

# Cost Analysis in the Community-Based School Transportation Service

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**Abstract:** This study aims to analyze the magnitude of the costs and factors that influence the implementation of community-based school transportation services. Implementation of school transportation services as simple mass transportation as an effort to reduce congestion on the highway. The research method uses a qualitative approach with a case study research design. The location of the study was at Al-Falah Elementary School in Surabaya which enabled the community to maximize school-specific services to support the learning process. Data collection techniques used by interviews, observation, and documentation. Data collected, then processed by step condensing data, presenting data, then verifying data. To ensure data can be properly accounted for, the data validity test is carried out which includes credibility testing, transferability, dependability, and confirmation. The results of the study indicate that the analysis of the cost of association-based school transportation services is determined by the parents' background factors and the amount of school transportation operational costs. Where education and economic level parents have a big contribution to determine the choice of school transportation services. Meanwhile, the determination of school transportation costs is determined by personal costs, operational costs, distance or location, number of interested persons in one area, and the type of vehicle used.

**Keywords:** cost analysis, school transportation, community association

## I. INTRODUCTION

Management of school transportation is an important part of school management, in addition to other educational components. School transportation functions as part of special services to support the realization of the quality of education. School transportation as a means of supporting learning for students to leave and go home on time. The existence of school transportation can help students be better prepared to face the learning process. Students do not need to worry about arriving late or going home still waiting for parents to pick up. With the existence of school transportation services, students will be picked up in the morning and delivered to the house when they return home after school.

School transportation as a means of shuttle students, where the management must pay attention to matters relating to safety, cost, adequacy, and efficiency. Safety relates to how the management of school transportation services in implementing the safety system during the trip [1]. The focus on safety is how the manager identifies safety-related risks such as human, vehicle, operational, infrastructure/ environment, and community risks.

Funding for school transportation services is related to the number of costs incurred for the operation of school transportation. Determination of the cost is based on distance, maintenance and operational costs of the

vehicle, and personal costs. In the concept of education financing, the cost of school transportation services is included in the indirect costs incurred by students in supporting the learning process. For parents, this funding is integrated with the overall education costs and unit costs of each student. This is called direct costs and indirect costs [2].

Unit costs are calculated by taking into account the number of students in each school, so unit costs are considered standard and can be compared between schools with one another. Analysis of unit costs in relation to other influencing factors can use the school as a unit of analysis. By analyzing unit costs, it allows the school to know the efficiency in the use of school resources, the benefits of educational investment, and the distribution of public expenditure for education. Besides that, it can also be used as an alternative to improve the education system sustainably.

To get the analysis, the school needs to integrate the types of direct and indirect costs. As an example to analyze cost efficiency and determine the ability of parents to send their children to school. Calculation of unit cost per student from total school operations as part of direct costs is supported by indirect costs, one of which is school transportation services. In determining the number of costs it is necessary to adjust the level or ability of parents. Where the background of parents is influenced by

several things, including the level of education and economics.

School transportation services in Indonesia are very small compared to the number of schools and students. As an example in the Surabaya area, the number of school buses provided is insufficient both from the vehicle and the route [3]. Data obtained from the Surabaya City Transportation Agency, the number of school buses in Surabaya consists of 4 units with 1 departure and return route. This shows that the number of students and the number of vehicles are not balanced, even very minimal. In addition, according to data from Castrol Manager in 2015, Surabaya was ranked fourth as the most developed city in the world with total congestion of 29,880 times. The effort that can be made by the Surabaya City Government is to provide school buses and encourage schools and the private sector to provide school transportation services to reduce congestion in the Surabaya area.

The results of research on school transportation state that the number of junior and senior high school students in the Wijaya Kusuma road area is 4,000 students with residential locations spread across 31 sub-districts in the Surabaya area [4]. More than half of the respondents, namely 57%, departed using school buses as a medium of transportation. While those who did not use school buses were 12% and others were abstained. The number of vehicles needed is 38 large buses with a capacity of 54 seats or 66 buses, if using small buses with a capacity of 31 seats. This shows that school buses are needed by students as a means of transportation to schools.

The existing phenomenon encourages schools to provide school transportation services independently as one of the services that support the learning process. One of the schools that has school transportation services is Al-Falah Elementary School Surabaya. This school is a private school that is based on the Al-Falah Surabaya foundation. The number of students in Al-Falah Elementary School is 731 students with a percentage of school transportation service users of 25%, besides being picked up by parents. School transportation services owned by the Al-Falah Foundation are 14 vehicles for kindergarten and elementary school, while for junior high schools there are 13 vehicles.

The benefits that parents get from having a school transportation service are feeling helpful in delivering and picking up students to school. In addition, school transportation services also have a positive impact on schools because the existence of school transportation services raises the image of the school and makes the school superior in terms of providing support services for students in carrying out learning. Another impact that can be felt from the existence of school transportation services is helping the Surabaya city government in reducing congestion levels.

Al-Falah Elementary School Surabaya in providing school transportation services is very concerned about safety aspects. This can be seen from the driver's qualifications who understand the insights of safety on the road, understand the traffic signs, and have a driver's license. Completeness of vehicles must also be considered in ensuring student safety. The coordinator of the school transportation community will hold a monthly meeting to

discuss the condition of the vehicle. In addition, the driver must also give instructions to students while in the car to maintain security. Another thing that must be considered is the dismissal of the car at the school as well as the students' behavior when leaving the car.

School transportation services also pay attention to economic or cost factors. This factor is the basis for schools and parents to determine school transportation services. Benchmark used in determining costs is the coverage of areas that can be reached by school transportation services [5]. Benchmark costs used in Al-Falah Elementary School Surabaya are based on distance traveled and regional division. The maximum mileage set by the school is 25 kilometers and the division of territory is 4, namely the south, north, west, and east lines. Each of these directions has the area coverage set by taking into account the traffic density and estimated time needed for the trip.

In addition to economic factors, there are other important factors, namely the adequacy factor. Adequacy factors are related to how the conditions of transportation, the determination of the vehicle used, the number of seats, and the number of students [5]. Al-Falah Elementary School in determining the adequacy of the implementation of school transportation services is based on the number of students and the number of vehicles needed to accommodate them as a whole. The number of students using school transportation services is 365 students with 14 vehicles. The selection of vehicles is determined by the association as the manager of transportation services.

Efficiency is one of the factors that should be applied in school transportation services [6]. Efficiency is related to time, where in school transportation services can help students and parents in overcoming traffic congestion on the road. Implementation of efficient concepts in school transportation services at Al-Falah Elementary School by setting rules regarding student departure and return schedules, as well as estimating delays for students to enter the car. The scheduled departure starts at 5:30 a.m. for the farthest route and return at 12:30 a.m. for classes 1 and 2, as well as 3:30 p.m. for classes 3,4,5, and 6. The estimated delay for students to enter cars 5 to 10 minutes, if it exceeds then students will be left. This is to anticipate traffic jams on the road as well as delays in coming to school because there is a reduction in points for students who arrive late.

Al-Falah Elementary School is one of the private schools that provide school transportation services. Transportation in this school has a special character compared to other schools. The vehicle that is used as a means of transportation does not belong to the school but belongs to the drivers who join the association which are under the auspices of the Al-Falah Foundation. Transportation services at Al-Falah Elementary School began with the school business. At present, the school business is disbanded by the school, then in 2005 vehicle owners formed an association that was sheltered by Al-Falah Elementary School. In addition, this transportation service also helps schools to save operational funds used in the procurement and maintenance of vehicles and helps students arrive on time. The existing regulations at Al-Falah Elementary School, for students who arrive late, will be subject to sanctions for point deduction. This will

have an impact on the final assessment of student discipline. The existence of school transportation services can minimize penalty points for students who arrive late.

## II. METHOD

This research is a descriptive study with a qualitative approach because in this study the researcher explained and described the real conditions that occur in school transportation services in supporting the learning process. The selection of research locations at Al-Falah Elementary School Surabaya. The reason for choosing a location is this educational institution that provides school transportation services in the form of associations to support the learning process through the arrival of students on time and has an impact on the absence of reduction points due to student delays.

Data collection techniques used by researchers were interviews, observation, and documentation. Interviews as the main source were carried out to informants consisting of school transportation service coordinators, Al-Falah principals, class teachers, drivers, parents, and students. The information chosen is the representation of all personnel involved directly and indirectly in the use and management of school transportation services. The data analysis was carried out with three lines, namely: data condensation, data presentation and data verification [7]. Before the data is presented, it is necessary to condense the data from the results of data collection. This is used to strengthen each other's data to support more accurate research results.

To ensure the research data can be accounted for, the researcher tests the validity of the data. This test includes credibility, transferability, dependability, and confirmation. Test credibility through source triangulation and technical triangulation, as well as member checks. In each informant, the researcher asked the informant to look again at the narration or utterance delivered at the interview.

## III. RESULT AND DISCUSSION

Cost analysis in school transportation was assessed from the aspects of parents' background and the number of fees used for school transportation operations. This is explained in the following sub-chapters.

### 1. Background of students' parents

The parents' background is crucial in choosing a school for their children. Especially in the city of Surabaya, the cost of education for public elementary and junior high school levels has been free by the government. For some parents, they will choose the best educational institution for their children. Where quality private schools can be the main reference. Along with the trend of education lately, the trend of Islamic education is getting stronger and becoming a community atmosphere to instill morality and character for children [8].

Determination of private schools will have an impact on the number of costs incurred by parents. In general, economically capable parents will prioritize the quality of education compared to the number of education costs that must be spent. This condition occurs in the background of the study. Parents with a busy schedule are choosing Islamic schools to replace the cultivation of morality and character. The busy work makes parents no

longer have the opportunity to take and pick up children. Thus, the presence of school transportation is very helpful and eases the task of parents to deliver and pick up children.

The ability of parents to choose educational institutions and utilize transportation services is determined by their educational background and family economic capacity [9, 10]. Where in the study of human capital theory, the educational process is a future investment. People who invest their time, energy, and finances to pursue higher education will get results for the feasibility of living in the future. The higher the level of education, the higher the income when working. This has an impact on the level of awareness of parents to choose their children in quality education institutions.

### 2. Determination of school transportation costs

Costs are an important part of including children in school transportation services [11]. Determining the number of fees from the school transportation service will influence the high and low enthusiasm of parents to participate. Besides, in terms of school transportation services, it must also pay attention to how the comparison between expenditure and income is obtained so that the costs charged will be rational.

Economic factors must be considered by schools and also the government in determining the number of costs [5]. The background of students will influence the interest of parents to use the school transportation services that have been provided. Determination of costs based on regional coverage, the further the coverage of the area, the higher the costs charged to parents. The school also limits the scope of the area, this is intended to provide an average cost as well as grouping the area covered.

Based on the research findings regarding the cost of school transportation services in Al Falah Elementary School Surabaya, it can be seen that the determination of costs is based on how far the distance of residence is to school. Whereas in the cost determination it is managed independently by the association so that the school does not have the authority in it. This separate management pattern has an impact on school income from the results of school operations. The school does not benefit financially from the school's transportation services.

The researcher also identified other factors in determining the number of costs. In addition to the distance of residence, it is also based on the participation of students in the school's transportation services. Following the documentation study obtained, the types of school transportation services are divided into three, namely: fees for students who only go to school, go to school, and also who go to school and go home. This obviously will affect the costs charged to each parent. The school transportation association, as the manager of this service, needs to take into account the break event point that must be obtained for one student shuttle service area.

Management of school transportation services is separate from school management. The school transportation community needs to calculate the total operational costs divided by the number of students participating in this transportation service [12]. The more students join in one area or destination, the more expensive the cost will be. Conversely, if in an area or the goal is the number of students is small, then the cost will

be more expensive [13]. Some strategies carried out by the association as managers of school transportation by determining the type of vehicle used. For routes with a large number of students, they will use a minibus with a capacity of 12-15 students. As for routes with fewer interested parties, the school presents a minibus with less capacity.

The school transportation community before determining the number of fees charged to parents will first be surveyed. The purpose of the survey is to find out where the students live and measure how far it is from the school. Besides, it also knows whether the student in question has friends who are in the pickup or return area. This can be illustrated through the flow chart as follows:

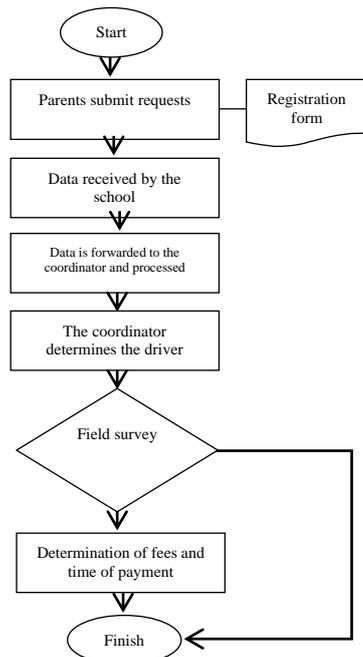


Chart 1 Flowchart Determining the Cost of School Transportation Services

Based on the flow chart above, parents who will use the school transportation service submit a service request by filling in the registration form. Some important points in filling out the form include: student name, class, student guardian telephone number, choosing a list of service categories, and filling in the full address. This activity is carried out by the school. Furthermore, all application forms that have been collected, submitted to the community association. The next step, the association will map the area or location based on the address that has been filled.

The results of mapping the number of students based on the pickup location were left to the driver. The next step, the driver conducts a location survey as a material for determining pickup decisions and the number of fees that will be paid by parents. The criteria for determining this location refer to the rules of the community that have been set. Where the distance or minimum radius of 2 kilometers and a maximum of 25 kilometers. It aims to reach all students who study at Al Falah Elementary School Surabaya to be well served. The distance between the school and the home address determines the amount of the cost to use the school

transportation service. The farther the place of residence, the more expensive the costs are paid and vice versa.

The residence of students who attend Al-Falah Elementary School is located in almost all areas of Surabaya City. Not only that, but some students come from the buffer zone of Surabaya, including Sidoarjo and Gresik. The rates charged for short distances range from Rp. 400,000 - Rp. 500,000 for departing and going to school services. While for long distances between 20-25 kilometers, the amount of the transfer and shuttle costs between Rp 650,000 - Rp 700,000. The amount of cost between students is very varied concerning the components that influence. The area or pickup location that many students will get is cheaper than the area where few students use school transportation services. Likewise with the type of vehicle used, where the size of operational costs determines the number of service costs incurred by parents.

#### IV. CONCLUSION

Cost analysis in association-based school transportation services is based on an analysis of influencing factors, namely: parental background and determining the operational costs of school transportation. The background of parents influences the continuity of school transportation services. This is closely related to the background of parental education, as well as the economic level. In determining the transportation service costs paid by parents, the fee is based on the number of operational costs which include: personal costs, operational costs, distance or location, the number of students interested in one area, and the type of vehicle used.

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