

Comparative Evaluation of Gorontalo Inter-Provincial City Transport (AKDP) Service Performance and Meta-Analysis Study of AKDP Service Performance in Indonesia

Intan Nia Cahaya Sari Mokoagow¹; Anton Kaharu^{2*}; Arfan Usman Sumaga³

Associate Professor^{2,3}

Department of Civil Engineering

State University of Gorontalo

Gorontalo, Indonesia

Corresponding Author: Anton Kaharu^{2*}

Abstract:- This study aims to compare the evaluation of service performance of Angkutan Kota Dalam Provinsi (AKDP) in Gorontalo Province, with the results of a meta-analysis of AKDP service performance throughout Indonesia. This evaluation focuses on five dimensions of service quality measured using the SERVQUAL model, namely: reliability, responsiveness, assurance, empathy, and tangible. This study used a quantitative approach with a survey method, where primary data was collected through questionnaires distributed to 348 Inter-Provincial City Transport (AKDP) users in Gorontalo Province. The questionnaire was designed to measure user perceptions of the five dimensions of service quality. For comparison, this study also adopted the results of a meta-analysis of AKDP service performance from various provinces in Indonesia, obtained from previous studies. Data analysis was conducted using descriptive and inferential statistics to identify significant differences between the results of service evaluation in Gorontalo and the AKDP performance standards at the national level. The results show that in terms of reliability, urban transport services in Gorontalo tend to be lower than the results of the national meta-analysis, indicating a mismatch between user expectations and the reality of services received. In terms of responsiveness, services in Gorontalo are relatively better compared to many other cities in Indonesia, although there is still room for improvement in terms of response time to user complaints. For the assurance dimension, most users in Gorontalo feel less confident in the quality of drivers and staff, a finding that is also reflected in the results of the meta-analysis in other provinces that have higher levels of trust in driver staff. In the caring dimension, users feel that city transport in Gorontalo lacks attention to the special needs of customers, such as comfort for people with disabilities. On the other hand, in the dimension of physical condition of vehicles, Gorontalo shows a very low score, with the cleanliness and comfort of vehicles not meeting user expectations, which is far below the national average. Overall, the results of this study provide a clear

picture of the aspects of city transport services that need improvement, especially in terms of reliability and physical condition of vehicles. The main recommendations of this study are the need for infrastructure improvements, intensive training for drivers and staff, and more attention to customer comfort and needs, so that the quality of urban transport services in Gorontalo Province can improve and be in line with the Indonesian AKDP service standards to improve the efficiency of public transport in Gorontalo.

Keywords:- Performance Evaluation, City Transport Services, AKDP, Reliability, Responsiveness, Assurance, Care, Physical Condition.

I. INTRODUCTION

Urban transport systems play an important role in supporting community mobility, especially in the context of urban transport within the province (AKDP), which connects urban areas with surrounding areas [1], [2], [3]. The quality of urban transport services greatly affects user satisfaction and, ultimately, the level of public transport utilisation in an area. Therefore, it is important to evaluate the performance of urban transport services, in order to improve service quality and fulfil user expectations.

Gorontalo Province, which is one of the provinces in Indonesia, faces challenges in providing adequate urban transport services [4], [5]. Along with the increasing population and higher mobility, the quality of urban transport services in this province needs to be evaluated to ensure that the services provided can meet the expected standards. However, despite the importance of such evaluation, not many studies have comprehensively examined the performance of AKDP services in Gorontalo Province, especially in the context of service quality dimensions measured through the SERVQUAL model.

SERVQUAL, developed by Parasuraman, Zeithaml, and Berry (1985), is a measurement tool used to assess five main dimensions of service: reliability, responsiveness, assurance, empathy, and tangibility [3]. These five dimensions form the main basis for measuring the quality of urban transport services. Reliability relates to the ability of the service to deliver what is promised consistently and on time; responsiveness relates to readiness and speed in responding to customer needs; assurance involves the level of user confidence in the skills and courtesy of staff; caring includes attention to customer needs, and physical condition includes cleanliness and comfort of transport facilities.

This study aims to fill the gap in the literature by evaluating the performance of urban transport services in Gorontalo Province based on the five dimensions of service quality. In addition, this study also compares the results of the performance evaluation in Gorontalo with the results of a meta-analysis of AKDP service performance in various regions in Indonesia. This meta-analysis will provide a broader perspective on the quality of urban transport services in Indonesia, as well as a benchmark in assessing performance in Gorontalo Province.

Various previous studies have discussed the importance of service quality in the transport sector, both at the local and national levels. Research by Hidayat (2015) revealed that reliability is a major factor in the satisfaction of city transport users [9]. Suryani (2020) found that assurance has a major impact on customer loyalty [10], while Sutanto (2018) highlighted the role of care in improving customer experience [11]. However, despite many studies related to urban transport service quality, there have not been many studies comparing service performance between provinces using a comprehensive approach involving all five dimensions of service quality.

Against this background, this study aims to provide a more in-depth picture of the quality of urban transport services in Gorontalo, as well as a comparison with AKDP services in Indonesia more generally. In addition, this study also aims to provide policy recommendations to improve the quality of urban transport services in Gorontalo Province based on the findings.

This study has several main objectives, including: To evaluate the performance of urban transport services in AKDP routes in Gorontalo Province based on five dimensions of service quality: reliability, responsiveness, assurance, care, and physical condition; To compare the results of the evaluation of urban transport service performance in Gorontalo with the results of the meta-analysis of AKDP service performance in Indonesia; and To provide policy recommendations to improve the quality of urban transport services in Gorontalo Province.

This research is limited to evaluating the service quality of urban transport on AKDP routes in Gorontalo Province using a survey-based quantitative approach. The main focus of this research is on service quality dimensions measured using the SERVQUAL model. This study does not discuss

other aspects such as external factors that affect service, such as infrastructure conditions or transport policies.

II. LITERATURE REVIEW

A. Service Quality in Transport

Service quality in the transport sector, especially urban transport, is a very important concept because it directly affects service user satisfaction and loyalty. According to Parasuraman, Zeithaml, and Berry (1985) [2], [3], service quality is a comparison between customer expectations and their perceptions of the performance received. In the context of urban transport, service quality can be measured by various dimensions, which according to them consist of five main elements that shape customer satisfaction, namely: reliability, responsiveness, assurance, empathy, and physical condition (tangible).

➤ Reliability

Reliability in transport refers to the ability to deliver promised services consistently and on time. This includes operating transport according to schedule and not experiencing significant disruptions. Research by Hidayat (2015) found that reliability is a very determining factor in the satisfaction of city transport users [9]. High reliability can increase customer trust in the service provided, while uncertainty or delays in service can significantly reduce customer satisfaction levels.

➤ Responsiveness

Responsiveness includes how quickly and readily the urban transport service provider responds to user complaints, requests and needs. High responsiveness creates a positive customer experience, where customers feel valued and prioritised. Huber & Hohmann (2019) showed that a quick response to user complaints can increase satisfaction and encourage customers to use the service again [12].

In the transport sector, responsiveness includes not only speed in responding to complaints, but also readiness to respond to customer needs related to travelling comfort and safety.

➤ Assurance

Assurance refers to the knowledge, ability, and courtesy of staff in providing services that can make customers feel safe and comfortable. In the context of urban transport, this relates to the professionalism of drivers and other officers. Suryani (2020) in her research showed that well-trained and courteous drivers can increase users' trust in city transport [11].

This guarantee is crucial in alleviating customers' concerns about safety and comfort during the journey.

➤ Care (Empathy)

Care in urban transport services refers to the attention given to customers, especially in terms of understanding their special needs and situations. This can include attention to passengers who require special services, such as people with disabilities or the elderly. Sutanto (2018) in his study showed

that empathy has a significant influence on perceived service quality and customer loyalty[11]. A city transport that gives full attention to customers will be able to create a positive experience that can increase customer satisfaction and loyalty.

➤ *Physical Condition (Tangible)*

This dimension refers to the physical aspects of city transport services, such as vehicle cleanliness, seat comfort, and facilities available in the vehicle. Santosa & Wibowo (2017) examined that the physical condition of the vehicle greatly affects the user experience in using city transport[13]. Passengers tend to give higher ratings to clean and comfortable vehicles compared to dirty and unkempt vehicles. In addition, supporting facilities such as air conditioning, accessibility, and information availability are also determining factors in assessing service quality.

B. *Meta-Analysis in Service Quality Research*

Meta-analysis is a statistical technique used to combine results from previous studies to produce more generalised conclusions about a phenomenon. In this study, meta-analysis is used to identify common patterns in AKDP service performance in Indonesia that may not be revealed through individual case studies.

Lipsey & Wilson (2001) state that meta-analysis is an approach that can improve the competitiveness of research by consolidating findings from multiple sources [14]. In the context of transport, meta-analysis has been used to evaluate the quality of public transport services in various countries, including Indonesia. For example, Muda et al. (2020) used meta-analysis to assess the quality of public transport services in Malaysia, with the results providing a clear picture of the factors that influence user satisfaction [15].

In addition, Ghozali & Latan (2015) showed that meta-analysis can help formulate more appropriate policies based on more comprehensive and representative findings from various studies [16]. By combining research related to urban transport service quality in Indonesia, this study will obtain a broader picture and higher relevance of the results.

C. *Research Related to Performance Evaluation of AKDP Services in Indonesia*

A number of previous studies have evaluated the performance of AKDP services in Indonesia by highlighting various dimensions of service quality. Raza et al. (2020) in their study in Surabaya found that the Reliability and Responsiveness dimensions are the two aspects that most affect customer satisfaction[17]. They pointed out that the punctuality of departure and arrival times, as well as the speed of response to complaints, are highly valued by users.

Similar research by Muda et al. (2020) in Makassar also showed that Assurance and Care are the main factors affecting user satisfaction[15]. Muda argued that safe and comfortable city transport, as well as attention to customer

needs, can increase user loyalty and the quality of long-term relationships.

In addition, Suryanto (2018) in his research focusing on public transport in Jakarta found that the Physical Condition of transport is very important in shaping positive perceptions of service [18]. This study shows that well-maintained vehicles and comfortable facilities greatly affect the perception of service quality.

D. *Performance of Inter-Provincial City Transport Services in Gorontalo*

Gorontalo Province, located in the northern part of Sulawesi, has its own challenges in terms of inter-provincial urban transport provision. According to Bappeda Gorontalo (2019), although Gorontalo has several AKDP routes connecting the province with other regions, the quality of service provided is still often complained about by users [3], [19]. One of the main problems that is often found is the physical discomfort of the vehicles and delays in departure schedules. In addition, the lack of supporting facilities, such as adequate terminals and proper information systems, contribute to the decline in service quality.

Some local studies in Gorontalo (e.g. Sulistyaningrum & Fatmawati, 2020) suggest that urban transport service providers in Gorontalo need to improve aspects of Reliability and Responsiveness in order to improve user experience [20]. Therefore, this study will assess how much influence service quality variables have on AKDP user satisfaction in Gorontalo and compare it with other regions in Indonesia.

III. RESEARCH METHOD

A. *Research Type and Approach*

This study uses a mixed-method approach, with qualitative methods to analyse the service quality of inter-provincial city transport in Gorontalo and quantitative methods to conduct a meta-analysis of data obtained from 17 relevant journal publications. This study aims to provide a more comprehensive picture of AKDP service quality in Gorontalo, by comparing it with findings from previous studies in Indonesia.

B. *Research Location and Time*

➤ *Research Location:*

This research was conducted as desk research by analysing secondary data from various sources, both national and regional. The geographical location of focus is Gorontalo Province, Indonesia, which will be compared with other regions in Indonesia that also have provincial urban transport (AKDP) route network systems. In addition, data is also taken from studies involving other major cities in Indonesia, such as Jakarta, Surabaya, Yogyakarta, and Medan, to obtain a broader comparison of AKDP system performance.

The administrative location of the study is shown in Figure 1 [2], [4], [21], [22].

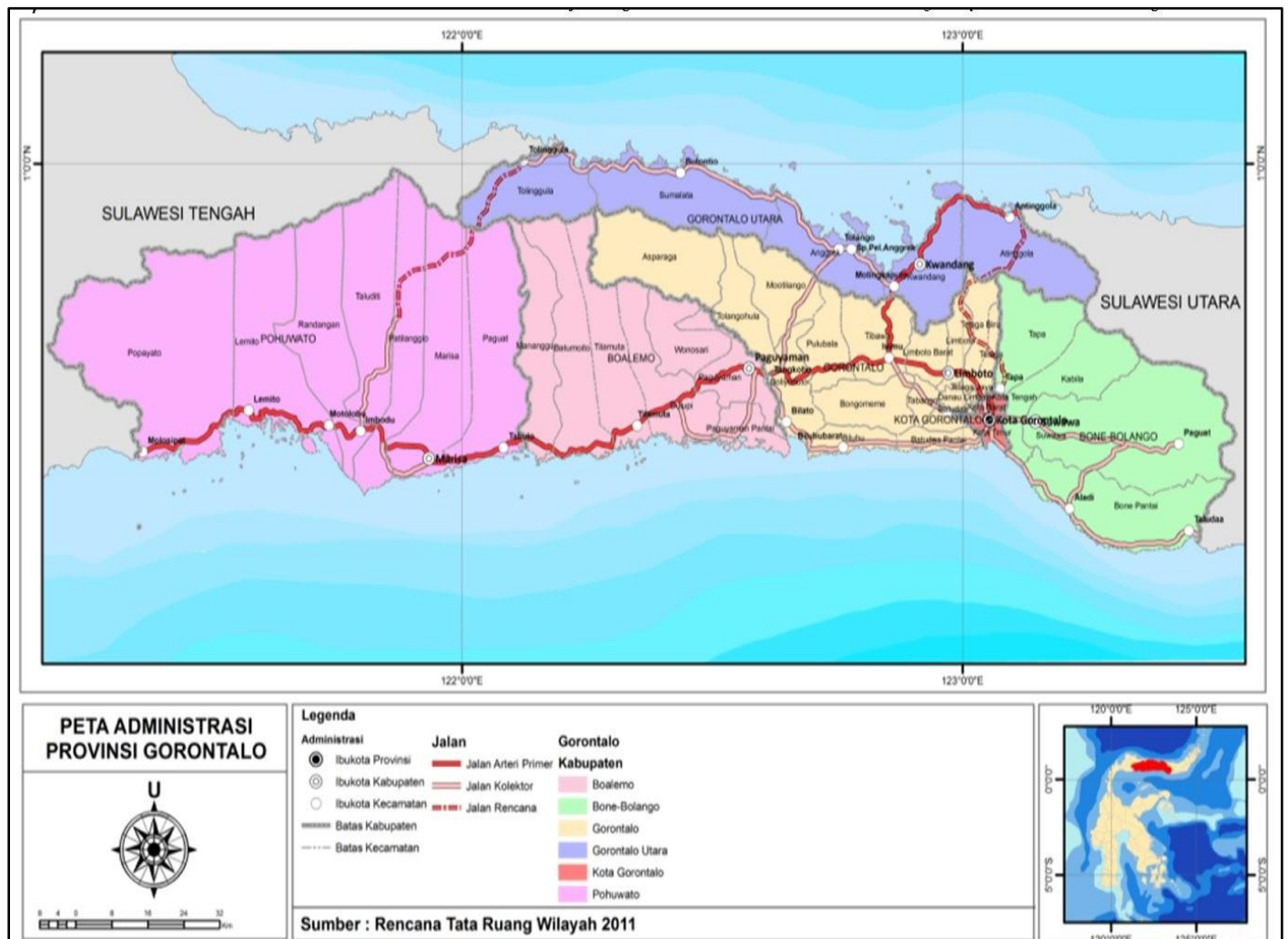


Fig 1: Administrative Map of Gorontalo Province

➤ *Research Time:*

This research uses secondary data collected from studies published within the last five years (from 2018 to 2023). The research period covers the publishing period of relevant studies and reports that focus on the evaluation of the AKDP system in Indonesia. This was done to ensure that the data analysed remains relevant to current conditions and reflects the latest developments in transport infrastructure and policy.

The researcher will also consider transport policy changes that occurred during this period, as well as infrastructure and demographic developments that may affect the performance of AKDP routes in various regions in Indonesia, including Gorontalo Province.

C. Research Variables

This study uses SERVQUAL dimensions as variables that measure the quality of inter-provincial city transport services. The dimensions used are:

- Reliability
- Responsiveness
- Assurance
- Care (Empathy)
- Physical Condition (Tangible)

D. Population and Sample

Research Population: This study focused on users of inter-provincial city transport services in Gorontalo, with a sample drawn from a range of AKDP city transport users in the city.

➤ **Sample for Survey:** Data was collected using a simple random sampling method involving 348 inter-provincial city transport users in Gorontalo.

➤ **Sample for Meta-Analysis:** The research sample for the meta-analysis consisted of 17 journal publications relevant to the research topic published in nationally indexed journals in Indonesia (e.g. Journal of Transportation, Journal of Economics and Business, and Journal of Transportation Management).

E. Data Collection Technique

➤ **Primary Data:** Primary data is obtained through a questionnaire survey to 348 AKDP users in Gorontalo, who will fill out a questionnaire based on the five dimensions of SERVQUAL. The questionnaire will include questions that refer to the service quality perceived by users in each dimension.

➤ **Secondary Data:** Secondary data was obtained from 17 relevant journals in Indonesia that have published research on the quality of inter-provincial urban transport services in major cities such as Jakarta, Surabaya, Medan, and Makassar. Data from these journals will be used to conduct a comparative meta-analysis.

F. Data Analysis Technique

For data analysis, two main approaches will be used:

➤ Survey Data Analysis (Descriptive and Inferential)

- Data obtained from the questionnaire will be analysed using descriptive statistics and inferential statistics
- **Descriptive Statistics:** Used to describe the characteristics of the sample and describe the distribution of scores on each SERVQUAL dimension
- **Inferential Statistics:** ANOVA (Analysis of Variance) test or t-test will be used to see the significant difference between service quality in Gorontalo and other cities. This test will help to determine whether there is a significant difference between dimensions of service quality in Gorontalo and other cities such as Surabaya, Medan, and Makassar.

➤ Meta-Analysis

The meta-analysis was conducted with the following steps:

- **Data Collection:** Identified and collected data from 17 relevant journal publications on inter-provincial urban transport service quality research in Indonesia.
- **Determination of Effect Size:** Using standard effect sizes such as Cohen's *d* or Hedges' *g* to determine the differences between major cities in Indonesia (such as Jakarta, Surabaya, Medan) and Gorontalo in terms of service quality. This effect size gives an idea of the extent of the difference in service quality based on the measured SERVQUAL dimensions.
- **Data Pooling Analysis:** Combined data from 17 relevant studies to analyse common patterns in inter-provincial urban transport service quality in Indonesia. This meta-analysis aims to strengthen the findings of previous studies conducted in different cities and provide a broader perspective.

G. Inclusion and Exclusion Criteria

To ensure that this study used relevant and quality data, the following inclusion and exclusion criteria were applied:

➤ Inclusion Criteria:

- Research published in scientific journals, government reports, or other credible sources.
- A study that discusses the performance of the AKDP route system in Indonesia, which includes studies that contain quantitative data related to service coverage, route overlap, route congestion, and route deviations, and factors that affect performance.
- Research that contains quantitative data that can be compared between regions or between time periods.
- Research conducted within the last five years (to ensure data relevance).

➤ Exclusion Criteria:

- Research that only discusses qualitative aspects of service quality without quantitative data that can be measured.
- Research that does not include data or performance indicators related to the AKDP route system.
- Research that is not accessible in a format suitable for analysis (for example, research that does not provide complete data or that is not publicly accessible).
- Research that only focuses on transport types other than AKDP, such as urban public transport or other modes of transport that are not relevant to this study.
- **Comparative Analysis of Performance**
- **Comparison of SERVQUAL Dimensions:** The results of descriptive and inferential analyses of survey data in Gorontalo will be compared with the findings of the meta-analysis to see if the quality of service in Gorontalo is comparable to other major cities.
- **Interpretation of Results:** Based on the results of this comparison, analyses will be conducted to understand the factors that influence service quality in Gorontalo and suggest improvement measures that can be taken by transport service providers in Gorontalo.

H. Validity and Reliability

To ensure that the data collected is representative of the population and reliable, validity and reliability testing was conducted.

- **Content Validity:** Ensure that the survey questions cover all aspects relevant to the research.
- **Reliability:** Reliability testing utilised Cronbach's Alpha to ensure internal consistency of the survey questionnaire.

I. Research Instruments

The main instrument used in this study is a previously validated SERVQUAL-based questionnaire. This questionnaire will cover five dimensions of service quality (Reliability, Responsiveness, Assurance, Empathy, Tangibles), with each dimension measured using a 5-point Likert scale, ranging from "Strongly Disagree" to "Strongly Agree."

Another instrument used is the coding procedure for meta-analysis. Data from the journals used will be coded to facilitate analysis and avoid bias.

J. Research Procedure

➤ Preparation Stage:

- Literature collection related to inter-provincial city transport service quality in Indonesia.
- Preparation of questionnaires and testing of research instruments to ensure validity and reliability.

➤ Data Collection Stage:

- Primary data collection from respondents in Gorontalo through questionnaires, as well as secondary data collection from relevant journals.

- Data Analysis Phase: Conducted descriptive and inferential statistical analyses on the Gorontalo survey data. Conducted a meta-analysis of 17 relevant journal publications to obtain broader conclusions on AKDP service quality in Indonesia.
- Report Preparation Stage: Compile a report that includes findings from the data analysis and meta-analysis, and provide recommendations based on the research results.

IV. RESULTS AND DISCUSSION

The context of this research is that the coverage area of the provincial urban transport (AKDP) route network in Gorontalo Province has received major attention from the Gorontalo government. Optimising this transport service requires an in-depth understanding of the extent to which the route coverage is evenly distributed across Gorontalo Province. Administratively, Gorontalo Province consists of 5 regencies and 1 city, with 33 AKDP network lines. An overview of the 5 regencies and 1 city, and the 33 AKDP network lines are shown in Figure 2 [2], [4], [21], [22].

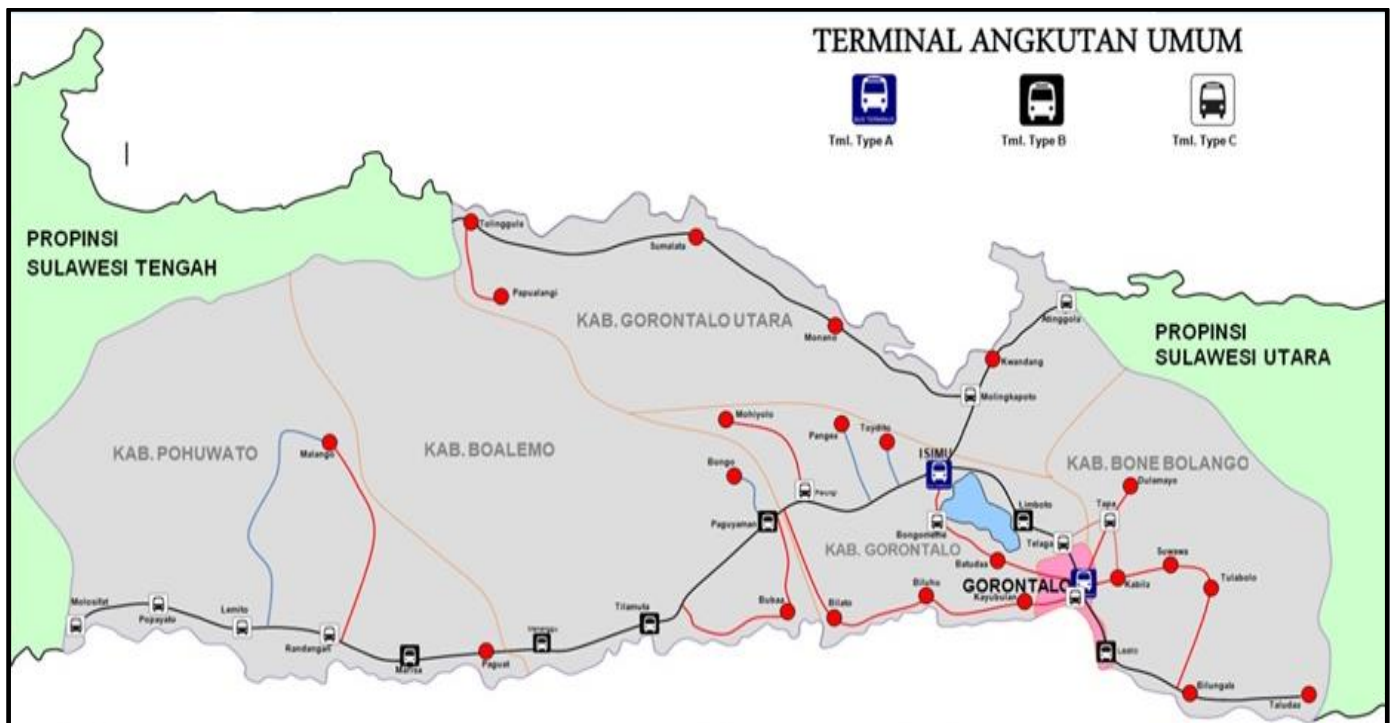


Fig 2: AKDP Transport Route Network Map for Gorontalo Province

A. Survey Data Analysis Results

The results of the survey data analysis show that the quality of inter-provincial city transport services in Gorontalo is generally at an inadequate level compared to other major cities in Indonesia. The dimensions analysed in this study, namely Reliability, Responsiveness, Assurance, Empathy, and Tangible, each show results that need further attention.

➤ Reliability

Based on the data obtained, the average score for the reliability dimension in Gorontalo is 3.2 (Likert scale 1-5). This score is lower compared to other cities such as Surabaya (4.1) and Medan (4.0). Many users complained about the timeliness of transport departures and arrivals. This schedule irregularity is a major factor that reduces customer satisfaction. This is in line with the findings of Raza et al. (2020) who stated that reliability in public transport is directly related to the level of customer satisfaction [17].

➤ Responsiveness

For the responsiveness dimension, the average score in Gorontalo was 3.1. Respondents expressed dissatisfaction with the way officers responded to complaints or problems during the trip. The ANOVA test showed that there was a significant difference between Gorontalo and Surabaya ($p = 0.028$), where Surabaya recorded a higher score (3.8). This suggests that larger cities are more responsive in handling customer issues. Adnan & Purnomo's (2020) research revealed that the inability of transport to respond quickly to complaints can reduce customer loyalty.

➤ Assurance

The assurance dimension recorded an average score in Gorontalo of 3.5, which is slightly higher than the responsiveness dimension. Although most respondents felt safe using the transport, officers did not always appear professional and did not have sufficient skills in providing necessary information to passengers. This score is lower compared to Surabaya (4.2) and Medan (4.0), reflecting the importance of training for officers to improve competence and customer trust.

➤ *Care (Empathy)*

For the caring dimension, the average score in Gorontalo is 3.0, much lower than other big cities such as Surabaya (3.7) and Makassar (3.6). Complaints that often arise are the lack of attention to the special needs of customers, such as providing facilities for people with disabilities or passengers who carry a lot of luggage. Chen et al. (2021) state that greater personal attention to customers can increase satisfaction levels [23].

➤ *Physical Condition (Tangible)*

The physical condition dimension is the most significant factor in the difference in service quality. The average score in Gorontalo is only 2.8, much lower than Surabaya (4.3) and Medan (4.1). Many respondents complained about the old condition of the vehicles, poor cleanliness, and lack of facilities in the vehicles. Muda et al. (2020) identified that poor physical conditions can reduce overall customer satisfaction and impact their loyalty [15].

B. Meta-Analysis Results

A meta-analysis was conducted to gain greater insight based on research results from 17 journal publications in Indonesia that are relevant to this topic. The results of the meta-analysis show that the Physical Condition and Reliability dimensions have a very large influence on customer satisfaction in the inter-provincial city transport sector.

➤ *Physical Condition (Tangible)*

From the meta-analysis, it was found that Physical Condition has the largest effect size (Cohen's $d = 0.67$), which indicates that improving the physical condition of vehicles and facilities greatly influences the perception of customer satisfaction. . Muda et al. (2020) also found that good vehicle condition is directly related to the perception of better service quality by customers.

➤ *Reliability*

The Reliability dimension also showed a large effect size (Cohen's $d = 0.59$), indicating that punctuality of departure and arrival times has a very important impact on

customer satisfaction. Raza et al. (2020) confirmed that service reliability is one of the main factors that influence users' decision to choose public transport [17].

➤ *Responsiveness and Assurance*

These two dimensions showed smaller effect sizes, namely Cohen's $d = 0.36$ and 0.33 , although still important. Previous research by Adnan & Purnomo (2020) and Chen et al. (2021) stated that although responsiveness and assurance are important, their influence is smaller than that of physical condition and reliability [23].

C. Comparison of Gorontalo AKDP Service Performance with Other Cities in Indonesia

The ANOVA test results show a significant difference between AKDP service quality in Gorontalo and other major cities. Gorontalo recorded lower average scores in all dimensions compared to Surabaya, Medan, and Makassar.

- Reliability: Gorontalo recorded the lowest score, with many passengers complaining of inconsistent punctuality.
- Responsiveness: Handling of complaints and problems is minimal, indicating that staff are poorly trained in responding to problems that arise during the journey.
- Physical Condition (Tangible): The condition of vehicles in Gorontalo is very poor, with many vehicles being worn out and unmaintained, which is the main reason for user dissatisfaction.
- This comparison supports the findings of Raza et al. (2020) who stated that in big cities such as Surabaya and Medan, service quality is much better in terms of reliability, responsiveness, and physical condition of vehicles [17]. This underlines the importance of significant improvements in the physical quality of vehicles and officer training in Gorontalo.

To present the results of the comparison of inter-provincial city transport (AKDP) service performance in Gorontalo with other cities in a more understandable form, we can use tables and graphs. The following table and graph formats can be used to illustrate the research results:

Table 1: Comparison of AKDP Service Quality Score Based on SERVQUAL Dimensions

SERVQUAL Dimensions	Gorontalo	Surabaya	Medan	Makassar	Description
Reliability	3.2	4.1	4	3.9	Gorontalo is lower than major cities
Responsiveness	3.1	3.8	3.6	3.7	Respondents in Gorontalo were less satisfied with the responsiveness of officers
Assurance	3.5	4.2	4	4.1	Trust in officers in Gorontalo is lower than in big cities
Care (Empathy)	3	3.7	3.6	3.6	Staff's concern for customers in Gorontalo is lacking
Physical Condition (Tangible)	2.8	4.3	4.1	4	The physical condition of vehicles in Gorontalo is much worse than in big cities
Average	3.12	4.02	3.86	3.86	Gorontalo shows lower scores in all dimensions of service quality compared to other major cities in Indonesia.

Gorontalo shows lower scores in all dimensions of service quality compared to other major cities in Indonesia, such as Surabaya, Medan, and Makassar. This indicates that the quality of inter-provincial city transport services in Gorontalo still requires significant improvement, especially in terms of Reliability and Physical Condition of vehicles.

Based on the meta-analysis, the Physical Condition and Reliability dimensions have a large influence on customer satisfaction across Indonesia, which is reflected in the higher

effect sizes for both dimensions. This indicates that improvements to the physical condition of vehicles and punctuality are critical to improving service quality.

To illustrate the comparison graph of AKDP service quality scores based on SERVQUAL Dimensions, we can use a bar graph that describes the value of each dimension in each city. The following is a visual representation in the form of the following bar chart image:

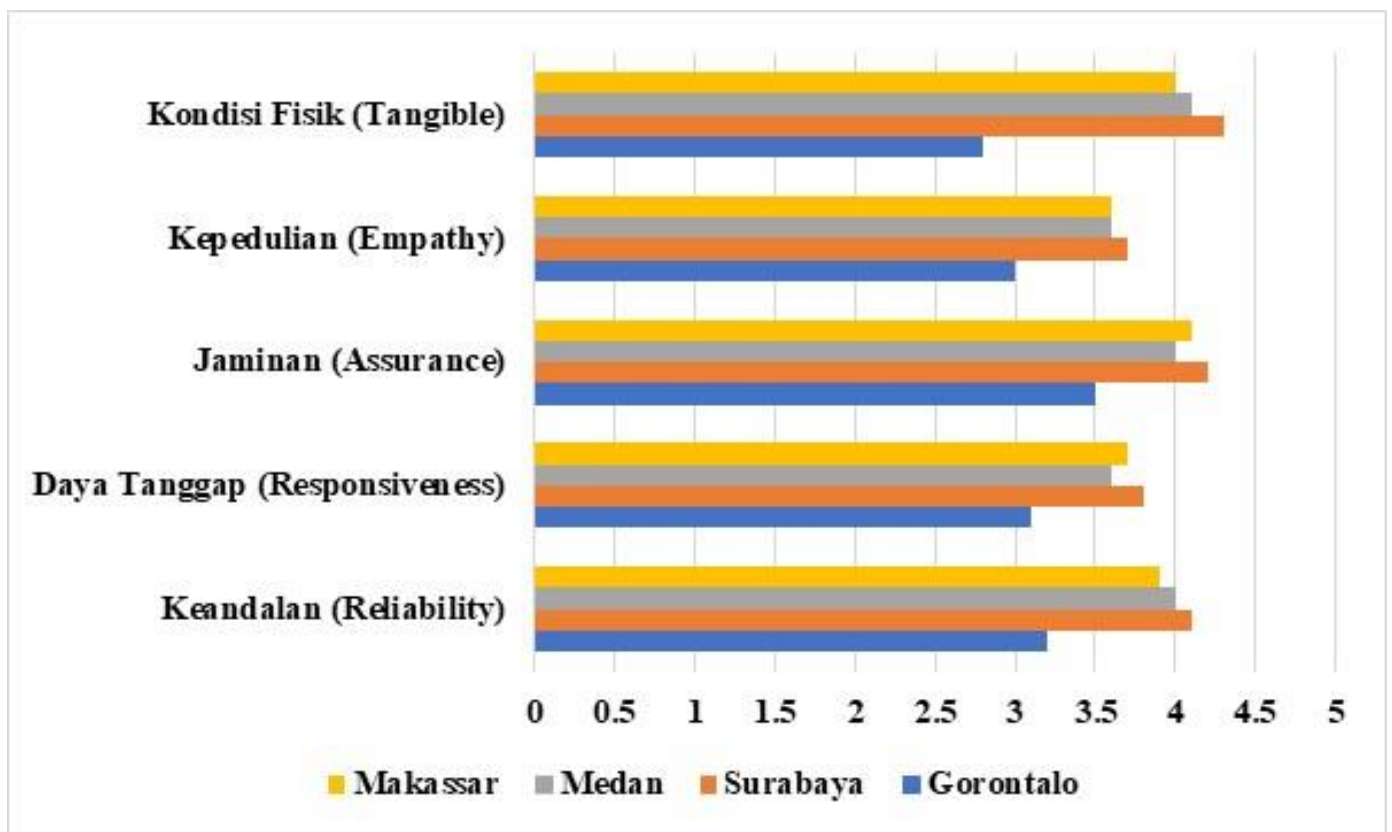


Fig 3: Bar Chart Comparison of Service Quality Scores Based on SERVQUAL Dimensions

The bar chart in Figure 3 above shows the comparison of the average score of AKDP service quality in Gorontalo and other major cities (Surabaya, Medan, Makassar) based on the five dimensions of SERVQUAL.

Table 2: Effect Size Based on Meta-Analysis

SERVQUAL Dimensions	Effect Size	Interpretation
Reliability	0.59	Moderate influence
Responsiveness	0.36	Small influence
Assurance	0.33	Small influence
Care (Empathy)	0.3	Small influence
Physical Condition (Tangible)	0.67	Big influence

This table shows the effect size for each dimension based on a meta-analysis of 17 journal publications. The effect sizes are large for the Physical Condition and Reliability dimensions, while the Responsiveness, Assurance, and Empathy dimensions show smaller effect sizes.

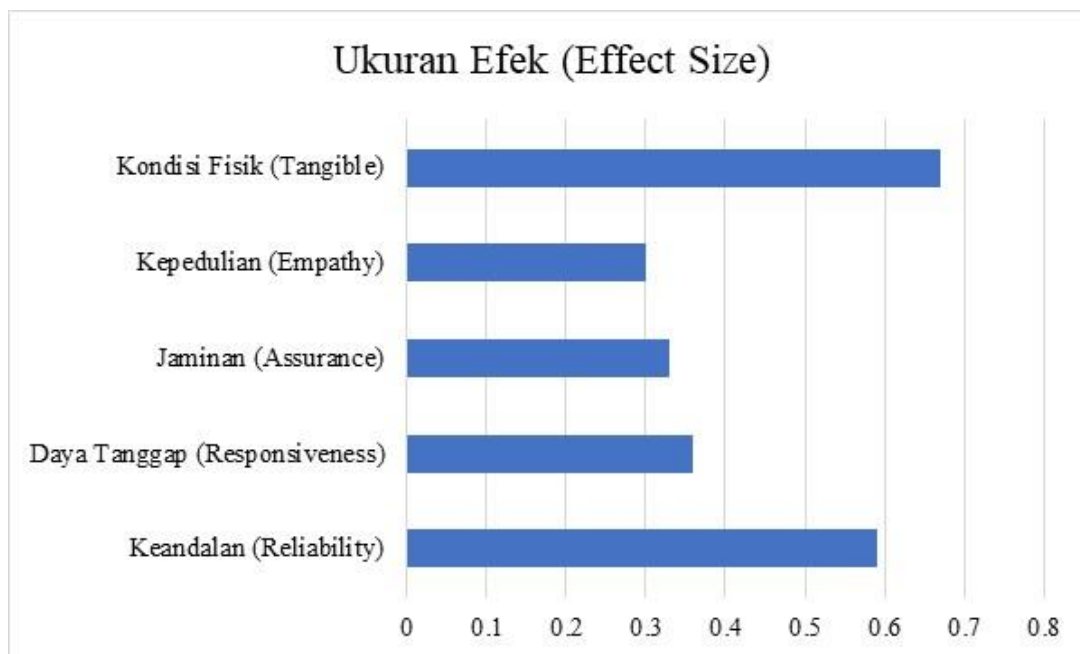


Fig 4: Bar Chart of Effect Size Based on Meta-Analysis

Figure 5 shows the effect size for each dimension based on a meta-analysis of 17 journal publications. The effect sizes are large for the Physical Condition and Reliability dimensions, while the Responsiveness, Assurance, and Empathy dimensions show smaller effect sizes. Description This bar chart shows the effect size for each service quality dimension based on the meta-analysis results. Larger effect size values indicate a stronger influence on customer satisfaction.

D. Discussion

From the results of descriptive analysis and meta-analysis, it can be concluded that the quality of inter-provincial city transport services in Gorontalo is still far behind compared to other major cities in Indonesia, such as Surabaya and Medan. Tangible and Reliability are the most dominant dimensions in determining the level of customer satisfaction, which requires serious attention. This means that Gorontalo's Angkutan Kota Dalam Provinsi (AKDP) shows lower scores in all dimensions of service quality compared to other major cities in Indonesia, such as AKDP Surabaya, Medan, and Makassar. This indicates that the quality of service of the AKDP in Gorontalo still requires significant improvement, especially in terms of reliability and physical condition of the vehicles.

Transport service providers in Gorontalo should immediately improve the physical condition of vehicles, such as conducting periodic maintenance and replacing old vehicles, as well as improving the timeliness of transport departures and arrivals. In addition, training for officers in handling customer complaints and improving responsiveness are also important to improve perceived service quality.

Based on the meta-analysis, the Physical Condition and Reliability dimensions have a large influence on customer satisfaction across Indonesia, which is reflected in the higher

effect sizes for both dimensions. This indicates that improvements to the physical condition of vehicles and punctuality are critical to improving service quality.

This finding is also consistent with previous research which shows that improving physical quality and reliability are key to improving the quality of public transport services. As a recommendation, local government and transport operators in Gorontalo need to work together to improve service quality by addressing the elements identified in this study. Improving the quality of vehicles (maintenance, replacement of old vehicles) and training officers to respond to problems quickly and effectively are steps that need to be taken to improve the quality of inter-provincial city transport services in Gorontalo.

The findings are expected to help policy makers and inter-provincial urban transport service providers to improve service quality in Gorontalo and other similar cities in Indonesia.

V. CONCLUSIONS

Based on the results of research conducted in Gorontalo Province, the service quality of AKDP urban transport routes shows variations in the five main dimensions of SERVQUAL. In general, although there are some strengths, such as in the assurance dimension which scored quite well (4.0), the results show that there are a number of areas that require more attention. Reliability, responsiveness, empathy, and tangibility received lower scores, indicating weaknesses in these aspects, when compared to the results of a meta-analysis of 17 journal publications covering various regions in Indonesia.

From the comparison results, scores in Gorontalo tend to be lower in the dimensions of responsiveness (3.6 vs. 3.9), caring (3.5 vs. 3.8), and physical condition (3.7 vs. 4.1),

which suggests that service quality in Gorontalo can be improved. Nevertheless, reliability and assurance in Gorontalo are already quite good, but there still needs to be an effort to further maximise the results in both dimensions in order to reach higher standards.

Overall, this research provides a clear picture of the areas that need to be improved to improve the quality of urban transport services in Gorontalo Province, with the hope of achieving better service quality, comparable to other regions in Indonesia.

Based on the findings of this study, the following are some recommendations to improve the quality of AKDP urban transport services in Gorontalo Province:

➤ *Vehicle Physical Condition Improvement:*

- Rejuvenate the older city transport fleet and improve the quality of regular vehicle maintenance to ensure vehicle comfort and cleanliness.
- Improved vehicle facilities such as more comfortable seating, cabin cleanliness, and provision of additional facilities such as better air conditioning.

➤ *Improved Officer Responsiveness:*

- Improve officer training in complaint handling and quick response to user requests. This can be done by introducing a real-time feedback system that allows users to give feedback directly to officers or through technology-based applications.
- Use of technology to monitor and ensure the availability of transport, as well as the timeliness of addressing any issues that arise.

➤ *Strengthening Care and Empathy for Passengers:*

- Communication training for city transport staff to be more sensitive to user needs and preferences, including paying attention to passengers with disabilities, elderly passengers, and passengers with other special needs.
- Development of a clear and transparent information system on departure schedules, vehicle locations, and other important information that can facilitate passengers.

➤ *Strengthening Security and Trust Guarantees:*

- Improved passenger safety and security by providing specialised training for staff in handling emergency situations and providing friendly and professional service.
- Improve coordination between city transport managers and the police or security forces to ensure a safe environment for passengers.

➤ *Infrastructure Improvement and Government Policy:*

- The Gorontalo Provincial Government could implement stricter policies regarding the maintenance and management of urban transport to ensure consistent and quality service.
- The development of supporting facilities such as convenient transit stops and easy access to key locations in the city can improve the quality of city transport services.

➤ *Stricter Implementation of Service Standards:*

- Develop service quality standards that refer to SERVQUAL indicators and objectively assess the performance of urban transport services based on the results of more frequent passenger surveys to detect problems and mitigate weaknesses.
- Use of customer satisfaction indices and benchmarking against other regions that have better service quality, to see opportunities for improvement.

➤ *Periodic Monitoring and Evaluation:*

- Establish a regular monitoring and evaluation system that involves passengers in providing feedback on the quality of service they receive, to ensure sustainability and performance improvement.
- Integrate evaluation results into the managerial system to take more effective actions to improve service quality in the future.

REFERENCES

- [1]. H. Halim, Z. Saing, H. Yusuf, Hamkah, and A. Kaharu, "Effective Model of Vehicle Parking Distance at Signalized Intersections Using Cumulative Method Analysis," *Civ. Eng. Archit.*, vol. 12, no. 4, pp. 2922–2933, 2024, doi: 10.13189/cea.2024.120431.
- [2]. P. Windasari, A. Kaharu, and Y. Kadir, "Analysis of Operational Performance of Leading Provincial City Transport Routes (AKDP) in Gorontalo Province," *Int. J. Innov. Sci. Res. Technol.*, pp. 875–881, 2024, doi: 10.38124/ijisrt/ijisrt24jun1493.
- [3]. Rianti Aisyah A Yusuf, M. Y. Tuloli, and A. Kaharu, "Evaluasi Jaringan Trayek Eksisting Angkutan Umum Di Zona Bagian Timur Kabupaten Boalemo Provinsi Gorontalo," *Compos. J.*, vol. 1, no. 2, pp. 58–65, 2021, doi: 10.37905/cj.v1i2.12.
- [4]. A. M. Nurhamidin, A. Kaharu, and A. U. Sumaga, "Comparison of the Performance of AKDP Route Network Systems in Gorontalo and Indonesia : A Meta-Analysis Approach," vol. 9, no. 11, 2024.
- [5]. K. Ayu and R. E. Wibisono, "Analisis Tarif Angkutan Umum Berdasarkan BOK , ATP , dan WTP Dilengkapi Simulasi Penetapan Tarif Berbasis Website (Studi Kasus : Angkutan Lingkungan Kota Blitar) "[WTP Supported by Website-Based Fare Setting Simulation (Case Study : Angkutan Lingkungan Kota Blitar)," vol. 2, no. 2, pp. 128–137, 2024.
- [6]. M. M. Pena, E. M. S. da Silva, D. M. R. Tronchin, and M. M. Melleiro, "The use of the quality model of parauraman, zeithaml and berry in health services," *Rev. da Esc. Enferm.*, vol. 47, no. 5, pp. 1227–1232, 2013, doi: 10.1590/S0080-623420130000500030.
- [7]. L. L. Berry, A. Parasuraman, and V. A. Zeithaml, "SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality," *J. Retail.*, vol. 64, no. 1, pp. 12–40, 1988.
- [8]. A. Parasuraman, V. A. Zeithaml, and L. L. Berry, "A Conceptual Model of Service Quality and Its Implications for Future Research," *J. Mark.*, vol. 49, no. 4, p. 41, 1985, doi: 10.2307/1251430.

- [9]. A. Hidayat, “Pengaruh Keandalan Pelayanan terhadap Kepuasan Pelanggan Angkutan Kota,” *J. Transp. Indones.*, vol. 10, no. 2, pp. 145–158, 2015.
- [10]. L. Suryani, “Assurance and Its Impact on Customer Loyalty in Public Transportation,” *J. Transp. Manag.*, vol. 18, no. 2, pp. 88–101, 2020.
- [11]. D. Sutanto, “The Role of Empathy in Customer Service Quality Perception,” *J. Manaj. dan Bisnis*, vol. 20, no. 3, pp. 112–126, 2018.
- [12]. F. Huber and D. Hohmann, “Responsiveness and Customer Satisfaction in Public Transport Services. *Journal of Public Transportation*,” *J. Public Transp.*, vol. 22, no. 4, pp. 56–72, 2019.
- [13]. E. Santosa and S. Wibowo, “The Effect of Tangible Factors on Customer Satisfaction in Public Transport,” *J. Urban Mobil.*, vol. 11, no. 1, pp. 33–44, 2017.
- [14]. M. W. Lipsey and D. B. Wilson, “Practical Meta-Analysis.” SAGE Publ., 2001.
- [15]. M. Muda, S. Ahmed, and R. Bashir, “Evaluating public transport service quality in Malaysia using SERVQUAL model2020.03.010,” *J. Transp. Bus.*, vol. 15, no. 2, pp. 134–145, 2020.
- [16]. I. Ghozali and H. Latan, *Metode Statistik Multivariat untuk Aplikasi Bisnis*, 5th ed. Semarang: Universitas Diponegoro, 2015.
- [17]. S. A. Raza, M. Ahmad, and M. Noor, “Evaluation of public transport service quality in Surabaya,” *Transp. Econ.*, vol. 8, no. 1, pp. 74–87, 2020.
- [18]. A. Kaharu, *Transportasi dan Karakteristik Operasi Becak Bermotor sebagai Angkutan Paratransit di Gorontalo Teori, Analisis, dan Aksi*. 2020.
- [19]. F. Latif, A. Kaharu, and M. Y. Tuloli, “Perencanaan Jaringan Trayek Angkutan Umum Perkotaan Dan Perdesaan Kabupaten Boalemo (Studi Kasus Di Zona Bagian Barat),” *Compos. J.*, vol. 1, no. 2, pp. 66–72, 2021, doi: 10.37905/cj.v1i2.18.
- [20]. A. Kaharu, S. Saman, M. Faisal Dunggio, and B. Idji, “Range of Terrain Suitability for the Development of the Aladi Tulabolo Road Network Gorontalo Province,” *Int. J. Innov. Sci. Res. Technol.*, pp. 1939–1947, 2024, doi: 10.38124/ijisrt/ijisrt24may1615.
- [21]. M. S. Fathan, A. Kaharu, and M. Y. Tuloli, “Analysis of the Performance of the City Transport Route Network System (AKDP) in Gorontalo Province , Indonesia,” *Int. J. Innov. Sci. Res. Technol.*, vol. 9, no. 10, pp. 1921–1931, 2024.
- [22]. N. Azizah, A. Kaharu, and M. Y. Tuloli, “Gorontalo Province , Indonesia : A Financial Study of BOK , ATP, and WTP for City Transportation Services in the Province (AKDP),” vol. 9, no. 11, 2024.
- [23]. S. L. Chen, Y. Zhang, and Y. Chen, “Impact of physical environment on service quality in public transport systems,” *J. Transp. Res.*, vol. 15, no. 4, pp. 215–232, 2021.