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The Service Quality of Public Transport in Luang Prabang Province, Lao PDR

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Abstract

This study investigates passengers' satisfaction with public transportation services in Luang Prabang Province, Lao PDR. A total of 336 passengers from the southern and northern bus terminals participated in the study. Data were collected using structured questionnaires and analyzed using mean scores and standard deviations in SPSS.

The results indicate that passengers' overall satisfaction with public transport services is very good across four key elements: Operational Processes, External Characteristics, Fare Rates, and Facilities. Among these, Operational Processes received the highest satisfaction score, followed by External Characteristics, Fare Rates, and Facilities. The findings suggest that passengers value efficient operations and professional service, while fare transparency and facility improvements remain important areas for enhancement. These insights provide guidance for policymakers and service providers aiming to improve service quality, passenger satisfaction, and ridership in Luang Prabang Province.

Keywords: Passengers; Public Transportation; Service Quality; Operational Processes; Fare Rates

1. Introduction

Public transport development is a national priority of the Lao PDR, as reflected in the 9th Five-Year National Socio-Economic Development Plan (2021–2025) and the Ministry of Public Works and Transport's vision toward 2030. In line with these strategic goals, the Luang Prabang Provincial Department of Public Works and Transport aims to modernize transport services to enhance safety, efficiency, sustainability, and service quality (Summary of the Party Executive Committee, 2024). Public transport plays a vital role in supporting socio-economic development by providing essential mobility for residents, tourists, and business travelers. In Luang Prabang Province, the system consists of 14 bus stations, 26 transport companies, and 3 bus associations operating more than 2,000 passenger vehicles, forming a key component of the province's service infrastructure (Department of Public Works and Transport, Luang Prabang Province, 2021).

Despite the established transport network, public transport services in Luang Prabang Province continue to face challenges, including inconsistent service standards, inadequate vehicle maintenance, and limited attention to customer needs. These issues, together with infrastructure and safety concerns, have led to declining service quality and reduced passenger confidence, resulting in decreased ridership (Department of Public Works and Transport, Luang Prabang Province, 2021). Previous studies similarly note that prioritizing profit over passenger experience often results in poor cleanliness, unreliable schedules, and low service standards (Anoree, 2021). Improving service quality and responding to passenger needs are therefore essential to rebuild trust and enhance the attractiveness of public transport services (Chenel & Moynihan, 2021).

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In response to these concerns, a clearer understanding of passenger perspectives is necessary. This study aims to understand passengers' satisfaction with the quality of public transport services in Luang Prabang Province, Lao PDR. The findings are expected to provide evidence-based insights to support service improvement and policy development in the provincial public transport sector.

2. Literature review

2.1. Service Quality

According to Siriwat (2008), service quality is a key factor influencing public transport use and the concept of service quality was proposed as follows:

- **Reliability** – Services provided to customers must be consistent and accurate.
- **Responsiveness** – Staff must provide services and solve customers' problems promptly according to their needs.
- **Assurance** – Staff must possess knowledge, competence, and willingness in order to build customers' trust and confidence.
- **Empathy** – Providing care and attention to customers with different needs.
- **Tangibility** – Creating recognizable services through the presence of facilities, equipment, personnel, and communication materials to ensure customer confidence.

Zhu (2002) explained that service quality, as perceived by customers, can be classified into two main types as follows:

2.2. Technical Quality

Technical quality refers to the quality that results from customers' objective evaluation of the services they receive. In other words, it reflects how customers assess service quality based on what they actually obtain after the service production process and the interaction between service providers and customers have been completed. This type of quality assessment is based on factual outcomes, specifically whether the services received are able to effectively solve customers' problems.

2.3. Functional Quality

Functional quality refers to the quality derived from customers' evaluation of the service delivery process or the manner in which services are provided. Customers may assess various elements such as the physical appearance of the service environment, tools and equipment related to service provision, staff attire, personality, behavior, communication, and service manners. These factors collectively influence customers' perceptions of the overall service experience.

2.4. Determinants of Service Quality

Parasuraman et al. (2004) stated that in evaluating service quality, consumers utilize eleven key factors to assess the quality of services. These factors are as follows:

- **Accessibility:** This refers to the ease with which customers can access or contact service providers. It includes operating hours, location convenience, and the availability of facilities that enable customers to conveniently reach or communicate with the service provider, such as having a service location that is easy to access.
- **Communication:** This refers to the provision of information to customers using clear and understandable language. It also includes listening to customer opinions, suggestions, and feedback regarding the organization's services.
- **Competence:** This refers to the knowledge, abilities, and skills of service providers in performing their duties effectively. For example, bank employees who are well trained and capable of delivering high-quality services to customers.
- **Courtesy:** This refers to the politeness, respectfulness, attentiveness, and friendliness demonstrated by service providers toward customers.
- **Credibility:** This refers to the trustworthiness and integrity of the organization and its personnel. For instance, an organization with a good reputation and a positive image is more likely to be trusted by customers.
- **Reliability:** This refers to the ability to perform promised services dependably and accurately, such as delivering services in accordance with what has been communicated to customers.

- Responsiveness: This refers to the willingness of service providers to deliver prompt and efficient services, such as immediately assisting customers with deposit or withdrawal transactions.
- Security: This refers to services that are free from danger, risk, or doubt. For example, the use of clean and hygienic medical equipment that is free from contamination.
- Tangibles: This refers to the physical aspects that can be observed, including personnel appearance, equipment used in service delivery, and promotional materials. These should reflect appropriateness, attractiveness, and modernity, such as neatly dressed staff, well-designed office buildings, and up-to-date service equipment.
- Understanding the Customer: This refers to efforts made to know and understand customers, including their specific needs and preferences. Examples include remembering customer details and providing additional services that meet individual customer requirements.
- Service Charges: This refers to the fees charged to customers for services. Service rates may vary depending on the nature of the business. In cases where services are similar, customers often compare service charges and tend to choose organizations that offer lower fees.

3. Research Methodology

This study employed a quantitative research method using a questionnaire that included multiple-choice questions and a 5-point Likert scale to collect data from passengers who are using public transport service in Luang Prabang Province focusing on the northern and southern bus stations. A sample size are 336 participants. The data were analyzed using SPSS version 22.0 software. The passengers' satisfaction on using public transport service quality were analyzed using mean scores and standard deviations (SD).

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

Table 1 Score, meaning and mean value

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

4. Result

The passengers' satisfaction with public transportation services in Luang Prabang Province, Lao PDR across four key service elements: Operational Processes, External Characteristics, Fare Rates, and Facilities:

Table 2 The mean value and standard deviation of each factors on the Service Quality of Public Transport in Luang Prabang Province

No	Elements	Mean	S.D	Ranking
1	Operational Processes	4.02	0.62	1
2	External Characteristics	3.99	0.492	2
3	Fare Rates	3.98	0.39	3
4	Facilities	3.96	0.460	4

The analysis of passengers' satisfaction with public transportation services in Luang Prabang Province revealed that Operational Processes had the highest level of satisfaction (Mean = 4.02, SD = 0.62), ranking first among the four service elements. This was followed by External Characteristics (Mean = 3.99, SD = 0.49), Fare Rates (Mean = 3.98, SD = 0.39),

and Facilities (Mean = 3.96, SD = 0.46), which ranked fourth. Overall, the findings indicate that passengers were most satisfied with the operational aspects of services, while facilities received comparatively lower satisfaction ratings.

5. Discussion

The results indicate that passengers' satisfaction with public transportation services in Luang Prabang Province is generally very good across all measured elements, with **Operational Processes** receiving the highest rating. This highlights that passengers are most satisfied with the efficiency and management of bus services, including scheduling, route organization, and travel times. These findings are consistent with previous studies by Zeithaml et al. (1990) and Changwetchay (2016), who found that reliable operational processes, predictable travel duration, and minimized wait times are major determinants of passenger satisfaction. Nevertheless, challenges such as traffic congestion, seasonal weather disruptions, and inconsistent vehicle maintenance remain, underscoring the need for proactive measures such as infrastructure improvements, regular vehicle inspections, and adherence to transport regulations (Department of Public Works and Transport, 2021; Bangkok Mass Transit Authority, 2018).

- **External Characteristics**, including staff appearance, politeness, and professionalism, were ranked second. Passengers generally perceive staff behavior as courteous and competent, which enhances confidence and trust in the service. This aligns with prior research by Anuwat (2011) and Pongphon (2014), demonstrating that staff service quality is a critical factor influencing passenger satisfaction, safety perceptions, and ridership levels. Continuous training and monitoring of staff conduct are therefore essential to maintain and improve service standards.
- **Fare Rates** were ranked third, indicating general satisfaction but also pointing to areas for improvement. Passengers value transparent pricing, differentiation according to service type or user category, and convenient ticket sales, including online options. While current ticket prices are generally perceived as fair, overall affordability remains a concern. These findings support Sullivan (2007) and Tajuta (2011), who emphasized that fare structure, cost-effectiveness, and accessibility strongly influence public transport use, particularly among low-income passengers.
- **Facilities** received the lowest ranking, suggesting that while passengers are generally satisfied, improvements are needed. Key areas include well-maintained waiting areas, sufficient seating, shelter from weather, functional onboard equipment, and clean restroom facilities. This finding is consistent with Ariya (2016) and Sittha (2016), who found that convenience and comfort significantly impact user satisfaction and repeat usage. Similarly, Xuchong and Zhimei (2024) highlighted that investments in facilities and service efficiency are critical to enhancing passenger experience and loyalty.

Overall, the findings indicate that while passengers in Luang Prabang are generally satisfied with public transportation, prioritizing improvements in operational efficiency, fare transparency, and facilities could further enhance service quality, passenger satisfaction, and ridership.

6. Conclusion

This study examined passengers' satisfaction with public transportation services in Luang Prabang Province, focusing on four key elements: Operational Processes, External Characteristics, Fare Rates, and Facilities. The findings indicate that passengers were most satisfied with Operational Processes, reflecting the importance of efficient scheduling, reliable routes, and minimized waiting times. External Characteristics, such as staff professionalism and courtesy, were also highly rated, highlighting the role of service personnel in shaping passenger perceptions. While Fare Rates and Facilities received slightly lower ratings, they remain critical areas for improvement, particularly in terms of fare transparency, accessibility, and convenience, as well as comfortable and well-maintained facilities. Overall, the results suggest that continued efforts to optimize operations, enhance staff performance, improve facilities, and implement user-friendly fare systems are essential to further increase passenger satisfaction, trust, and ridership.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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