

Research Article

The Influence of Service Quality and Station Facilities on Mass Rapid Transit Jakarta Passengers' Satisfaction

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Abstract.

Mass Rapid Transit (MRT) is an effective and convenient electric rail-based transportation system which has proven to have positive results since it is applied in large cities in various countries. Various facilities at MRT stations are provided to facilitate customer service. This study aimed to determine the effect of service quality and station facilities on user satisfaction when using the Jakarta MRT. The research method used was quantitative research using a questionnaire. The sample was 100 respondents from MRT user data using the Slovin Formula. The results indicated that the quality of service and station facilities has an influence of 52.7% and strongly relates to user satisfaction.

Keywords: Service Quality, Facilities, Passenger Satisfaction

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1. Introduction

Jakarta is the capital of one of the most densely populated countries in the world that is Indonesia. At the end of 2019, the population of the capital city was 11,063,324 people (statistics.Jakarta.go.id). It is estimated that more than 4.5 (four) million people in the area around Jabodetabek travel to and from the city every working day. Based on the results of a survey released by the Tom-Tom index, in 2017, Jakarta was the 4th most congested city in the world, then a year later it became number 7, and in 2019, Jakarta occupies the position of the city in the world at number 10.

To overcome these problems, the DKI Jakarta Government has an alternative solution, which is Mass Rapid Transit or commonly abbreviated as MRT. Mass Rapid Transit is an effective and convenient electric rail-based transportation system which has proven to have positive results since it is applied in large cities in various countries. With the existence of the MRT, it is expected to increase the enthusiasm of people who previously

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used private vehicles to start switching to using public transportation such as the MRT for their daily transportation [1].

Various facilities at MRT stations are provided to facilitate passenger service. To enter the station, both elevated and underground, facilities are provided with escalators, elevators, and stairs. The elevators are prioritized for the elderly, pregnant women, and people with disabilities. Inside the station, there are also facilities for a first aid room, breastfeeding room, public toilets, seats, screen door platform (PSD), station front office for passenger services (Customer services), ticket sales office (TOM), public announcements, and Tactile, etc. Unfortunately, there is no parking area provided outside the MRT station. For users who want to use private vehicles to get to the MRT station, must refrain from using private vehicles, and use other transportation such as public transportation, or other types of online transportation. As (Sulastiyono 2006) states that facilities are the provision of physical equipment to provide convenience to guests in carrying out their activities or activities so that guests' needs can be met. This then becomes the basis for consumer assessment of service performance.

This research cannot be separated from previous research to see the difference between research conducted by researchers and research conducted by other researchers. Previous research conducted by Fatoni & Hardianti, 2020 and Delyani & Prambudi, 2019 only discussed whether facilities affect the satisfaction of MRT Jakarta passengers and whether service satisfaction affects the satisfaction of Jakarta MRT passengers. The purpose of this study is to find out the effect of service quality and station facilities on passenger satisfaction in using the Jakarta MRT.

2. Literature Review

2.1. Service Quality

Quality is a condition that relates to services, products, and services that meet customer criteria or expectations [3] While the service according to [4] is a performance that is not physically tangible and can be felt more than owned, and consumers are more able to participate in the process of consuming these services. Therefore, it can be defined from the explanation of the theory above, the quality of service needs to be done by companies to increase consumer buying interest, to the use of the products and services offered so that consumers can feel satisfied Facilities.

According [5] the facility is the physical resource that must exist and be provided before the products and services offered to customers. These facilities include the condition of the facility itself; interior and exterior design. Facilities are important objects to increase customer satisfaction and to meet the convenience needed by service users. If the service provided is by customer expectations, then the customer will be satisfied [6]. Facilities and infrastructure are important to increase customer satisfaction and can meet the needs and desires of users of products and services. If the available facilities meet the standard customer criteria, the customer will feel satisfied.

2.2. Passenger satisfaction

Customer satisfaction can be defined as the level of customer feeling after getting a product or service provided by a company [7]. The feeling will arise because the customer compares the product or service that will be obtained by the customer himself. Therefore, customer satisfaction is very subjective in nature because the assessment depends on the customer himself [8]. Customer satisfaction has become an important thing in business competition. Customers are the main focus of every business or company and customers play an important role in the satisfaction of the products, services, and services they use [9].

H₁: There is an influence of service quality on the satisfaction of MRT passengers.

H₂: There is an effect of station facilities on the satisfaction of MRT passengers.

H₃: There is an effect of the quality of service and station facilities on the satisfaction of MRT passengers simultaneously

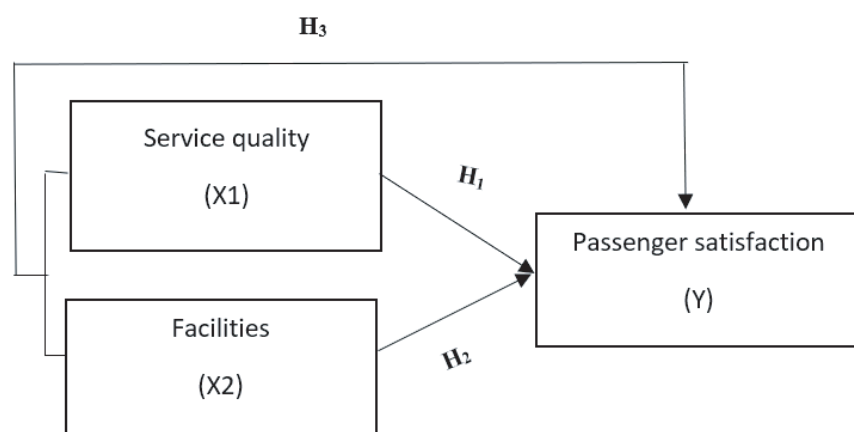


Figure 1: Conceptual Framework of Research Methods..

3. Methods

The research method used was a quantitative study using a questionnaire as a data collection tool, this study used the 2019 MRT user data as a population of 24 million using a sample of 100 respondents calculated by using the Slovin formula with an error rate of 10%.

This study used multiple linear regression with the regression equation $Y = a + b_1X_1 + b_2X_2$ and must meet the requirements through the normality test, linearity, heteroscedasticity test, and multicollinearity test.

4. Result and Discussion

4.1. Validity Test and Reliability Test

After conducting the Validity and Reliability Test with a significance level of 5%, all questions were declared Valid and Reliable because the value in R Count was greater than R Table (0.197), and Cronbach's alpha value was greater than 0.6.

4.1.1. Normality test

Source: The result of data by SPSS

Based on Figure 2, it can be concluded that the data in this study are normally distributed, as evidenced by the distribution points that spread and stick to the diagonal line.

4.1.2. Linearity Test

Source: The result of data by SPSS

Based on the table above, the significance of the value for deviation from linearity is 0.292. It can be concluded that there is a linear relationship in each variable.

4.1.3. Heteroscedasticity Test

Dependent Variable: LN_RES

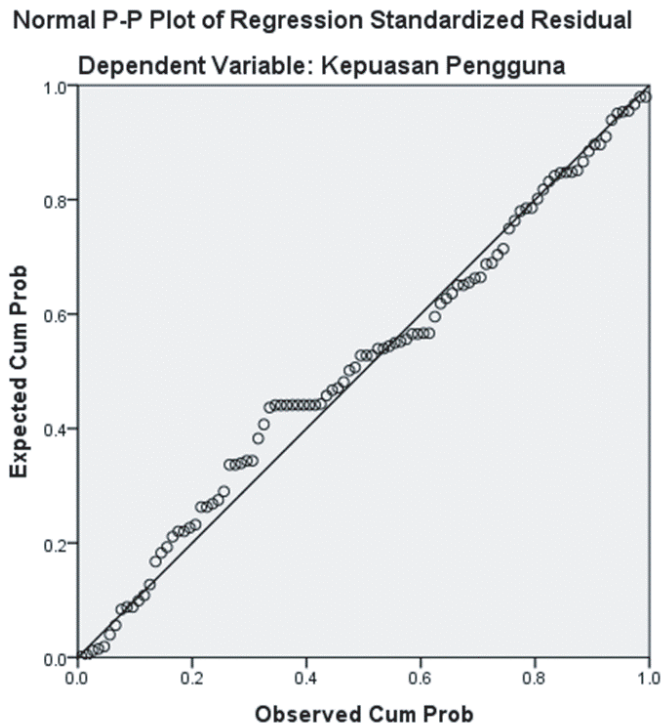


Figure 2: Result of Normality Test.

TABLE 1: Linearity Test.

			Sum of Squares	df	Mean Square	F	Sig.
User satisfaction * service quality	Between Groups	(Combined)	1209.495	20	60.475	3.111	.000
		Linearity	771.900	1	771.900	39.705	.000
		Deviation from Linearity	437.595	19	23.031	1.185	.292
	Within Groups		1535.815	79	19.441		
	Total		2745.310	99			

TABLE 2: Heteroscedasticity Test.

Description	T value	Sig
Service Quality	(-0,054)	0,957
Station Facilities	1,700	0,092

Source: The result of data by SPSS

From the results of the above analysis, it was found that the significance value for the X_1 variable was $0.957 > 0.05$ and the X_2 variable was $0.092 > 0.05$. Hence, it can be concluded that the data in this study did not contain symptoms of heteroscedasticity.

4.1.4. Multicollinearity Test

TABLE 3: Multicollinearities Test.

Description	Tolerance	VIF
Service Quality	0,709	1,410
Station Facilities	0,709	1,410

Dependent Variable: User Satisfaction

Source: the result of data by SPSS

Based on the results in the table above, the Tolerance and VIF values in each variable are $0.709 > 0.1$ and $1.140 < 10$. Thus, it can be concluded that the data in this study does not have multicollinearity.

4.1.5. Multiple Linear Regression Test

TABLE 4: Multiple linear regressions.

Coefficients						
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	8.536	3.211		2.658	.009
	Service quality	.218	.085	.213	2.570	.012
	Station facilities	.554	.078	.588	7.092	.000

a. Dependent Variable: Passenger satisfaction

Source : The result of data by SPSS

$$Y = a + b_1X_1 + b_2X_2$$

$$Y = 8,536 + 0,218 (X1) + 0,554 (X2)$$

The linear regression equation can be explained as follows:

1. The constant value (a) of 8.536 indicates the value of the variables X1 and X2 is constant with respect to Y (X = 0)
2. If the value of each variable increases by 1 (X = 1), then the value of constant or variable Y increases to 9.308
3. The equation is positive. Thus, it can be concluded that the better the services and facilities, the higher the passenger satisfaction.

4.1.6. T-Test (Partial)

Based on the results of the analysis in table 6, the value of significance of the variables X_1 (0.12) and X_2 (0.00) is less than 0.05, and the T- Count Value is greater than the T-Table 1.984. It can be concluded that the H_1 and H_2 contained an influence on passenger satisfaction.

4.1.7. F Test

TABLE 5: F Test.

Description	F value	Sig
Regression	53.959	0.000

Source: *The result of data by SPSS*

Based on the table above, the significance value is $0.00 < 0.05$ and the calculated F value is $53.959 > 3.09$ and it can be concluded that H_3 is acceptable. Thus there is an influence between service quality and station facilities on passenger satisfaction.

4.2. Determinant coefficient

TABLE 6: Coefisien Determinant.

R	R Square
0.726	0.527

Source : *The result of data by SPSS*

Based on the table above, the R Square value is 0.527 and the R-value is 0.726 which means that the variables X_1 and X_2 have an effect of 52.7% and have a strong relationship because $R > 0.60$.

5. Discussion

1. Based on the results obtained from the T-test partially, it can be said that H_1 and H_2 obtained the value of the significance of the variables X_1 (0.12) and X_2 (0.00) is less than 0.05 and the T-Count value is greater than the T-Table 1.984. It can be concluded that H_1 and H_2 are the influence of service quality on passenger satisfaction.

2. Based on the results obtained from the F-Test, it can be said that H3 is acceptable. Based on table 8, the significance value is $0.00 < 0.05$ and the calculated F value is $53.959 > 3.09$. It can be concluded that there is an effect of service quality and station facilities on customer satisfaction.
3. Therefore, it can be seen that the quality of service and station facilities has an influence of 52.7% and has a strong relationship to passenger satisfaction.

The results of this study support previous research conducted by, [5] which states that facilities influence decisions on the satisfaction of MRT Jakarta passengers. [10] stated in their research that service satisfaction affects the satisfaction of MRT Jakarta passengers.

6. Conclusion

The results of the analysis and discussion can be concluded that:

1. The influence of Service Quality on the satisfaction of MRT Jakarta passengers based on the results of the data above, it can be said that MRT Jakarta passengers are satisfied with the quality of services provided by PT. MRT Jakarta. With the hope that PT. MRT Jakarta can maintain good and stable service quality. To improve the quality of service PT. MRT also need to improve the quality of its human resources or employees with fast responsiveness so that it can help serve passengers and give more attention to MRT Jakarta passengers.
2. The influence of station facilities on the satisfaction of MRT Jakarta passengers based on the results of the data above can be said that there is an effect of service quality and station facilities on customer satisfaction with a value of 52.7%, the remaining 48.3% is influenced by other variables not carried out in this study. It is hoped that the facilities that are already available are maintained properly and correctly. PT. MRT Jakarta must also increase the use of facilities that make it easier for users to use this fast transportation. Also by adding parking area facilities outside the station to make it easier for passengers who use private vehicles to get to the MRT station by parking their vehicles in the station parking area.

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