

IDENTIFY THE CAUSES FOR THE REJECTION OF PUBLIC TRANSPORT SERVICE IN GAMPAHA DISTRICT: A STUDY ON THE LEVEL OF PERCEPTION OF PRIVATE VEHICLE USERS

G. A. U. V. Gamalath¹ and Sampath Siriwardena²

^{1,2}*Faculty of Humanities and Social Sciences, CINEC Campus, Sri Lanka.*

¹*uththaragamalath@gmail.com, ²roshan.siriwardena@cinec.edu*

ABSTRACT - People frequently use private vehicles because they are dissatisfied with the services provided by public transportation in various regions of the world. Understanding the satisfaction of regular private vehicle users is critical if we are to understand their needs and preferences for public transportation and encourage them to make the modal switch. As the main objective the study aims to identify the causes for the rejection of public transport services in Gampaha district based on the level of perception of private vehicle users. Based on these objectives, and using the SERVQUAL model, the independent variables are identified as rejection causes following quality and demographic attributes and the dependent variable is the rejection of PT by private vehicle users. The research is followed by the quantitative approach and convenient sampling method where the data collection involved 389 respondents. The primary research objective is attained through data analysis by identifying and statistically proving the service quality attribute and demographic characteristics-based elements that influence PT rejection. And it has been statistically proven that each of these criteria contributes separately and positively to explaining the total rejection. Deeper into the study, present challenges in the PT system, strategies to persuade PV users to switch modes, and recommendations to improve PT performance are explained.

Keywords: Public Transport (PT); Private vehicle users (PV); Rejection

1. INTRODUCTION

This study aims to understand why private vehicle users reject public transport in Sri Lanka, a country with a high population density and a 5.6 million automobile fleet. The vehicle-to-person ratio is 1:4, with 26 vehicles for every 100 persons, causing a 50% increase in vehicles. This is due to economic issues and fuel shortages. Many people prefer private vehicles for their work activities, believing it is more efficient and convenient. The primary research question is the causes of private vehicle users' rejection of public transport services. The study aims to identify issues in public transport service quality and uncover the causes for rejection by private vehicle users. The study also aims to find solutions that encourage private vehicle users to make a modal shift by understanding their perception of public transport service quality. The findings will benefit private vehicle users, public transport users, the Sri Lankan government, SLTB, and the general public by providing an understanding of the general public's perception of Sri Lanka's public transportation system. Targeting the influence of car usage is crucial to reduce car utilization.

2. MATERIALS AND METHODS

The research employs a deductive approach and quantitative methodology, using a questionnaire to gather demographics, rejection factors, and perceptions of private car users in Gampaha District. Convenience sampling was employed to access 389 respondents, despite limitations in geographical proximity, availability, willingness, and personal contacts. for the study at 95% confidence level with 5% margin of error level.

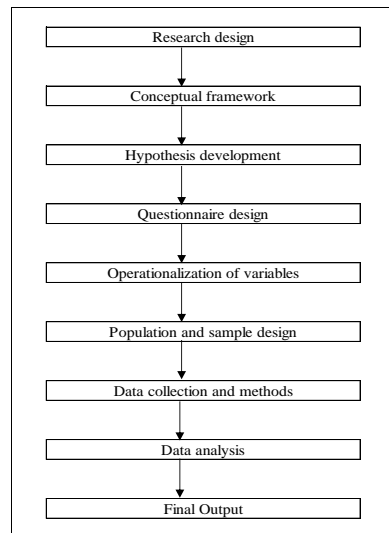


Figure 1. Methodology Flowchart

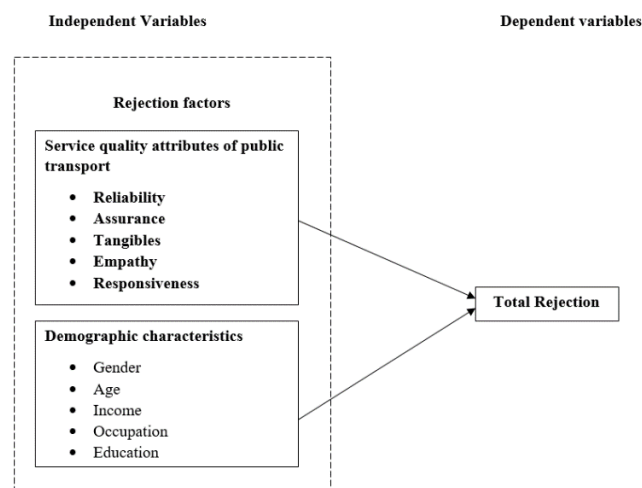


Figure 2. Conceptual Framework

In the study the independent variable is identified as the rejection factors of private vehicle users followed by two categories Quality attributes and Demographic and socio mobility attributes. Service quality attributes includes 5 independent variables which include in the SERVQUAL model and demographic characteristics are included as showed in conceptual framework [3].

SERVQUAL factors are helpful for measuring service quality delivery in a specific study.

- **Reliability** - Ability of a service provider to deliver on its promises accurately and consistently.
- **Assurance**- Ability of employees to inspire confidence and trust via their knowledge, manners, and actions.
- **Tangibles**- Physical facilities, equipment, and appearance of personnel
- **Empathy**- Giving clients individualized care and attention.
- **Responsiveness**- willingness of the firm to help customer and provide prompt service.

3. RESULTS AND DISCUSSION

The correlation summary table shows that all independent variables of rejection cause based on service quality attributes have a positive correlation with the dependent variable, total rejection. Demographic variables, such as monthly income, occupation, and education level, have a positive relationship with total rejection, as people have different attitudes and perceptions. Low-income users are less likely to choose public transport over public transport due to higher income. Variable

tangibles of public transport (PT) include seat availability, bus fare, use of travel cards, comfortability, and cleanliness. People are more likely to reject PT due to poor quality of service and lack of capacity to cater to demand. Reliability is a key factor in rejection, with most indicators except for information availability being identified as causes. PV users reject PT when reliability-based measures are lacking, as they expect reliable services. Responsiveness is another factor, with more PV users considering responsiveness-related rejection causes. They are more likely to reject PT when they perceive PT services as not providing satisfactory facilities. Regarding the factor Assurance, people are willing to choose private vehicles over PT when they are not assured about safety and convenience. Empathy is another factor, with factors such as convenience to the elderly, driver's and conductor's behavior, and responding to complaints influencing people to reject public transport. Private vehicle users seek reliability assurance solutions, including service coverage, frequency, design, capacity, and technology adoption. A good service quality and well-managed service increases the willingness of users to shift from PV to PT. Implementing operational performance guidelines, increasing bus fleets, enhancing driver and conductor experiences, and introducing bus-specific roads and lanes can reduce travel time and increase PT acceptance. Implementing smart cards, season passes, and integrating public transport with new technology can also improve reliability and reduce rejection of PT.

Table 1. Correlations Table

		Total Rejection
Tangibles	Pearson Correlation	0.316**
	Sig. (2-tailed)	<0.001
Reliability	Pearson Correlation	.563**
	Sig. (2-tailed)	<0.001
Responsiveness	Pearson Correlation	.450**
	Sig. (2-tailed)	<0.001
Assurance	Pearson Correlation	.533**
	Sig. (2-tailed)	<0.001
Empathy	Pearson Correlation	.413**
	Sig. (2-tailed)	<0.001

Reference: Research Data

4. CONCLUSION

The study aimed to address the rejection of public transport by private vehicle users in Gampaha district. It focused on identifying causes, existing issues, and solutions to encourage a modal shift. A quantitative research design and deductive approach was used, with 389 private vehicle users. Recommendations included improving PT quality and service performance and enhancing public transport systems for a modal shift.

ACKNOWLEDGEMENT

Sincere gratitude towards Mr. Sampath Siriwardena for the continuous supervision and support and towards CINEC Campus for the guidance provided throughout the study.

REFERENCES

1. Ranawana, H. (2018, May 25). *Factors Affecting Service Quality in Public Bus Transportation in Sri Lanka*. Retrieved October 17, 2022
2. De Ona, J., De Ona, R., 2015b. Quality of service in public transport based on customer satisfaction surveys: a review and assessment of methodological approaches. *Transport. Sci.* 49, 605–622.
3. Sooriyabandara, C.N. and Hewage, D. (2018) Analysis of factors affecting passenger satisfaction on service quality in public transportation in Sri Lanka, IR@KDU Home.