AS 1	Likert	Riding, et.al (2002)

Tangibles	LRT Jakarta has overcome congestion	T1	Likert	Riding, et.al (2002)

3   RESEARCH METHODOLOGY

3.1 Research Object

This research was conducted on May 15 until June 15, 2020 at LRT Jakarta Station, which is one of the modes of transportation offer service in capital city. The object of this research is the customer at LRT Jakarta Station.

3.2 The Steps of Data Collection

This is an important step, because the data collected will be used to analyze problems that are being researched or to test hypotheses that have been formulated. Data collection can be done by way of interviews (face-to-face interviews, telephone interviews, interviews with the help of computers and interviews via electronic media); questionnaires (submitted in person, sent by post, conducted electronically); observation; and motivational techniques (Sekaran and Bougie: 2013).

Data collection in primary is collected by questionnaire. Secondary data is obtained by studying literature review related to customer satisfaction research on the quality of services available at PT LRT Jakarta. These data contain instructions for conducting research and information that is useful in preparing reports.

3.3 Data Processing

Data obtained from respondents were tested for validity and reliability to avoid bias and doubt the validity of the study. Testing used SPSS version 25.

3.3.1. Validity Test Data

Data validity test is carried out to test whether each statement's attributes have revealed the factors to be investigated according to the conditions of the population. Validity is a tool for measurement in order to make validation of questionnaire.A measuring instrument with high validity will have a small error variant. So the data collected is reliable data.

3.3.2. Reliability Test Data

Data reliability is a proof to obtain the credibility of a questionnaire to be trusted as a data collection tool. The reliability coefficient between 0.00 and 1.00. Questions asked can be trusted if you receive alpha> 0.60.

3.3.3. Simple Linear Regression

According to (Pardede and Manurung, 2018), it is known that in simple regression, Independent variable (X) has an influence to the dependent variable (Y).

1. RESULTS AND DISCUSSION

4.1 Validity Test

The data collected was tested for validity, to test this validity using the help of Statistical Product and Service Solutions (SPSS) version 25.0. Validity test is calculated by comparing the r count value with the r table value at the error level of 5% for the degree of freedom (df) = n-2, provided the test results of the questionnaire statement are declared valid if r count> rtable (Ghozali, 2013: 53 in research Prastiwi & Jumino, 2018). The results of the SPSS calculation will get the value of r in the table for each question item and then it will be compared with the value of r in the table for degree of freedom (df) = n-2, the number of samples (n) = 150. The amount of df is calculated from 150 to 2 = 148, r count> r table, then the items of questionnaire questions submitted to customers are declared valid.

Table of Test Results of Customer Satisfaction Validity Variables

No	Statement	rcount	r table	Explanation
1	Statement 1	1	0,1603	Valid
2	Statement 2	0,720	0,1603	Valid
3	Statement 3	0,722	0,1603	Valid
4	Statement 4	0,772	0,1603	Valid

Sources : Processing questionnaire data with SPSS 25.0

Based on the validity test of all Customer Satisfaction questionnaire statements above, it appears that there are no invalid statements because they have a Corrected Item Total Correlation value> 0.1603, thus the statement is suitable for analysis for the Customer Satisfaction variable is 4 valid statements. Because r arithmetic starting from the lowest to the highest is 0.720 to 1> r table is 0.1603.

Table of Test Results of Service Quality Validity Variables

No	Statement	r count	r table	Explanation
1	Statement 1	0,550	0,1603	Valid
2	Statement 2	0,670	0,1603	Valid
3	Statement 3	0,603	0,1603	Valid
4	Statement 4	0,712	0,1603	Valid
5	Statement 5	0,745	0,1603	Valid
6	Statement 6	0,610	0,1603	Valid
7	Statement 7	0,648	0,1603	Valid
8	Statement 8	0,682	0,1603	Valid

9	Statement 9	0,657	0,1603	Valid
10	Statement 10	0,555	0,1603	Valid
11	Statement 11	0,442	0,1603	Valid

Sources : Processing questionnaire data with SPSS 25.0

Based on the validity test of all the Service Quality variable questionnaires statements above, it is seen there is no invalid statement because it has a Corrected Item Total Correlation value> 0.1603, the statement is fit for analysis for the Quality Services variable is 11 valid statements. Because r arithmetic starting from the lowest to the highest is 0.442 to 0.745> r table is 0.1603.

4.2 Reliability Test Data

Data reliability test was performed by calculating the alpha chrobach value in SPSS software version 25.0. Data can be stated reliable if a is greater than 0.6.

Variabels	Reliability Statistics	
	Cronbach's Alpha	N of Items
Customer Satisfaction	0,923	4
Service Quality	0,940	11

Reliability test results table

Sources : Processing questionnaire data with SPSS 25.0

(Prof.Dr.Sugiyono, 2017) stated that the reliability calculation used is by using the Cronbach alpha method. The reliability test was carried out with Cronbach's alpha, which reliability level was 0.6.

Reliability test results Customer satisfaction variables show that all statement items in the questionnaire have reliability statistics-Cronbach Alpha items of 0.923> 0.1603 because the reliability constant is 0.600, so the statement is said to be reliable.

The reliability test results of Service Quality Variables show that all statement items in the questionnaire have items of reliability statistics-Cronbach Alpha of 0.940> 0.1603 because the reliability constant is 0.600, then the statement is said to be reliable.

4.3 Simple Linear Regression

According to (Pardede and Manurung, 2018), it is known that in simple regression, Independent variable (X) has an influence to the dependent variable (Y).

Coefficients[a]

| Model | Unstandardized Coefficients | | Standardized Coefficients | | |
	B	Std. Error	Beta	t	Sig.
(Constant)	9,648	1,560		6,186	,000
Customer Satisfaction (X)	2,142	,095	,881	22,610	,000

a. Dependent Variable: Service Quality
Source: Processed based on the results of questionnaire data, 2020

Based on data analysis using SPSS 25.0, the results of the regression equation are obtained as follows:

Y= a + bX atau 9,648 + 2,142X

The simple linear regression equation implies that each increase in the application score of variable X (Customer Satisfaction) of 2.142 will be followed by an increase in the variable Y (Quality of Service) of 9,648.

Results Test F (Simultaneous)

This test is done by comparing the significance of Fcount> Ftable

According to (Pardede and Manurung, 2018), the formulated model is appropriate, by looking at the value of $F_{table} = F_{(5\%;k;n-k-1)} = F_{(5\%;2;50-2-1)} = F_{(5\%;2;47)} = 3.2$.

Table 4.Test F (simultan)
ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6252,540	1	6252,540	511,229	,000[b]
	Residual	1810,100	148	12,230		
	Total	8062,640	149			

a. Dependent Variable: Service Quality (Y)
b. Predictors: (Constant), Customer Satisfaction (X)

Source: Processed based on the results of questionnaire data, 2020

Based on the results of the test table above, it can be seen that the Fcount value of 511,229 with the Ftable value is 3.2. After the value of Fcount> Ftable and then H0 is rejected and H2 is accepted.

Coefficient of Determination

According to (Pardede and Manurung, 2018) the coefficient of determination (Goodness of Fit) is denoted by R2. The coefficient of determination (R2) measures the extent of customer satisfaction to explain variations in the dependent variable.

Table 5. Coefficient of Determination

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,881[a]	,775	,774	3,497

a. Predictors: (Constant), Customer Satisfaction

Source: Processed based on the results of questionnaire data, 2020

Based on the table above, it can be seen that the coefficient of determination is found in the correlation R value of 0.881 meaning that there is a relationship between the X variable against the Y variable. R square value of 0.775 means that there is an influence between the variable X on the variable by 77.5%.

Conclusion

Based on the analysis of the research results in the previous chapter, it can be concluded that the increase in customer satisfaction that is carried out appropriately has a positive and significant effect on the quality of service, hence it can be stated that quantitatively this study has very effective results. Furthermore the effectiveness and efficiency of the process, customer satisfaction Jakarta LRT showed positive effect on the quality of service and prevention of Covid 19 Virus outbreak on LRT Jakarta.

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