

## Analisis Analysis of Public Transport Subsidy for Students in Medan City

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### **ABSTRACT**

*The population continues to increase every year, and so do transportation needs. This is inseparable from the increasing number and variety of population activities. also includes educational activities. Traveling to and from school often results in traffic jams. Apart from that, many students choose to use private vehicles. which worsens air pollution and traffic congestion. Thus, the aim of this research is to create regulations governing the use of public transportation, especially for students. can facilitate student transportation to and from school. Thus, perhaps this can be implemented in the future. This is an example of how the government can provide incentives for students to use public transportation in an effort to reduce congestion caused by the use of private vehicles. The data collection process was carried out using observation, interviews, surveys and paperwork methods, then procedures for analyzing student characteristics and analyzing subsidy mechanisms. Based on various analyzes conducted, based on these findings, 69% of students are willing to switch to subsidized public transportation*

**Keywords:** *Transportation; Public Transportation; Student*

### **INTRODUCTION**

The population of Indonesia is today rather large, which has an impact on a variety of community relationships and activities. People need means of transportation to get from one place to another when they interact. It is essential to plan for land management. to manage neighborhood activities and transfer the public well's land usage. Not only is travel necessary for social and business engagements, but it also serves educational goals, such as students who need to go to school. Land transportation is a component of the financial system and encompasses both public and private modes. However, private vehicles—motorcycles in particular—are more frequently used in lieu of public transportation. Data indicates an increase in the number of motorbikes in Indonesia, which has resulted in a significant dominance of the vehicle market.

The degree of urban activity is reflected in transportation patterns. Right now, public transit is often less desirable in urban areas. Long wait times, uncomfortable conditions, and restricted accessibility are some of the reasons why society prefers private transportation. Traveling online is growing in popularity. simple, direct route to the destination.

The rapidly growing city of Medan is experiencing similar consequences. The use of motorized vehicles for communal movement has improved his stature. Students are drawn to cars and motorcycles in particular, and less people choose public transportation. Both traffic congestion and air pollution are becoming increasing problems. become leaner. Student subsidies for public transportation

become ways to improve mobility and benefit students. Studies estimate the possibility that subsidies for urban transportation may move schools and create regulations for more efficient forms of transportation.

The research findings provide some details regarding the analysis of student subsidies for public transportation in particular regions of Indonesia. The sources referenced, however, lacked detailed information regarding the examination of Medan's student public transit subsidies. According to the data currently available, an examination of Medan's student public transportation subsidies can therefore assist in enhancing students' access to transportation, reducing the cost of that transit, and increasing their engagement with their education.

In this case, the analysis may entail assessing the mobility requirements of the students, charting the necessary public transportation routes, and computing vehicle operating expenses to ascertain the best subsidy plan. To better understand the students' transportation needs, the analysis can also take into account their preferences for the modes of transportation they use, such as rural public transportation and motorbike taxis.

## **RESEARCH METHODS**

This is where the method for collecting data for primary and secondary research is carried out. key methods for gathering research data This is achieved by observation and conversation with public transit operators, users, and the government. Meanwhile, collecting secondary data The process for achieving this is data collecting. essential, including the number of schools, students, and school distribution in the literature reviews that were utilized to collect data and information from governmental agencies associated with the Department of Transportation, like Education in Higher Medan City.

### **Data Analysis Method**

Data analysis techniques are a step in the analysis process wherein collected primary or secondary data is processed for draw conclusions when making decisions. choices to reach objectives and solutions formulation of research problems.

#### 1) Examining the Distribution of Schools and Level of Interest for User

The analytical methodology employed combines quantitative and descriptive analysis tools with a descriptive methodology. Given the characteristics of transportation utilization, a quantitative explanation will be provided. It's common in Medan City to use numerals. or the amount, picture, or curve to make the results simple to understand, and employing the mapping distribution technique in the educational

#### 2) Examination of Subsidy Systems

Marjanto (2016) states that there exist multiple mechanisms that can be employed. When giving subsidies, do the following:

- a. Complete Subsidy System

This comprehensive system of subsidies offers complete accountability for government funding public transportation, which calls for sufficient funding allocation.

b. Mechanism for Operational Difference Subsidies

Within the operational difference subsidies program In this case, the government provides assistance in the form of funding to cover processes that result in cost deficits above what is obtained.

c. Fuel Oil (BBM) Substitution Process

The fuel subsidy mechanism is the procedure by which the government provides additional funds or financial support to cover gasoline expenses for certain vehicle activities, such as school buses and public transportation. This approach aims to keep ticket prices affordable for consumers of these services and prevent unanticipated rate increases induced by changes in market fuel prices.

In this study, a maximum of 100 participants will be sampled from 14 schools, including Junior High School (SMP), School and High School (SMA), Middle School (SMK), and Vocational. The computations are shown since the number of pupils using each public transportation system fluctuates. model for all educational establishments. In light of student interviews intended to gather details regarding the attributes of the respondent or student.

**RESULTS AND DISCUSSION**

**1) Examination of User Interest Level and School Distribution**

Students differ in terms of the type of mode and the reasoning behind the mode's selection, the costs associated with travel, their thoughts on the condition of the world at this time, and their views on public transit. A subsidy for using public transit is available to students. The following is a list of the pupils' qualities with an explanation.

a) Respondent Features Depending on the Type of Mode Selection  
 Predicted on the characteristics

Questionnaire's findings choice of mode is recognized to exist in if at all possible, travel to school View the diagram and table below This.

**Table 1. 1 Characteristics of Respondents Based on Type of Mode Selection**

Mode type	City transport	Car	Motorcycle
Amount	15	13	72

Considering the characteristics of the respondent based on the mode that is being used by students includes using city transit with motorbikes with a percentage of 15% 72%, and automobiles with a 13% share.

b) Respondents' Characteristics Based on Perceptions in Moda Choice

Based on the characteristics questionnaire's results view in motion decision is aware that while en route to school is shown in the diagram and table below.

**Table 1. 2 Characteristics of Respondents Based on Perception in Mode Selection**

Reasons for Vehicle Selection	Fast	Cheap	Comfortable	No choice
Amount	44	14	31	11

Considering the features of the respondent's justifications students' preferred mode of operation dominated includes justifications for acting quickly with 44% of the population, but for petty reasons at 14%, feeling content with the overall percentage 31% and the explanation for the lack of a percentage option 11%.

c) Features of Respondents at Cost Remove it

Considering the outcomes of the qualities survey Respondents' expenses are recognized. that while traveling to school can be observed in the following table and diagram below

**Table 1. 3 Characteristics of Cost Respondents Removed**

Costs are issued	< Rp.5.000	> Rp.10.00	> Rp.15.000	Rp.10.000 - Rp.15.000
Amount	86	2	7	5

Considering the characteristics of the respondent with expenses < Rp accounting for the majority of student travel-related costs 5,000 at an 86% yield, costing more than IDR 15,000. at a rate of 7%, expenses surpass IDR 10,000 with percentage of 2% and a 10,000–15,000 IDR fee with a five percent share.

d) Respondents' characteristics based on their perceptions of the current state of transportation

Considering the outcomes of the qualities survey respondents' perceptions of the circumstances It is now established that using public transit is possible. View the diagram and table below.

**Table 1. 4 Characteristics of Respondents Based on Perceptions Regarding Conditions Current Public Transportation**

Current Conditions of Public Transport	Reckless driver	Long travel time	Long waiting time
Amount	37	48	15

Considering the characteristics of the respondent views of the state of public transportation as of right now by pupils while on the road

characterized by lengthy travel times and rate of 48%, with drivers who are careless yields a 37% percentage, but with conditions of extended wait times with a 15% percentage.

- e) Respondents' characteristics according to the availability of subsidized public transportation

According to the characteristics questionnaire respondents' responses regarding the accessibility of public transportation The table below displays the subsidies. as well as the diagram down below.

**Table 1. 5 Characteristics of Respondents Based on Availability of Subsidized Public Transport**

Availability of Subsidized Public Transport	Agree	Don't Agree
Amount	74	26

Considering the traits of the respondents according to the availability of publicly funded transportation 74% of students said they agreed, while 26% The pupil disagrees or does not

- f) Respondents' characteristics according to their perceptions about switching to use of subsidized public transportation

The information below is taken from a survey. which gathers information about the availability of students in converting to the use of public transportation The data table and diagram that follow will be shown below.

**Table 1. 6 Characteristics of Respondents Based on Perceptions Regarding Switching Using subsidized public transportation**

Willing to Switch to Using Subsidized Public Transport	Willing	Not willing
Amount	69	31

Using the information above, it is known that Perception of readiness to transition to using a vehicle Subsidies are generally controlled by willing, or 69% 31% of students are not willing, compared to the students who are ready to transition to public transportation subsidy. An availability diagram is shown below. about converting to public transportation financially supported.

## 2) Evaluation of Mechanisms for Subsidies

An assessment of the protocols and a comprehensive understanding of the methods or phases utilized in providing aid or funding to a certain sector or group of people. Finding the system's advantages, drawbacks, impacts, and implications is the goal. The purpose of the subsidy is to assist in achieving the.

- a) Complete Subsidy System

This comprehensive subsidy plan suggests that responsibility rests with the government whole in obtaining funding for encourage the use of public transit. This funding procedure demands sufficient funding allocation from Regional Government of Medan City.

b) Distinction in Operations Subsidy System

Under the operational difference subsidy program, the government offers a certain amount of funding, the disparity between revenue and operating expenses acquired via public transportation. Along with Nonetheless, people who use public transportation still tarified, with tariffs still intended to be reasonably priced for the neighborhood.

c) Fuel Subsidy Mechanism Fuel oil (BBM)

Subsidy mechanism financing scheme is an approach that can be applied. Yet, deep operations of public transportation and material usage BBM (fuel oil) is one of the obligations. the duty of the government.

## CONCLUSION

Based on the results of the research, it was determined that using public transportation to get to school in Medan City still less well-liked because of limited services which results in poor public transportation performance. By Thus, subsidies for public transportation are feasible. pique students' curiosity more. Results of subsidy analysis In 14 public transportation schools, the majority of students (72%) prefer motorcycles due to their higher speed (44%) and cheap (less than IDR 5,000, 86%). 48 percent of students believe that trips on public transit take a long time. 74% of respondents support student subsidies for public transit, and 69% of them are willing to transferring to publicly funded transportation. Three different mechanisms of subsidization are available: full BOK subsidy (Rp 30,019,000 per vehicle), operational BOK subsidy difference (Rp 24,200,900 per vehicle, 71.14%), and BOK fuel subsidies (Rp 15,000,000 per vehicle, 49.97%). The annual total cost of the full subsidy is IDR 2,791,767,000, with operational subsidy difference of Rp 2,250,683,700 and fuel subsidy of Rp 1,395,000,000. The most cost-effective BOK BBM subsidy mechanism has fuel distribution restrictions outside the purview of local government and a high risk of misuse.

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