



(RESEARCH ARTICLE)



A STUDYING THE DEVELOPMENT DIRECTION ON THE SERVICE QUALITY OF PUBLIC TRANSPORT IN BOKEO PROVINCE

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ABSTRACT

This study aimed to understand passengers' opinions on the quality of public transport services in Tonpheung and Houayxay districts, Bokeo Province. A questionnaire was used to collect data from passengers at 3 stations: Keochampar bus station, and PhetAloun bus station in the Tonpheung and Houayxay Districts. A total of 360 questionnaires were completed. The data were analyzed by calculating the mean and standard deviation. The results were as follows:

Most respondents were female (75.27%), and 40.56% were aged 16-25 years old, followed by those aged 46–55 years (28.06%), 36-45 years old (16.56%), 26-35 years old (12.5%), and over 55 years old (3.33%). Most respondents were married (64.1%). In terms of education, the highest proportion held a bachelor's degree (58.41%), followed by secondary education (25.8%) and primary education (15.8%). Regarding monthly income, the most common range was 4,000,001-5,000,000 LAK (66.9%). This was followed by 3,000,001-4,000,000 LAK (17.2%), and over 5,000,001 LAK (15.9%).

Passengers' perceptions of public transport service quality were assessed across four areas: appearance, facilities, operational processes, and fares. While the overall average score was "excellent," and all most individual aspects even scored "excellent," the results indicate that services still require improvement and targeted development. In general, however, user satisfaction with service quality remains inadequate. This is clearly evidenced by a decline in the number of public transport users, a trend that has led many operators to cease services.

Keywords: Passengers, Bokeo Transportation, Service Quality, Northern Bus Station, Tonpheung and Houayxay Districts.

1 INTRODUCTION

The implementation of the 9th Five-Year National Socio-Economic Development Plan (2021-2025) and the five-year Sector Development Plan (2020-2024) aligns with the Ministry of Public Works and Transport's vision to 2030. The Grassroots Party Committee of the Bokeo Provincial Department of Public Works and Transport has adopted this vision, which is to "develop public works and transport to be cutting-edge, focused, highly effective, modern, safe, resilient to climate change, interconnected, and sustainable" (Summary of the Party Executive Committee, 2024).

The Public Works and Transport sector has historically played a vital role in advancing the nation's socio-economic development, serving as a key driver of national progress. The domestic passenger transport network, which now reaches every province and district, provides convenient travel for all ethnic. This network also facilitates travel for tourists and foreigners visiting or working in the Lao PDR. Historically, the government has worked to improve vehicle standards and service quality to meet diverse passenger needs. This has included offering a choice of service tiers, such as VIP1, VIP2, Ordinary, and Minivan classes.

Currently, Bokeo Province has many bus stations, but in the Tonpheung and Houayxay districts there were 3 bus stations. The passenger transport sector comprises only 1 company and 3 bus associations, operating a fleet of 156 passenger vehicles. This infrastructure and service network plays a vital role in the province's socio-economic development (Department of Public Works and Transport, Bokeo Province, 2024).

In the past, public transport services in Bokeo Province evolved to include multiple service types and increased competition, particularly in upgrading vehicles and other services. This led to a gradual improvement in both the quantity and quality of offerings. However, this competitive environment also created internal conflicts among operators. Key issues included the modification of vehicles to non-standard specifications and persistent problems like poor road conditions. These unaddressed infrastructure and safety issues resulted in frequent accidents, rapid vehicle breakdowns, and an overall decline in service quality-encompassing safety, vehicle cleanliness, and driver readiness. Consequently, these operational challenges have contributed to a decrease in passenger numbers. For many operators, this loss of ridership has led to financial losses, forcing some to cease operations entirely (Department of Public Works and Transport, Bokeo Province, 2024).

From the problems identified in the bus service sector, many operators have prioritized profit over passenger experience. This approach has led to various service disputes, including non-compliant vehicle quality and poor interior and exterior cleanliness. Consequently, passenger numbers have declined, forcing some operators to cease their activities (Anoree, 2021). To rebuild trust, fostering a sense of belonging among passengers is a crucial step toward improving the public image of bus services. The ultimate goal is to create a consistently positive experience that impresses passengers and encourages them to return (Chenel & Moynihan, 2021).

Given the issues outlined above, the researcher is interested in studying the quality of inter-provincial public transport services in Bokeo Province. The study aims to gather information that can help improve and resolve problems within the public transport system. Ultimately, this research seeks to reduce conflicts and increase satisfaction for both service operators and passengers.

2 MATERIAL AND METHODS

2.1 Data collection tools

This study employed a quantitative research method. The tools used included a computer with statistical analysis software and a structured questionnaire. Data were collected using this questionnaire, which featured multiple-choice questions and a 5-point Likert scale. The questionnaire was developed based on the theoretical relationship between service quality and the management of the public transport system in Tonpheung and Houayxay districts, Bokeo Province. It demonstrated high reliability, with a Cronbach's Alpha coefficient of 0.954 and an Item-Objective Congruence (IOC) index of 0.89.

The questionnaire consisted of three parts:

- Part 1: Personal information of the respondents.
- Part 2: Problems faced by passengers using public transport.
- Part 3: Passengers' opinions on improvements for the public transport system.

2.2 Population and sample size

The target population comprised passengers using public transport from Tonpheung and Houayxay districts to surrounding to Vientiane capital city and Natheuy bus station as Laos-China Railway Station. A sample size of 360 participants was determined using quota sampling, a non-probability method, based on the following procedures:

Data Collection Period: May-July 2026.

Sampling Method: Data collectors selected 6 passengers during each of two daily time slots (7:00-10:00 and 15:00-18:00), resulting in 6 respondents per day. Over a 20-day collection period, this yielded a total sample of 360 people.

2.3 Data collection

The data collection procedure followed three steps:

- Participant Selection and Briefing: Prospective participants were selected and provided with a detailed explanation of the study's purpose and procedures.
- Questionnaire Distribution: Questionnaires were distributed only to individuals who consented to participate after the initial briefing.
- Collection and Verification: Completed questionnaires were collected on-site and subsequently reviewed for completeness and accuracy.

2.4 Data analysis

All data were analyzed using SPSS version 22.0 software, in accordance with the research objectives outlined below:

2.4.1 Part 1: Analysis of Respondent Characteristics

Descriptive statistics were employed to summarize the general data of respondents, including frequency counts and percentages.

2.4.2 Part 2: Analysis of Perceptions Regarding Service Quality

Passengers' opinions on public transport service quality were analyzed using mean scores and standard deviations (SD).

2.5 Determining scoring criteria and interpretation criteria

The rating criteria for public transport service quality were based on a 5-point Likert scale (Sisaart, 2002). The scale, ranging from 1 to 5, was used in the questionnaire to measure respondents' level of agreement. The corresponding interpretation for each score is as follows:

Score	Meaning	Mean	interpretation
1	Lowest	1.00 - 1.80	Lowest
2	Low	1.81 - 2.60	Low
3	Medium	2.61 - 3.40	Medium
4	Very good	3.41 - 4.20	Very good
5	Excellent	4.21 - 5.00	Excellent

3 RESULT

3.1 Personal data of respondents

There were 360 respondents in total. The majority were female (75.27%). By age, the largest group was 16-25 years old (146 people, 40.56%), followed by those aged 46-55 (101 people, 28.06%). The remaining respondents were distributed as follows: 36-45 years old (56 people, 16.56%), 26-35 years old (45 people, 12.5%), and over 55 years old (12 people, 3.33%). Most respondents were married (64.1%). In terms of education, the highest proportion held a bachelor's degree (58.41%), followed by secondary education (25.8%) and primary education (15.8%). Regarding monthly income, the most common range was 4,000,001-5,000,000 LAK (66.9%). This was followed by 3,000,001-4,000,000 LAK (17.2%), and over 5,000,001 LAK (15.9%).

3.2 The quality of the public transport service

The researchers assessed the quality of inter-provincial public transport services from Tonpheung and Houayxay districts to surrounding Houaytheuy bus station as Railway station. The results for each aspect are presented below.

This aspect evaluated the quality of public transportation services in Bokeo Province regarding the internal and customer-facing attributes experienced by passengers. The researchers used 13 aspects, with an overall mean value of 4.25 and a standard deviation of 0.49. Within this category. Seven items were rated as excellent: (1) Most of the staff have a polite service personality, (2) Staff are polite and use polite language in their service, (3) There are enough staff to provide services, (4) Driver picks up and drops off passengers at the pick-up and drop-off points, (5) The interior and exterior of the bus are kept clean, (6) The seats are well spaced and not too crowded and (7) The air conditioning inside of the car provides ample cooling for passengers. All results were shown in Table 1.

Table 1: Mean, standard deviation and concepts of passenger on the quality of public transportation service in Bokeo Province in terms of appearance.

No	Appearance	Mean	S.D	Interpretation
1	Most of the staff have a polite service personality	4.38	0.49	Excellent
2	The staff is well-dressed	4.01	0.62	Very good
3	Staff are polite and use polite language in their service	4.43	0.17	Excellent
4	The staff is enthusiastic and willing to provide service	4.01	0.16	Very good
5	The staff is enthusiastic about providing service	4.18	0.42	Very good
6	Staff are knowledgeable in providing information clearly	4.05	0.65	Very good
7	There are enough staff to provide services	4.65	0.74	Excellent
8	Drivers must obey traffic laws	4.05	0.67	Very good
9	Driver picks up and drops off passengers at the pick-up and drop-off points	4.21	0.14	Excellent
10	The interior and exterior of the bus are kept clean	4.41	0.51	Excellent
11	The seats are well spaced and not too crowded	4.25	0.52	Excellent
12	The air conditioning inside of the car provides ample cooling for passengers	4.34	0.51	Excellent
13	The staff has a uniform specifically for drivers.	4.33	0.81	Very good
	Overall mean	4.25	0.49	Excellent

Researchers evaluated nine items related to passenger facilities. The overall evaluation for this aspect was excellent (mean = 4.26, SD = 0.460). Six items were rated as excellent: (1) Passenger pick-up and drop-off points are suitable for the needs of service users, (2) Security equipment is well prepared, (3) The bus waiting area has appropriate seating and a roof to protect from the sun and rain, (4) The equipment inside the buses are perfect condition and ready, (5) There are food and drinks service inside the bus and (6) There are clean toilet inside the bus. The remaining 3 items were rated as very good. All results were shown in Table 2.

Table 2: Mean, standard deviation and concepts of passenger on the quality of public transportation service in Bokeo Province in terms of the facilities.

No	Facilities	Mean	S.D	Interpretation
1	Passenger pick-up and drop-off points are suitable for the needs of service users	4.39	0.49	Excellent
2	Regulation poster of staff are clear	4.19	0.45	Very good
3	Security equipment is well prepared	4.32	0.11	Excellent
4	The appropriateness of the number of vehicles provided is sufficient for the service users	4.01	0.14	Very good
5	The bus waiting area has appropriate seating and a roof to protect from the sun and rain	4.45	0.80	Excellent
6	Regular buses are in good condition and ready for service	3.95	0.41	Very good
7	The equipment inside the buses are perfect condition and ready	4.25	0.41	Excellent
8	There are food and drinks service inside the bus	4.24	0.41	Excellent
9	There are clean toilet inside the bus	4.56	0.95	Excellent
	Overall mean	4.26	0.46	Excellent

In terms of the operational process of passenger services, ten items related to service operations were evaluated. The overall score for this aspect was excellent (mean = 4.25, SD = 0.620). Seven items were rated as excellent: (1) The bus routes on each line are properly arranged, (2) The waiting time for each bus is not too long, (3) Bus service times are appropriate, (4) Advertising and public relations about bus services are widespread, (5) Paying for each service fee is convenient and quick, (6) There is a waiting area for those who come to use the service and (7) The bus station is convenient area. The remaining 3 items were rated as very good. Detailed results are shown in Table 3.

Table 3: Mean, standard deviation and concepts of passenger on the quality of public transportation service in Bokeo Province in terms of the operational process.

No	Operational process	Mean	S.D	Interpretation
1	Inside the bus, there are cold towels to service	3.83	0.74	Very good
2	The bus routes on each line are properly arranged	4.32	0.53	Excellent
3	The waiting time for each bus is not too long	4.34	0.74	Excellent
4	Bus service times are appropriate	4.45	0.62	Excellent
5	Advertising and public relations about bus services are widespread	4.23	0.74	Excellent
6	Paying for each service fee is convenient and quick	4.34	0.40	Excellent
7	There is a comment box for service users	4.02	0.63	Very good
8	Be responsible for the devices of those who use the service	4.18	0.62	Very good
9	There is a waiting area for those who come to use the service	4.54	0.75	Excellent
10	The bus station is convenient area	4.21	0.43	Excellent
	Overall mean	4.25	0.62	Excellent

In terms of fares for passenger service, seven items were evaluated. The overall evaluation for this aspect was excellent (mean = 4.24, SD = 0.39). 5 items were rated as excellent: (1) Ticket prices are suitable for the distance, (2) Ticket prices are clearly set, (3) There is a price differentiation according to the type of service user, which is appropriate, (4) The price posters are large and clearly detailed and (5) Suitable charge for goods belongs with passenger. The remaining 2 items were rated as very good. Detailed results are shown in Table 4.

Table 4: Mean, standard deviation and concepts of passenger on the quality of public transportation service in Bokeo Province in terms of the fares

No	Fares	Mean	S.D	Interpretation
1	Ticket prices are suitable for the distance	4.34	0.22	Very good
2	Ticket prices are clearly set	4.33	0.30	Very good
3	There is a price differentiation according to the type of service user, which is appropriate.	4.54	0.13	Very good
4	Ticket prices are not expensive when compare with travel	3.83	0.42	Very good
5	The price posters are large and clearly detailed	4.38	0.49	Excellent
6	Suitable charge for goods belongs with passenger	4.46	0.41	Very good
7	The tickets are sale through multiple channels	3.82	0.74	Very good
	Overall mean	4.24	0.39	Excellent

4 DISCUSSION

The results indicate that service quality, in terms of external aspects such as staff interaction, was rated at an excellent level. This suggests that the service provided by staff is generally acceptable to passengers. This finding is consistent with previous research by Anuwat (2011) and Pongphon (2014), who studied the service quality of Bangkok's BTS

Skytrain. Their studies also found that staff service quality significantly impacts public transport systems, contributing to passenger satisfaction. This, in turn, leads to higher ridership and a greater sense of safety among commuters.

The operational processes of the service were rated at an excellent level, indicating satisfactory performance but also highlighting key areas for improvement. Priority should be given to optimizing bus schedules, ensuring appropriate routes for each line and minimizing passenger wait times. This focus is supported by prior research. Zeithaml et al. (1990) and Changwetchay (2016), in their studies on passenger satisfaction with Bangkok's BTS, found that commuters prioritize appropriate service timing and reliable travel duration. Efficient scheduling helps avoid traffic congestion, ensuring predictable journeys and on-time arrivals. However, external factors such as adverse traffic conditions during the rainy season and inconsistent vehicle maintenance can still cause delays. This underscores the need for proactive measures: road infrastructure must be improved, and vehicles must undergo regular inspections before departure, as mandated by transport regulations (Department of Public Works and Transport, 2024). These standards align with frameworks established by the Bangkok Mass Transit Authority (2018) and the Department of Land Transport (2019), which require mandatory pre-service vehicle checks and readiness of service staff. Strict adherence to these protocols is essential to build passenger confidence, and clear prohibitions with enforceable penalties for violators must be consistently applied.

The facilities were rated at an excellent level, indicating general satisfaction but also room for improvement. Key priorities include ensuring safety equipment is fully prepared, designing waiting areas with appropriate seating and adequate shelter from sun and rain, and optimizing passenger pick-up points for user convenience.

This finding aligns with previous research. For example, Ariya (2016) and Sittha (2016), in their studies on public bus user satisfaction, found that passengers highly value convenience. Specific factors highlighted include well-designed waiting areas with proper seating and, most importantly, a sufficient number of buses to minimize wait times for each line. Furthermore, the broader importance of service efficiency is supported by studies on related transport systems. Xuchong and Zhimei (2024), in their analysis of the Lao-China railway, noted that companies improve transportation efficiency to enhance customer satisfaction. Their results indicate that when customers are satisfied with service efficiency, they are more likely to become repeat users.

The overall rating for fares was at an excellent level. However, this aspect requires targeted improvements, particularly concerning pricing structures. Recommendations include diversifying ticket sales through multiple channels and implementing differentiated pricing based on service type or user category. Passengers place significant importance on transparent and accessible fare systems. They value pricing that reflects the type of vehicle, and they strongly prefer multi-format ticket sales especially online options to avoid the need to travel to the station before departure. A current advantage is that regular tickets remain available in some areas, and their associated service fees are generally perceived as fair. Nonetheless, a persistent concern is that overall ticket prices are still perceived as high. Relevant authorities should, therefore, reconsider pricing strategies to enhance customer satisfaction and increase ridership. This aligns with the findings of Sullivan (2007) and Tajuta (2011), who studied passenger behavior and satisfaction with public transport services. Their research found that users, many of whom are low-income earners, primarily focus on price, travel time, and service frequency. Key satisfaction factors include on-time arrivals, cost-effectiveness, convenience, and reliable service.

5 CONCLUSION

This study of public transportation service quality in Tonpheung and Houayxay Districts. Bokeo Province, examined respondents' personal information and their opinions on service quality. The key results are as follows:

- The majority of respondents were female covering 75.27%, aged between 16-25 years old cover 40.56%, most of them were married covering 64.1% and. It was found that most of them had a bachelor degree, and the predominant monthly income range was 4,000,001-5,000,000 LAK. The primary mode of travel was the public bus, with key reasons for usage being cost savings, convenience, and time efficiency.

Passenger opinions on service quality were analyzed across four aspects: external appearance, facilities, operational processes, and fares. All four aspects had an overall mean of excellent level. Despite the positive overall rating, passengers indicated that services require further improvement and systematic development to enhance the public transport system. Paradoxically, general user satisfaction with service quality remains inadequate. This is evidenced by a decline in ridership, which has resulted in some operators ceasing their services.

STATEMENTS ON COMPLIANCE WITH ETHICAL STANDARDS

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Disclosure of conflict of interest

Regarding the publication of this manuscript, the authors declare that this work does not conflict with the interests of others.

REFERENCES

- [1] Anuwat, B. (2011). Service quality of BTS train for citizens in Bangkok. Master of Business Administration, Business Administration Program, Bandung Business University.
- [2] Ariya, M, (2016). A study of the satisfaction of users of public buses of Virakorn Company Limited on the Hat Yai-Sungkai Khok route. Independent study, Master of Public Administration, Hat Yai University.
- [3] Anoree, S. (2021). Factors affecting competitive advantage and success of entrepreneurs and small and medium enterprises in Ratchaburi province. [Online] 2023. Available from: <https://sure.su.ac.th/xmlui/handle/123456789/26608>.
- [4] Bangkok Mass Transit Authority, (2018). Annual report on the state of the industry and future trends. Bangkok, Thailand.
- [5] Changwetchay, B. (2016). Service Quality Affecting to Passenger's Satisfaction BTS Skytrain in Bangkok. An Independent Study Master of Business Administration, Bangkok University.
- [6] Chenel, T., & Moynihan, Q. (2021). Cities that are home to some of the world's best. Department of Land Transport. (2019). Annual Transport Statistics Report on Vehicle Complaints Received under the Land Transport Act (Nationwide) by Service Charge, Fiscal Year. Bangkok, Thailand.
- [7] Department of Public Works and Transport, Bokeo Province, 2024.
- [8] Sullivan, S. (2007). Consumer Behavior. Bangkok, Thailand.
- [9] Sittha, K. (2016). Factors influencing satisfaction with Nakhon Sai bus services. Independent study. Master of Business Administration, Thammasat University.
- [10] Pongphon, N. (2014). Factors influencing user satisfaction of BTS subway service in Bangkok.
- [11] (Independent study for Master's degree). University of Thammasat, Faculty of Commerce and Accounting.
- [12] Summary of the Party Executive Committee of the Grassroots Party Committee, Department of Public Works and Transport, Bokeo Province, 2024.
- [13] Sisaart, B. (2002). Basic research. No. 7. Bangkok: Sowithiyasatha.SPSS. Software platform offers advanced statistical analysis.
- [14] Tajuta, C. (2011). Customer satisfaction with the quality of public bus services of the company. Transport Limited at the Maslawan Bus Station. Independent study, Master of Business Administration, Rajamangala University of Technology Thanaburi.
- [15] Xuchong, Y. and Zhimei, Q. (2024). A Study on the China-Laos Railway's Economic and Strategic Significance.
- [16] *Souphanouvong University Journal of Multidisciplinary Research and Development 2024, Vol. 10, No. 1, 115-123.*
- [17] Zeithaml, V. A., Parasuraman, A., & Berry, L. L. (1990). Delivering quality service: Balancing customer receptions. New York: Free.