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THE EFFECT OF OPERATIONAL TIMELINESS AND SERVICE COSTUMERS LOYALTY ON THE PERFORMANCE SYSTEM OF PT MRT JAKARTA (PERSERODA)

Muhammad Erlangga Jamhari [1], Fitria Wulan Azijah Harahap [2], Darmawan Apriyadi [3], Indriyati [4]

[1,2,3,4] Institut Transportasi dan Logistik Trisakti, Jakarta, Indonesia

Corresponding author: erlanggajamhari02@gmail.com

Abstract: As we already know, transportation in Indonesia has been growing rapidly and increasing technologically so that people can shorten the time on the trip to carry out activities at their destination. For example, the construction of Jakarta MRT. As a transportation service, MRT is obliged to provide the best service and facilities for its customers including the timeliness of train arrival. Customers satisfaction is very important to trigger customer loyalty so that customers become loyal and satisfied with the service provided. This research purposed to find out the effect of operational timeliness and customer loyalty on Jakarta MRT performance system. The type of research used in this study was quantitative by using data taken from respondents through a questionnaire that was distributed to MRT Jakarta users and obtained a sample of 41 respondents. The result of validity test of each variable is declared valid

Keywords: *Operational Timeliness, Customer Loyalty, MRT Jakarta System Performance*

Introduction (Include Literature Review)

Transportation is one of the most important means to meet human needs. In this modern era, with an increasing density for residents in the capital, transportation can support the needs of residents to carry out an activity or to move from one place to another. One of the transportation that is widely used by the people of Indonesian is land transportation. The continuous increase in population growth, especially the capital city of Jakarta, has caused an increase in congestion rates caused by the growth of private vehicles by

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5.35% which is not balanced with the road growth rate which is only 0.95% per year 2018. With this MRT which is able to carry as many as ±250,000 passengers per train, it is hoped that it can reduce the level of congestion that occurs in the capital city of Jakarta. As we already know, transportation in Indonesian has been growing rapidly and increasing technologically so that people can shorten the time on the trip to carry out activities at their destination. For example on July 17, 2008 the construction of Jakarta MRT started. Now the MRT Jakarta operates along 15.7 km connecting as many as 13 stations, from Lebak Bulus Station to the final station Bundaran HI. As a transportation service, MRT is obliged to provide the best service and facilities for its customers including the timeliness of train arrival. Throughout 2020, the timeliness of Jakarta MRT reached 99.988 percent with the total number of trips reaching 69,276 trains trips, although it experienced a decrease in the number of passengers during 2020 due to COVID-19 pandemic. The timelinss of the MRT consists of three aspects, MRT Jakarta as a transportation service provider continues to be committed to provide international standard services and services.(Handayani et al., 2021)

The latest operational schedule changes on April 18, 2022 at PT MRT Jakarta (Perseroda) implement an operational schedule from 05:00 to 23:00 WIB from Monday to Friday, with train departures every 5 minutes during peak hours, namely 7:00 to 9:00 WIB and 17:00 to 19:00 WIB, and every 10 minutes vice versa. While the Jakarta MRT operates every 10 minutes on weekends at 6:00-23:00 WIB. On Tuesday (08 October 2019), from 18:57 WIB to 19:14 WIB the Jakarta MRT train experienced a delay of 16 minutes 12 seconds at Fatmawati MRT station, South Jakarta. Based on the inspection results, no internal damage was found on the RaTangga 0721 train. (Haryono et al., 2019)

Management is the planning, organizing, directing, and controlling of human resources and other resources in order to effectively and efficiently achieve organizational goals (Jones and George). Management includes activities carried out by one or more people in order to coordinate activities

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carried out by another person and to achieve goals that cannot be achieved by one person alone (Donnely, Gibson and Ivancevich). In management there are several management functions, namely Planning, Organizing, Directing, and Controling. Human resource management is the process of acquiring, training, appraising, and compensating employees, and of attending to their labor relations, health and safety, and fairness concerns (Gary Desler,2013). The definition of a train is a vehicle with motion power (electricity, diesel or steam power) that runs alone or is coupled with other vehicles, which will or is moving on rails, consisting of passenger trains and freight trains (land transportation statistics book, BPS, 2015: 24). According to Handoko, (2010) timeliness is the period of time a customer orders a product until the product arrives at the customers. According to Lovelock, Wirtz, & Mussry (2017), consumers loyalty is defined by a customer's willingness to continue to subscribe to a company in the long term by buying and using its goods and services repeatedly and better yet exclusively and also voluntarily recommending it to others. Company performance is the capability of the company in achieving goals by using resources effectively and efficiently (Daft, 2000). The performance of the transportation system in terms of management includes frequency, capacity, operational costs, and scheduling systems.

Regarding this research, it requires a framework of thinking to relate the variables as follows:

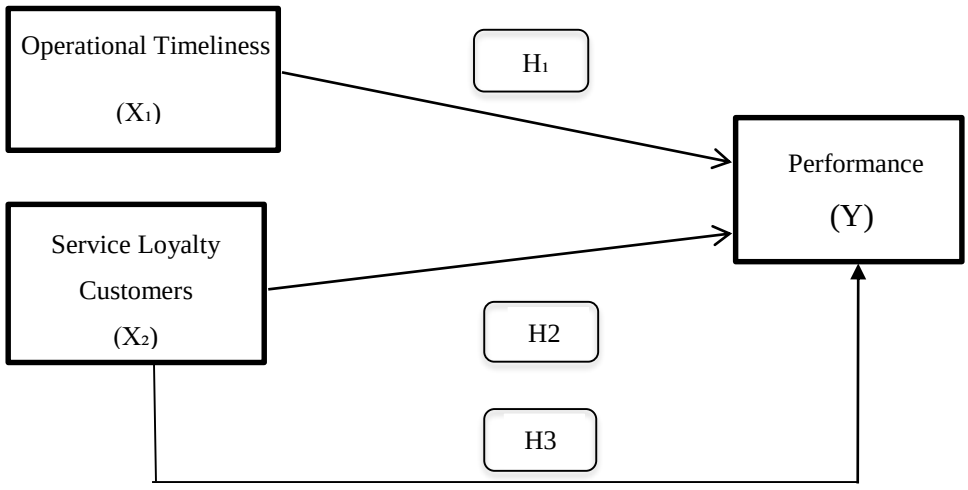

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Figure 1. Conceptional Fram of mind

H_1 = It is suspected that Operational Timeliness has a significant effect on MRT Performance.

H_2 = It is suspected that Customer Loyalty has a significant effect on MRT Performance.

H_3 = It is suspected that Operational Timeliness and Customers Loyalty simultaneously have a significant effect on MRT Performance.

Method

The method used for this research is quantitative method. The method used in this study is a quantitative method by distributing questionnaires to respondents via google form and then using SPSS as a data collection tool

Population & Sample

The population is the object or subject that is selected for research and then the conclusion is determined. The population designated in this study was unlimited. To determine the number of samples from the population in this study used the formula of Isaac and Michael. Isaac and Michael's formulas have provided calculation results that are useful for determining the number of samples based on error rates of 1%, 5%, and 10%. In this study, the error rate or sampling error in determining the number of samples was at an error rate of 10% with a total of 41 respondents. Thus the formula used according to isaac, S., & Michael, W. B. (1995) is as follows :

$$s = \frac{\lambda^2 . N . P . Q}{d^2 (N - 1) + \lambda^2 . P Q}$$

Figure 2. Isaac and Michael's Sample Formula

Description :

S : Number of Samples

λ : Chi Squared depends on the degree of freedom and error rate, with dk = 1 , error level 1% then chi squared = 6.634, error level 5% then chi squared = 3.841, and error level 10% then chi squared = 2.706.

N : Total Population.

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P : Chance of being right (0.5) Q : Odds of being wrong (0.5).

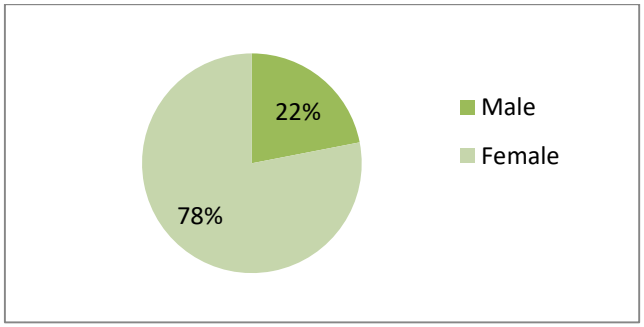
d : The difference between the sample average and the population mean. The difference can be 0.01;0.05, and 0.10.

Discussion and Result

Characteristics of Respondents

Table 1.

Gender of Respondents of PT MRT Jakarta



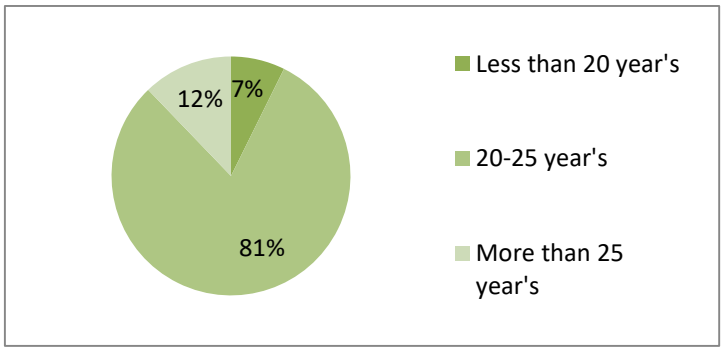
Source: data processed by the author in SPSS version 25 (2022)

Based on the information of table , obtained from the questionnaire, it can be known about the gender of respondents who use MRT Jakarta, showing that the majority of respondents was women, namely 32 respondents from 41 or 29.6%, while the number of male respondents was 9 respondents from 41 or 8.3%.

Classification of Respondents by Age

Tabel 2.

Age of Respondents of PT MRT Jakarta



Source: data processed by the author in SPSS version 25 (2022)

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Based on the information in the table, it can be seen that the majority of MRT Jakarta users who are aged between 20-25 years were 33 respondents (30.6%), who are more than 25 years old were 5 respondents (4.6%), and those aged less than 20 years were 3 respondents (2.8%).

Reliability Test

Table 3.

Reliability Test Results

Variable	*Cronbach's Alpha*	Standart	Description
X1	0,745	0,60	Reliable
X2	0,835	0,60	Reliable
Y	0,833	0,60	Reliable

Source: data processed by the author in SPSS version 25 (2022)

Based on the table , it was known that each variable had a Cronbach's Alpha value of more than 0,6. It concluded that the variables Of Timeliness (X_1), Customers Loyalty (X_2), and Performance System (Y) were reliable.

Multiple Linear Regression Analysis Results

Table 4.

Multiple Regression Analysis Results

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.717	1.247		.575	.569
	Operational Timeliness	.439	.183	.348	2.404	.021
	Costumers Loyalty	.501	.126	.574	3.969	.000

a. Dependent Variable: Performance System

The table above shows that a coefficient for the X1 variable of 0.439 and the X2 variable of 0.501 with a constant of 0.717. then there was a regression equation as follows:

Y = 0,717 + 0,439 + 0,501

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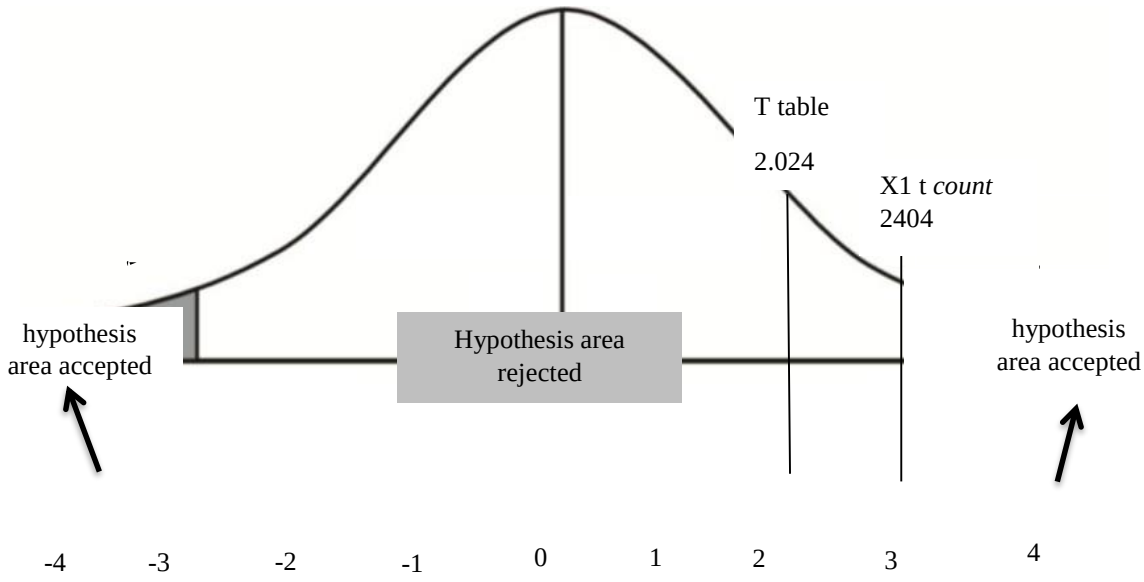
The value of the variable regression coefficient (X_1) of 0.439, shows that the operational timeliness variable have a positive impact on the MRT performance system which means that every increase of 1 unit of the operational timeliness variable will affect the MRT performance system by 0.439. Variable coefficient (X_2) of 0.501, shows that the customers loyalty variable has a positive influence on the MRT performance system which means that every increase of 1 unit of the customers loyalty variable will affect the MRT performance system by 0.501.

The results of the Hypothesis

Partial Test X_1 (T_{Count})



In the curve image above, there is a significant value for the effect of X_1 on Y is 0.021 < 0.05 and the t count value is 2,404 > 2,024. it can be concluded that H_0 declined and H_1 received. Meaning that there is an influence of X_1 on Y.

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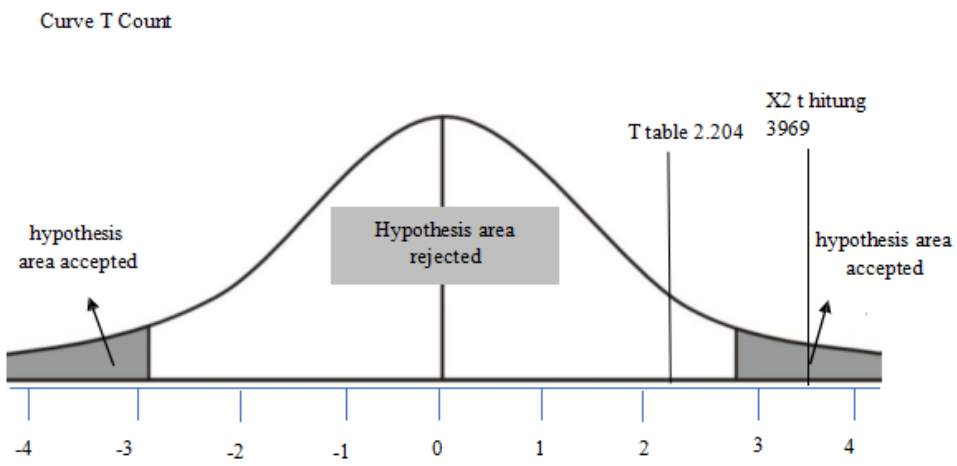
Partial Test X_2 (T_{Count})



It is known that the value of Sig for the influence of X_2 on Y is 0.000 < 0.05 and the value of t Count is 3,969 > 2,024. It can be concluded that H_0 was rejected and H_2 was accepted. Means that there is an influence of X_2 on Y.

Simultaneous Test (F_{count})

Tabel 6.

Simultaneous Test Results (F-count)

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	276.039	2	138.019	72.636	.000[b]
	Residual	72.205	38	1.900		
	Total	348.244	40			

a. Dependent Variable: Performance System

b. Predictors: (Constant), customers loyalty , operational timeliness

F_{table} = f(k;n-k), F=(2;41-2), F_{table} = (2;39) = 3.24 with a probability level of 0.000 < 0.05.

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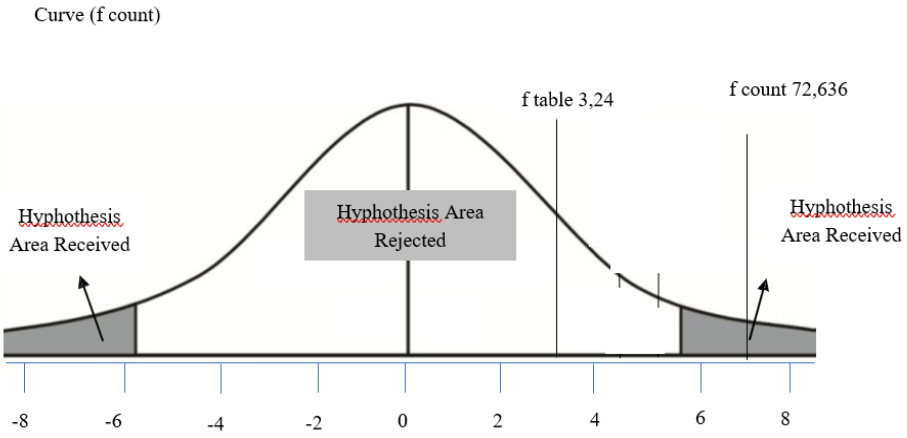
Curve F *count*



According to the table above, it is found that the value of Sig at the simultaneous X_1 and X_2 against Y is 0,000 < 5% and the value of Fcount is 72.636 < 3.24. It means that H_0 is rejected and H_3 is accepted which means that it has a simultaneous impact on X_1 and X_2 on Y.

The results of the Coefficient Determination Test

The coefficient of determination can be analyzed through the coefficient of determination test by calculating the adjusted R^2.

Table 7.

Coefficient of Determination Test Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.890[a]	.793	.782	1.37845

a. *Predictors: (Constant), Customer Loyalty, Operational Timeliness*

b. Dependent Variable: Performance System MRT

Source: Primary Data Processed (2022)

Seen from the table above, the value of R^2 is 0.782 or 78.2%. These results show that the magnitude of the influence of free variables (operational timeliness and customers loyalty) on bound variables (MRT performance system). While the rest (100 – 78.2% = 21.8%) . Thus, it can be explained that based on existing criteria, the variable of operational timeliness and the variable of customer loyalty have a high influence on the variables of the MRT performance system.

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Conclusion

Hypothesis test results prove the influence of the punctuality of MRT Jakarta operations and customers loyalty to the MRT performance system. The value of the variable regression coefficient (X_1) of 0.439 shows that the operational timeliness variable have a positive impact on the MRT performance system which means that every increase of 1 unit of the operational timeliness variable will affect the MRT performance system by 0.439. Variable coefficient (X_2) of 0.501, shows that the customers loyalty variable has a positive influence on the MRT performance system which means that every increase of 1 unit of the customers loyalty variable will affect the MRT performance system by 0.501.

Partial test (X_1 and X_2), value for the effect of X_1 on Y is 0.021 < 0.05 and the t count value is 2,404 > 2,024. it can be concluded that H_0 is declined and H_1 is accepted. Meaning that there is an influence of X_1 on Y. for the influence of X_2 on Y is 0.000 < 0.05 and the value of t Count is 3,969 > 2,024. so it can be concluded that H_0 was rejected and H_2 was accepted. Means that there is an influence of X_2 on Y.

Through the calculation, results obtained by the F test, the calculation is 72,636 with the F table value is 3.24. So that the value of F calculates > F table or 72,636 > 3.24, and a significant level of 0.000 < 0.05. Thus, it can be concluded that H_0 was rejected and H_3 was accepted stating "simultaneously there is a significant influence between the variables of operational timeliness and customer loyalty to the Jakarta MRT performance system". Based on the calculation results of the table test results F 58,342 > 3.21, then from these results Ho was rejected and Ha was accepted.

The test results of the Coefficient Determination can be analyzed through the coefficient of determination test by calculating the adjusted R^2. Shows the result of an adjusted value of R^2 of 0.782 or 78.2%. While the rest (100 – 78.2% = 21.8%) .Thus, it can be explained that based on existing criteria, the variable of operational timeliness and the variable of customers loyalty have a high influence on the variables of the MRT performance system.

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Implication

Theoretical implications

The results of this research show that operational timeliness affects customer loyalty to the Jakarta MRT performance system. In accordance with the theory of operational timeliness, with an increase in operational timeliness, it can be carried out if there is synergy between regulators and operators with a good planning system, implementation of high operational standards, increasing the frequency of train transportation adjusted to the capacity of the line and increasing the average speed in accordance with the technical capabilities of the facilities and infrastructure.

This research also shows that customer loyalty affects the performance system of MRT Jakarta that customer loyalty has several indicators, including:

1. Make recurring purchases on a regular basis.
2. Referencing to others.
3. Shows immunity to pull from competitors.

Based on this study, it is suggested that the performance provided by MRT must be further improved so that customers feel loyal, satisfied and use MRT services repeatedly according to the activities intended by customers.

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