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ARTICLE

Improving the Quality of Passenger Service Using Standards for Assessment of Rural Transport Services

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Abstract: In recent years, the government has been aggressively inviting the public to use public transportation for all regional residents in Indonesia. Mattson et al. (2021) stated that transportation and accessibility in the village are more comprehensive and have more complex transportation issues. Therefore, this study was conducted to measure rural transportation services to improve public transportation performance in the Pringsewu Regency. This study uses a mixed-method and combines quantitative and qualitative data at one time (Creswell, 2014). The data is analyzed quantitatively and then explained based on existing conditions and provisional assumptions. The data used are primary and secondary data. Primary data was obtained through field surveys on four rural transportation routes in Pringsewu Regency to obtain data on load factors, vehicle speed, waiting time, travel time, frequency/hour, and the number of vehicles operating from each route. Furthermore, the data is evaluated and given an assessment based on the suitability of indicators based on the assessment standard from the Directorate General of Land Transportation, Ministry of Transportation. Secondary data was obtained from Statistics Indonesia publications, official documents, and government websites. The analysis results showed that rural transportation services in the Pringsewu regency were below the ideal standard (70%), with an average loading factor of 40–50%, which is included in the bad category. This is estimated to be influenced by several factors, namely the low level of load factor and headway. The recommendation put forward is the need for efforts to add headways and increase the speed of travel time and reduce the frequency of trips to improve transportation performance.

Keywords: service; rural public transportation; load factor; headway

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1. Introduction

Transportation for development in Indonesia is an important sector in supporting community economic activities. In order to support this economic growth, a transportation system and supporting infrastructure facilities are needed that can create not only comfort but also safety and smoothness (Castells, 2000). Investment in transportation facilities, especially in rural areas, was found to have an impact on increasing farmers' income and rural development (L. Wang et al., 2022; Z. Wang & Sun, 2016). Construction and improvement of transportation facilities will increase product competitiveness which will also increase the income of actors' efforts due to savings in transportation costs, as well as increasing the availability of transportation support tools and facilities, in general, will facilitate the accessibility of the community in moving their economy, which in turn has an impact on regional economic growth (Abdullah, 2014; Hamid, 2014).

Unfortunately, the transportation problem experienced by many regions in Indonesia is the imbalance between the growth of traffic support infrastructure with the growth in the number of vehicles and the high level of community mobility (Supratikta, 2014). This is strongly influenced by the improvement of the community's economy in many areas. So, in general, the impact felt by the community as a result of this includes traffic jams on the highway, difficulty in finding parking spaces, high traffic accidents, and air pollution, which is increasingly concerning. Several studies conducted in areas such as Palembang, Madura, and Singaraja show that people in an area tend to prefer private vehicles, be it motorbikes or cars and demand community towards public transportation is decreasing (Zamzami & Herawati, 2019). So, it can be concluded that, in general, people's preferences in choosing this mode are strongly influenced by routes, travel conditions, ease of access, security, punctuality, and other factors related to public transportation. However, in contradiction with most of these studies, research conducted in a small area in Medan City, on the contrary, prefers public transportation, and this is affected by the cost, which is much cheaper than using private vehicles.

Lampung is the gateway for the community to enter Sumatra, which administratively has 13 districts and two city areas. As one of the busiest routes in Lampung Province and as a liaison to several areas on the west coast of Sumatra, Pringsewu Regency is positioned as one of the busiest routes to the west coast of Sumatra in Lampung Province (Armijon et al., 2017), making Pringsewu Regency a very potential position for the development of the trade and service sector and has a strategic position in the Lampung province context. However, public interest in the use of public transportation is still lacking; preferences for the use of public transportation in Lampung Province, as has been done, show that from a sample of respondents, the choice of public transportation is below the choice of private transportation and online vehicles. The decrease in public transport users occurs by 0.3% annually. In addition, transportation problems that occur in Lampung Province include traffic jams due to the accumulation of public transportation on the middle sections of the Central Sumatran highway during peak hours such as morning and evening.

Many have done transportation problems in Pringsewu Regency, including by Rona (2013), who found that there was a lack of information about the number of existing public transport routes, especially for those who use public transport services. Meanwhile, based on the results of observations and interviews with public transportation users, it is found that the general problem that occurs in Pringsewu Regency is that in addition to the lack of public interest in using public transportation, users also complain that public transportation services are still unsatisfactory, especially from the travel time factor. This is also in line with the problems of public transportation in general, such as long travel times, uncertain operating hours, and passenger discomfort due to overcrowding because the number of passengers exceeds the total capacity (Judiantono, 2015).

There have been many who have researched to analyze the performance of public transportation. However, it is still very rare to analyze the performance of public transportation in the province of Lampung, especially the Pringsewu Regency. Several studies have been conducted to evaluate rural transportation performance, such as those conducted in East Nusa Tenggara (Madeira, 2015) and Purwakarta Regency (Judiantono, 2015). Bekasi Regency, Sumenep Regency, Pinrang Regency. The results showed that the average performance of transportation services was still low, using indicators of speed, load capacity, distance, travel time, frequency/hour, service time, and the number of vehicles. Therefore, it is necessary to evaluate the performance of public transportation to provide better services than before so that public interest in using public transportation will increase. Service providers at the terminal should be able to provide comfort and security for users (Angestiwi, 2019).

Most of the public transportation in Pringsewu Regency uses small vehicles. Based on General Passenger Car is a motorized vehicle used as a public vehicle with eight seats which does not include the driver's seat. According to Mutiawati (2019), there are several types of general Passenger Cars, including (1) Small bus cars with a seat of at least nine to nineteen seats and (2) Medium bus cars with a capacity of up to thirty people who can sit and also stand and (3) Large bus cars with a capacity of up to thirty-nine people who can sit and also stand. By looking at these criteria, the rural transportation used in the Pringsewu regency belongs to the category of small vehicles. Therefore, this study only focuses on 4 routes starting from the Pringsewu terminal, namely Pringsewu–Gadingrejo, Pringsewu–Pagelaran, Pringsewu–Kalirejo, and Pringsewu–Pardasuka (Badan Perencanaan Pembangunan Daerah Pemerintah Kabupaten Pringsewu, 2012).

In order to evaluate the existing rural transportation services at Terminal C, Pringswum district, an evaluation of transportation services will be carried out according to the indicators of rural services so that in the future rural transportation in Pringsewu Regency will be better by taking into account the capacity, the time between and other factors in accordance with service indicators in accordance with the service indicators of the Director-General of Land Transportation with number 687/AJ.206/DRJD/2002.

2. Methods

This study uses a mixed-method between quantitative and qualitative. The quantitative data analysis in this study uses transportation service performance indicators based on the General Decree of the Minister of Transportation Number 687/AJ.206/DRJD/2002; this indicator is used to know the weight of existing public transport criteria based on the variables obtained when calculating. Sources of data used in this study are primary data through field studies and secondary data through literature studies with data collection techniques through interviews with drivers and users in the field. In this study, the population used was public transportation in Pringsewu Regency and users of transportation on four routes that serve to and from Pringsewu Terminal; in addition to using literature studies, this research also interviewed drivers and transport operators in Pringsewu Regency. After analyzing using transportation service performance indicators based on the General Decree of the Minister of Transportation Number 687/AJ.206/DRJD/2002 then, the data is processed using a qualitative approach to get a picture that is being researched so that it is easy to understand well so that a viewpoint is obtained on the information being researched (Creswell, 2014; Pratiwi, 2017).

This study was conducted on four routes, namely the Pringsewu–Pardasuka route, Pringsewu–Sukoharjo, Pringsewu–Gadingrejo, and Pringsewu–Pagelaran by observing directly in the field and also carried out a vehicle (onboard). The survey conducted on a vehicle in this study was conducted to determine the number of passenger occupancy per transportation in one trip (Nurdjanah & Kurniawati, 2016). During the field observations, the vehicle speed of each segment and the speed from

the beginning to the end of the trip were also obtained. Furthermore, a roadside survey was conducted to record the number of vehicles operating, length of trip, circulation time, frequency of service, and capacity of each public vehicle on the Terminal route. The timing of the field survey was chosen based on the service time of public transportation, namely from the morning (07.00) to the afternoon (18.00). The choice of rush hour time is based on Batarce's opinion (Batarce et al., 2022). usually, rush hour is the most critical time for public transportation and regulations of the bus operator. Other times can also be chosen, but other, more specific factors are needed.

This research was conducted for 5 days, with 4 routes, namely the Pringsewu–Pardasuka route; Pringsewu–Sukoharjo; Pringsewu–Gadingrejo; and Pringsewu–Pagelaran. Furthermore, the analysis used in evaluating rural transportation services for the Pringsewu Terminal Route analyzes headway time, frequency, load factor, travel speed, travel time, and service time.

Based on the analysis, it was found that the condition of public transportation services in Pringsewu Regency has not been able to provide a sense of security, comfort, and reliability in terms of schedules and waiting times for public transport users. It can be said that public transportation entrepreneurs are not yet professional in implementing public transportation after an analysis of the Ministry of Transportation's service indicators has been carried out. The lax implementation of minimum service standardization adds to the poor service of public transportation, resulting in a lack of public interest in using public transportation, reducing the market share of public transportation. The lack of public interest in taking public transportation causes the load factor to be lower, and this situation can be seen in the 4 (four) routes analyzed in this study; only 1 (one) route whose load factor is above 70%, namely Terminal Pringsewu–Gadingrejo.

Ideally, the implementation of public transportation should be beneficial on the operator side and the passenger side. On the operator side, the most important indicator is the loading factor. The loading factor is to compare the capacity that must be fulfilled with the available capacity in one trip. If the load factor indicator can be maintained in demand, the operator's income will also improve to improve the quality of rural transportation. On the other hand, if the load factor is low, the operator's income will be reduced so that they cannot maintain the quality of their transportation because each quality improvement requires a large enough cost. In general, rural transportation that operates costs more than income. Generally, the income of rural transport drivers is uncertain, so sometimes they pay the remaining operating costs of the vehicles they drive to reduce vehicle operating costs.

The analysis of the performance of rural transportation is carried out using the Technical Guidelines for the Implementation of Public Transport. In the technical guidelines, the weighting of public transport service standards is carried out as follows:

Table 1. Performance Standards of Public Transport Services

Criteria	Value
Good	18.00 – 24.00
Medium	12.00 – 17.99
Less	Less than 12

Source: Directorate General of Land Transportation (2014)

Meanwhile, the parameters and standard values for services according to the Decree of the Department of Transportation Number 687/AJ.206/DRJD/2002 are:

Table 2. Performance Parameters

No.	Parameter	Standard
1	Headway H ideal H top	 5–10 minutes 2–5 minutes
2	Waiting Time Average Maximum	 5–10 minutes 10–20 minutes
3	Load factor (load factor)	70%
4	Travel time Average Maximum	 1–1.5 hours 2–3 hours

Source: Decree of the Department of Transportation Number 687/AJ.206/DRJD/2002

Several factors that affect the assessment of public transport include several parameters used include:

1. Easiness

In this case, ease is seen from the accessibility associated with the length of the route that must be passed so that passengers can easily see or find it difficult to reach the location when it is reached through the transportation network system (Tamin, 2000). The more difficult it is to reach the location of transportation infrastructure in general, the less public interest in using it. The ease of travel in a community depends on its characteristics and community. A person who can drive his vehicle will expect that access to a vehicle and access to travel is relatively easier than someone who cannot drive and does not have access to a vehicle, but both those who do not have a vehicle and those who have a vehicle, quality of transit services, quality of roads, the safety of passing. traffic and bicycle facilities are quite important (Mattson et al., 2021).

2. Service Capacity

The number of fleets is compared with the length of the road traversed by the transport. Where the number of vehicles needed to serve passenger demand every time, the number of vehicles will increase according to the increasing demand for services and can be calculated using the equation:

$$N = \frac{L_r}{VH} \times 60$$

N = Number of fleets required per route per hour
V = Average operating speed (km/h)
Lr = Route length (km)
H = Headway (minutes)

3. Quality of Service

Quality of service seen from the parameters

a. Frequency of Service

Frequency is closely related to the vehicle load factor and can be calculated by:
F = 60/H
F = frequency (vehicle)
H= Headway (minutes)

b. Headway

The time difference between one transport and the next in the same route. The headway value can be expressed in the equation:
H = T2 – T1
H = Headway
T1 = first vehicle time
T2 = second vehicle time

c. Waiting Time

Can be measured from half the headway, in order to know the rate of random passenger arrivals. Where:
wt = 0.5 x H
Wt = Average Waiting Time (minutes)
H = Average headway (minutes)

d. Number of Operating Vehicles

By comparing the number of vehicles operating with the total number of available vehicles.

e. Service Time

The operating service time is one day from the morning until the transportation stops operating in the afternoon or evening. Eggermond et al. (2007) found from several studies that the right schedule plays an important role for users of public transportation, both for those who travel for business and vacation. Therefore, the service time is included as a basic indicator in making policy decisions that the Pringsewu Regency transportation office will take.

3. Results and Discussion

3.1. Description of Rural Transport in Pringsewu Regency

Rural transportation operating in Pringsewu is dominated by small cars with a capacity of 12 passengers. Several small cities in Indonesia generally use small-sized public transportation with a capacity that is not too large (Munawar, 2007). In Pringsewu Regency, each car has a different color depending on the route. The list of routes and colors is as follows:

a. Light blue transportation (Pringsewu–Pagelaran–Pugung–Talang Padang);
b. Dark blue transportation (Pringsewu–Wates–Gadingrejo);
c. Orange colored transportation (Pringsewu–Sumber Agung–Ambarawa–Pardasuka).

The number of rural transportation fleets in Pringsewu district on each route, with the type of vehicle used is the Public Passenger Car (PPC):

Table 3. Routes and Number of Vehicles Permitted

No.	Route	Vehicle Type	Capacity	Total
1	Pringsewu–Pardasuka	PPC	12	21
2	Pringsewu–Sukoharjo	PPC	12	59
3	Pringsewu–Gadingrejo	PPC	12	51
4	Pringsewu–Pagelaran	PPC	12	84

Source: Pringsewu Regency Transportation Service (2019)

The types of vehicles used by rural transportation in Pringsewu regency can be seen as follows:

Source: Pringsewu Regency Transportation Service (2019)

3.2. Public Transport Service Performance

By using the standards used in Indonesia, using the Decision Standards of the Director General of Land Transportation Number SK: SK.687/AJ.206/DRJD/2002, then an evaluation can be carried out using indicators of public transportation vehicles based on the standards that have been set by the government.

Table 4. Routes and Number of Permitted Vehicles

No.	Route		Load Factor	Travel Speed	Headway	Travel Time	Service Time	Frequency	Number of Vehicles	Pause Time	Total Value	Category
			%	Km/H	Minute	Minute	Hour	Drive/Hour	%	Minute		
1	Pringsewu–Pardasuka	Quantity	40	40	6	1.5	12	10	90	3	17	Good
		Value	1	3	3	1	1	3	2	3		
		Category	Less	Good	Good	Less	Less	Good	Good	Good		
2	Pringsewu–Sukoharjo	Quantity	50	40	5	1.5	12	12	50	3	16	Average
		Value	1	3	3	1	1	3	1	3		
		Category	Less	Good	Good	Less	Less	Good	Less	Good		
3	Pringsewu–Gadingrejo	Quantity	80	35	5	1.7	12	12	50	3	18	Good
		Value	3	3	3	1	1	3	1	3		
		Category	Good	Good	Good	Less	Less	Good	Less	Good		
4	Pringsewu–Pagelaran	Quantity	30	40	4	1.5	12	15	50	3	16	Average
		Value	1	3	3	1	1	3	1	3		
		Category	Less	Good	Good	Less	Less	Good	Less	Good		

In general, the network performance of the Tawang Terminal Pringsewu–Pardasuka route is in a good category, but several indicators need to be improved, including Load Factor, Travel Time, and Service Time. The calculation of the loading factor, which is still less effective than the established standard, needs to be improved so that people are interested in using public passenger cars (Mattson et al., 2021; Şimşekoğlu et al., 2015). If you look at the loading factor on rural transportation for Pringsewu Regency, the assessment of the loading factor is still low, and this can be seen from the small percentage of the loading factor.

For transportation in the Pringsewu Regency, the average loading factor is 40%, which is outside the standard of the Ministry of Transportation, where the ideal loading factor is 70%. The low load factor will cause less income to be obtained by rural transport owners, so they cannot bear the operational vehicle costs (Cowie, 2021; Munawar, 2007).

Zhu et al. (2016) who has researched "Public Vehicles for Future Urban Transport" found interesting factors in the loading factor of public transport in the future that the load factor of public transport will tend to slope down when an area tends to be congested with traffic. On the one hand, the number of vehicles has a fairly good performance where the number of vehicles operating is 90%, meaning that almost the number of vehicles that have operating licenses serve the community. Both the number of operating vehicles positively correlates with the intermediate time, where the intermediate time is 6 minutes.

The Pringsewu–Sukoharjo Terminal Public Transport Route shows that, in general, the performance is moderate (Table 4). Some indicators considered good are travel speed, headway, frequency, and pause. Indicators considered good are profitable for users of public transportation, while indicators for transportation entrepreneurs themselves are not good enough, such as load factor.

The loading factor of the Pringsewu–Sukoharjo Terminal route is only 50%; the loading factor of 50% with a high frequency will make it difficult for transport operators to survive in serving the community. So that some companies are

rejuvenating their transportation; rejuvenation of transportation to improve the quality of public transportation cannot be carried out because the income earned is still too small (Borhan et al., 2014), so in time the transportation entrepreneur cannot serve because the expenditure is greater than the income.

In general, the Pringsewu–Gadingrejo Terminal route has a good performance (Table 4) (Munawar, 2007). In the opinion that the assessment is seen as indicators of the load factor, travel speed, headway, frequency, and pause, if the travel time and service time perform less.

In Table 4, the 80% load factor illustrates that the demand for transportation along the route is quite significant because the traversed segments have a fairly busy land use. The headway is also very good because public transportation traverses every 5 minutes so that transportation reliability is maintained and passenger waiting times are also not too long. Similar to the previous route, namely Terminal Pringsewu–Sukoharjo, the indicators that are considered lacking are loading factors, length of trip, service time, and the number of vehicles.

Indicator assessment on the operator side is a special route where the demand for transportation is very small. This is illustrated in the loading factor assessment, where the loading factor is 30%. This condition is exacerbated by the number of vehicles operating at only 50%, meaning many vehicles are not operating. Although the number of vehicles operating is small, the headway and frequency are quite good (Batarce et al., 2022).

The analysis in the previous sub-chapter illustrates that the condition of public transportation services has not been able to provide a sense of security, comfort, and reliability in terms of schedules and waiting times for public transport users. Public transport entrepreneurs are not yet professionals in the administration of public transport. There are still many user opinions in newspapers in the city of Lampung that do not use public transportation in Pringsewu Regency because wherever the operator is concerned, it is not professional, so it is necessary to design a lane management application for public transportation to be more orderly (Cahyono, 2014; Rona, 2013). Safety Passengers have not become an important factor in the implementation of public transportation services. Besides, the lax implementation of minimum service standardization adds to the poor public transportation service. This condition results in a lack of public interest in using public transportation so that the market share of public transportation is reduced. The lack of public interest in taking public transportation causes the load factor to be lower. It can be seen from the 4 (four) routes analyzed that only 1 (one) route has a load factor of above 70%, namely Terminal Pringsewu–Gadingrejo, while the other 3 (three) routes perform less well or below 70%. The 3 (three) routes are Pringsewu–Pardasuka Terminal, Pringsewu–Sukoharjo Terminal and Pringsewu–Pagelaran Terminal.

Ideally, the implementation of public transportation should be beneficial on the operator side and the passenger side. On the operator side, the most important indicator is the load factor. If the load factor indicator can be maintained in demand, the operator's income will also improve to improve the quality of rural transportation. On the other hand, if the load factor is low, the operator's income will be reduced so that they cannot maintain the quality of their transportation because each quality improvement requires a large enough cost. In general, rural transportation that operates costs more than income. In order to reduce vehicle operating costs.

Sometimes the operator gets around this by not operating at off-peak hours. Operational hours during peak hours. It can be seen that demand in the Pringsewu Regency is very volatile. The demand for public transportation is high, while at certain other hours, the demand is very low. This very fluctuating demand for public transportation will make it difficult for operators to survive in serving the community; the impact is that the number of vehicles operating will be less. This can be seen from the analysis of the 4 (four) routes showing that three routes have poor performance on the indicator of the number of vehicles operating. This is the impact of low demand and fluctuating demand conditions in Pringsewu Regency.

Then from the passenger side, based on the analysis of the performance of public transportation, each indicator related to Headway, Frequency, and speed of travel has a fairly good performance, meaning that rural transportation has reliability in serving the community. For example, headway under 6 minutes illustrates the service is quite good, because every 6 minutes, public transport crosses a certain point so that the waiting time for passengers is not so long. For this reason, the waiting time for passengers is continuously monitored because the time indicator has a fairly high level of sensitivity. If the waiting time is long, the community has the potential to switch to one or private transportation.

To accelerate the improvement of rural transportation services in the Pringsewu Regency. The steps taken are as follows:

1. Strengthening the Role of the Government in the Implementation of Urban Transportation

   There is no need for a dichotomy between the roles of the central government and local governments in developing efficient, reliable, and comfortable urban transportation for the people. The center and the regions have their respective roles (Armijon et al., 2017; Badan Perencanaan Pembangunan Daerah Pemerintah Kabupaten Pringsewu, 2012). Especially for big cities with a large enough contribution of gross regional domestic product to the regional economy. Therefore, both the National Medium-Term Development Plan and the Transportation Strategic Planning should have an integrated urban transportation development program in terms of mode and financing.

   In the idealism of economic theory, with healthy competition and no economies of scale in the production process, there may be no need for government intervention in implementing public transportation (Sudrajat & Andhika, 2021; White, 2016). This is because the imposition of fees on public transport users in accordance with the marginal cost of providing public transport services will result in optimal and efficient use of resources. A perfect market will determine the quantity, quality, and cost of public transportation in accordance with the wishes of users, even though they are still constrained by limited capacity and other resources (Castells, 2000). However, such a perfect public transport market never existed, and government intervention will always be needed to implement public transport systems in urban areas (Ismail et al., 2012; UK News, 2020).

   In almost all cases, the real world never reflects the ideal conditions of economic theory, and market imperfections always occur in real economic transactions (Abdullah, 2014). And market failures are a major reason government intervention is necessary for the public sector economy. In addition, one of the reasons for government intervention is also because the subsidies provided or intervention by the government are needed for the creation of a redistribution of income from the urban affluent to the urban poor (the transport drawbacks) with the assumption that these subsidies or interventions are used properly for improving public transport services in the city.

   Some of the main reasons for the politics of urban transportation including the very large level of "publicness" and public interest, low-income residents who are tied to public transportation (captive transit), redistribution of income from the rich to the poor in the city by providing subsidies and progressive taxes on private vehicles (Wicaksono, 2012).

2. Preparation of Tender-Based Public Transport Operation Regulations

   The principle that applies in the tender mechanism is that all operators are free to choose the desired route. The criteria for the route that will be compiled set out the complete requirements for vehicles and operations, which include aspects of the quantity and quality of public transportation.

   Bidders make bids with a closed system with the unit price of the route stated in

Rp/Km, Rp/Rit, Rp/Day, and Rp/Month, accompanied by technical and administrative offers. The lowest bidder with technical specifications in accordance with the provisions in the tender documents and complete administrative documents can be declared the winner of the tender and subsequently bound by a contract agreement for 4 to 6 years with annual technical and administrative evaluations carried out (Zamzami & Herawati, 2019). Through this mechanism, the operator is only paid according to the operating performance specified in the specifications. If in the implementation of the contract, a breach of performance/violation is found by the operator, both in terms of quantitative and qualitative aspects, it can result in the imposition of a fine. When the contract period expires, the operator must return the route it serves to the government, and then the government will conduct a re-tender. In this case, the old operator can come back for the route offer he has traveled.

In this mechanism, each route will have its unique contract because it will be adapted to the field conditions of each route. In addition, the contract will be transparent, so anyone can and has the right to know it so that transparency is created and can avoid the occurrence of Corruption, Collusion, and Nepotism.

With the mechanism described above, it is hoped that a market price will be created for vehicle operating costs. The existence of competition between operators will reduce operating costs with the same or better quality. In other words, operators will compete for efficiency so that operating costs are minimized and will compete in improving services to attract consumers.

3. Determination of Public Transport Service Standards

   In order to ensure the quality of public transportation services, the physical condition of the vehicle must always be maintained so that it is in a condition that meets the technical requirements and roadworthiness standards (Tamin, 2000). Other things that need to be regulated are vehicle technical standards, exhaust emission standards, transmission system standards, use of air conditioner (AC), suspension system, luggage space availability, speed limiter, door system (easy going up and down), emergency doors, operational standards, route and hours of operation, place, and schedule of stops, maximum speed, operating speed, Sufficient number of buses, buses departing from the pool back to the pool, driver, real-time communication of the driver – operation center, recording of production (kilometers traveled and PNP), driver schedule (limit of operating hours & breaks), customer service standards, contracts of carriage, complaints and information services, complaint and complaint response mechanisms, passenger emergency services, satisfaction guarantees.

4. Rejuvenation of public transportation that has passed the roadworthy age limit

   The rejuvenation of public transportation is aimed at improving the conditions of public transportation services (Lanzendorf, 2002). Inadequate physical conditions will cause problems related to public transport safety as it is known that the condition of urban transportation in several urban districts has a vehicle age of more than ten years. For this reason, government policies are needed to limit the age limit for the roadworthiness of public transportation because if there is a vehicle age limit, older vehicles that are not eligible will continue to operate in serving public transport passengers (Momon, 2013). This poses a considerable risk to the safety of passengers on public transport. The policy of limiting roadworthiness must be based on considering the potential for existing trips and the rate of return on capital and profits of bus company entrepreneurs (Mattson et al., 2021; Tamin, 2000). Therefore, before setting the rules for the age limit of roadworthiness, a safety study must first be carried out (Morlok, 1985). From this result, the government has a benchmark in which year public transportation must be rejuvenated.

4. Conclusion

Several studies that have been conducted have found many deviant behaviors that can affect the public interest in using public transportation in the future (Gärling & Axhausen, 2003; Verplanken et al., 1997). Based on the frequency of use of transportation modes on their regular trips, the accessibility of transportation is generally good in terms of the distance traveled, the time of travel, and the costs that must be incurred (Litman, 2008). These community habit factors can encourage public transportation providers to redesign the transportation system to increase the mode share of public transport private cars. So that people's travel behavior, such as car ownership and the ease of finding a parking area, can be suppressed.

After the analysis and discussion methods have been carried out, it can be concluded that the route from the Pringsewu–Pardasuka Terminal and the Pringsewu–Gadingrejo Terminal Route each has a weight value of 17 and 18. Therefore, these two routes are in a GOOD category. While the Pringsewu–Sukoharjo Terminal Route and Pringsewu–Performance Terminal Route each with a score of 16, are in the MEDIUM category. It is advisable to rearrange the needs of the ideal fleet. After analyzing the ideal needs for the number of rural transportations in Pringsewu Regency, it was found that for the Pringsewu–Pardasuka Terminal Route, the ideal requirement is nine vehicles per hour; then Pringsewu–Sukoharjo Terminal, the ideal need is seven vehicles per hour; Pringsewu–Gadingrejo Terminal Route ideal needs nine vehicles per hour; Pringsewu Terminal-Performance, ideal needs eight vehicles per hour. Furthermore, after being evaluated, rural transportation services on the four routes were found to be constrained, namely the average loading factor below 70%, which is between 40–50% which is included in the LESS category. This is influenced by several factors, namely the low level of the load factor and headway.

For this reason, the improvement of rural transportation in Pringsewu Regency must first commit the regional head to make regional regulations related to the setting of minimum service standards and changes to the transportation management system by eliminating individual ownership of rural transportation and encouraging the formation of a consortium of transportation entrepreneurs in the administration of public transportation.

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