

## Analysis of Factors Influencing The Decline in Public Transportation Interest in Timika City

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### KEYWORDS

Public transportation;  
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### ABSTRACT

This research aims to determine the factors influencing the reduction of public transportation in Timika City. The method used is quantitative, which is collecting data through questionnaires. The research results show that several factors influencing the reduction in public transportation in Timika City are limited accessibility, service, and comfort. The analysis used in this research is multiple linear regression analysis. The results of this research explain that variable X1, namely accessibility, and variable X2, namely service, have a positive and insignificant influence on the interest of public transport users. Meanwhile, variable X3, namely comfort, has a positive and significant effect on the interest of public transport users. The implications of this study show that increasing comfort is the most significant factor in attracting public interest in using public transportation in Timika City. Improvements in accessibility and quality of service, while important, are not enough without increased convenience. Effective strategies should focus on improving hygiene, seat comfort, in-vehicle temperature, and tranquility during the trip.

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### 1. Introduction

Economic development in a country is inseparable from the influence of supporting facilities and infrastructure such as transportation, according to Merdeka Wati, 2012 (Daryono et al., 2021; Surung & Arka, 2018). The development of the regional economy is always associated with increased community activities. These community activities will form a movement model that connects community mobility with the relationship between the transportation industry and other industries (Karim et al., 2023; Muhyiddin & Nusa, 2023). According to Tamin, 2000 Transportation is an inseparable need in people's lives. Transportation has a close relationship between the location and the location of human activities. The importance of transportation can be seen in terms of people's needs for

public transportation services for the mobility of people and goods that will enter all corners of the country, even from and abroad (Jumain et al., 2021; Lucas et al., 2016). Transportation has a role in supporting community activities; to support these activities or activities, a driving facility is needed. Transportation is interrelated with humans because transportation is controlled by humans so that it runs properly. One of the transportation that humans often use is public transportation. Public transportation is one of the means used by many people; public transportation is usually used to go to several points or routes that have been determined and will not pass through unspecified routes (Buamona et al., 2017).

The city of Timika, a city located in Papua Province, Indonesia, has experienced a decline in the use of public transportation as the main mode of transportation. This has become a concern for the government and local communities, as public transportation not only serves as a means of transportation but also plays an important role in regulating traffic and reducing congestion in the city. In this analysis, we will discuss the factors that affect the decline in the use of public transportation in Timika City and find solutions to increase the use of this mode of transportation again.

Public transportation is one of the alternatives for the public because of several factors that can determine people's interest in using public transportation, some of these factors are accessibility, service, and convenience that will affect interest. If public transportation cannot guarantee safety, it will affect the public's interest in using it. If public transportation cannot guarantee passenger comfort, it will be able to affect the public's interest; if public transportation does not guarantee good service for passengers, it will be able to affect people's interest in using public transportation.

The decline in interest in the use of public transportation is a global phenomenon that also occurs in various cities, including Timika City. This study aims to identify and analyze the factors that affect the decrease in public interest in public transportation. Based on data analysis using the Questionnaire system, several main factors are often associated with a decline in the use of public transportation, including the availability of service facilities, accessibility, and operational conditions of public transportation, such as the level of comfort. Public transportation in Timika City is currently facing various challenges that cause a decrease in public interest in using it. Many of the Yellow Taxis used are still in poor condition. Vehicles that are old and poorly maintained often cause inconvenience to passengers. The erratic frequency of public transportation and often late is one of the main reasons for the decline in public interest in public transportation users. (Kusumadewi, 2020).

## **2. Materials and Methods**

This research can use primary data collection methods, such as direct surveys of the people of Timika through the distribution of questionnaires. In this study, questionnaire data was used, which was distributed online to people who had used public transportation. The survey had 100 respondents who were public transportation users in Timika City. This study aims to analyze the factors that affect the decrease in public transportation interest in Timika City.

This study aims to understand what are the influences between the independent variables X1 (accessibility), X2 (services), and X3 (convenience) on the dependent variable Y (interest). The multiple linear regression analysis method was used as an analysis tool using SPSS 25. Here is the model of the equation:

$$Y = a + \beta x_1 + \beta x_2 + \beta x_3 + e$$

Where:

Y: Interest

A: Constanta

X1: Accessibility

X2: Service

X3: Comfort

e: error

### 3. Result and Discussion

Multiple linear regression analysis is used to determine the influence between independent variables and bound variables. The independent variables in this study are Accessibility, Service, and Comfort. While the bound variable is Interest

#### Effect of Multiple Linear Regression Analysis with SPSS

This is the result of the data from SPSS:

#### Regression

**Table 1**  
**Model Summary<sup>b</sup>**

Model	R	R Square	Std. Error of the Estimate	Durbin-Watson
1	.679 <sup>a</sup>	.445	1.91373	1.667

a. Predictors: (Constant), Convenience (X3 ), Service ( X2 ), Accessibility ( X1 )

b. Dependent Variable: Interest ( Y )

Based on Table 1 and the output above, the determinant coefficient (R Square) is obtained at 0.461, which implies that the influence of free variables (Accessibility, Service, and Comfort) on bound variables (Interest) is 46.1%.

**Table 2**  
**ANOVA<sup>a</sup>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regresi	301.173	3	100.391	27.412	.000 <sup>b</sup>
	Residual	351.587	96	3.662		
	Total	652.760	99			

a. Dependent Variable: Interest (Y)

b. Predictors: (Constant). Accessibility, service, comfort

Table 2 of ANOVA shows that the relationship between the independent variable (Accessibility, Service, Convenience) and the dependent variable (Interest) has a significant effect of 0.000.

**Table 3**  
**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.906	.601		4.833	.000
	Accessibility	-.142	.133	-.165	-1.066	.289
	Service	.148	.140	.155	1.051	.296
	Comfort	.608	.121	.685	5.027	.000

Based on Table 3 above, it can be seen that accessibility (X1) is -0.142 with a sig of 0.289, which means that accessibility (X1) has no significant influence on interest (Y). Service (X2) is a coefficient of 0.148 with a sig of 0.296 > 0.5, which means that service (X2) has no significant influence on interest (Y). and for comfort (X3) is 0.608 with a sig of 0.000, which means that comfort (X3) has a significant influence on interest (Y). It can be concluded that convenience (X3) influences interest (Y), while accessibility (X1) and service (X2) have no significant influence.

## Discussion

### Accessibility to the Interest of Public Transportation Users in Timika City

The results of the above analysis show that accessibility has a negative and insignificant influence on the interest of public transportation users in Timika City (Alam et al., 2024). The results of the accessibility variable have a negative influence, meaning that when accessibility to public transportation increases, public interest in using it tends to decrease, and vice versa. This does not affect but can be caused by several other factors that affect the preference for the use of public transportation. Insignificant means that the analysis results do not show strong enough evidence to state that changes in accessibility actually affect public interest. This means that changes in accessibility are not large enough or inconsistent because they are considered to have a real impact on people's interest in using public transportation.

Accessibility, Public transportation, in community life, transportation has a very big role in determining the progress of a nation and state, the role of transportation is the nation's competitiveness as a means to interact in every activity, in this case, how a nation is able to manage a reliable transportation system according to Putra, 2016 in (Soimun et al., 2021). According to Redman et al., 2013 The quality attributes of public transportation that attract the attention of car users that the physical attributes (e.g., reliability of service, accessibility, price) and perceived quality (e.g. comfort, safety, convenience) of public transportation, especially affective and motivational attributes, and reliability of service and frequency, have an important role in attracting car users to public transportation (Wirahaji & Muka, 2023)

This is stated on (Putrika Damayanti & Khoirudin, 2021) stated that Accessibility has a positive influence on the interest of public transportation users.

### Services to the Interest of Public Transportation Users in Timika City

The results of the above analysis state that services have a negative and insignificant relationship with the interest of public transportation users. The relationship between services and

the interest of public transportation users is negative. When the quality of service increases, public interest in using public transportation tends to decrease, and vice versa. This may indicate that other factors are more dominant in influencing public interest than the quality of the service itself. Insignificant means that the analysis results do not show strong evidence to state that changes in service quality actually affect public interest. In other words, changes in service quality are not large enough or inconsistent to be considered to have a real impact on people's interest in using public transportation.

This is stated on (Hidayah, 2020) stated that the level of service does not affect the interest in using public transportation, while in (Putrika Damayanti & Khoirudin, 2021) stated that the quality of service has a positive influence on the interest of public transportation users and while in (Alrusydi, 2018) stated that the quality of service has a significant effect on public interest.

### **Convenience for the Interest of Public Transportation Users in Timika City**

The results of the above study state that Comfort has a positive and significant influence on the interest of public transportation users in the city of Timika. A positive influence means that when the comfort level in using public transportation increases, people's interest in using public transportation also increases. This shows that comfort is an important factor that can increase the use of public transportation by the community in Timika City (Ferdynand & Supriyatna, 2024). Significant means that the results show strong analytical evidence that changes in comfort levels impact people's interests. This means that the increase in comfort affects people's decisions to use public transportation.

This is stated by (Putrika Damayanti & Khoirudin, 2021) that Comfort positively influences public transportation users' interest.

## **4. Conclusion**

Based on the above research, it can be concluded that Accessibility refers to the ease of people in reaching and using public transportation services. While important, research shows that improving accessibility alone is insufficient to increase public interest in public transportation. The quality of service includes various aspects such as punctuality, staff shortages, and information availability. Although improving the quality of services is a good step, the study results show that it is also not significant enough to increase public interest. Comfort includes elements such as cleanliness, seat comfort, temperature in the vehicle, and tranquility during the trip. Research finds that convenience is the most significant factor influencing people's interest in public transportation. This means that people highly value a convenient travel experience and are more likely to opt for public transportation if they feel comfortable during the trip. To increase public interest in using public transportation in Timika City, efforts must be focused on improving comfort, which is a very significant factor. Improvements in accessibility and quality of service are not enough to attract more users without increasing convenience.

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