

## BUS TRANSPORT SERVICE IN SRI LANKA: A PERCEPTION OF USERS

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**ABSTRACT** – Public transport ridership has experienced a consistent decrease in the recent past, with a growing number of individuals switching to private vehicles, leading to worsened levels of traffic congestion, road accidents, environmental pollution, and related issues. The objectives of this research are to (a) identify present issues in bus transport service quality, (b) identify the key issues contributing to the decline in bus ridership, and (c) suggest methods to increase ridership to the bus system by collection perceptions of users (passengers, operators, and private vehicle drivers) via a face-to-face interview using a structured questionnaire. This is mainly focused on attracting private vehicle users into public bus transportation and sustaining the bus industry with its current passengers and required growth. Research was conducted in a Colombo suburban area identifying key factors impacting bus desirability such as safety, comfort, driver behavior, noise, speed, and cost-efficiency. Data collected via on-site observations, and surveys which were analyzed using analytical tools to determine the extent to which the aforementioned factors impact the attractiveness of bus transportation in the present context.

**Keywords:** Bus Transportation; Passenger Desires; Public Transport Attractiveness; Modal Shift; User Preferences

### 1. INTRODUCTION

The bus transportation system is the primary mode of public transportation in Sri Lanka, serving higher millions of passengers daily [1]. However, the number of bus users has been declining continuously over the years, raising concerns about the efficiency and sustainability of the bus transportation system [1]. Existing literature predominantly addresses public transportation challenges in developing countries, but research dedicated to Sri Lanka's bus system issues remains limited. In previous studies, factors such as examining passenger satisfaction, loyalty, service performance, broader public transport development inadequate, lack of integration with other modes of transport, limited accessibility, traffic congestion, and the emergence of alternative transportation options have been identified as potential reasons for the decline in bus transportation users [2-7]. High and increasing budget burden, poor operator behavior, and poor targeting of subsidies have been identified as three major problems in the operation of the bus transport sector in Sri Lanka in the early 2000s [8]. Research in Sri Lanka's context identifies a significant research gap concerning the persistent decline in bus usership. This study seeks to fill this gap by identifying the specific factors driving the negative growth trend in bus transportation. The study utilizes a mixed-methods approach, combining quantitative and qualitative data collection techniques involving surveys for users and non-users, alongside interviews with key stakeholders like drivers and conductors, to comprehend Sri Lanka's bus transportation challenges.

### 2. MATERIALS AND METHODS

#### 2.1. Data Collection

Research centers on the Colombo district, due to its pivotal role as the central hub of bus transportation in Sri Lanka. With a total sample size of 191, the Simple Random Sampling method is employed. Data collection

involves face-to-face interviews with bus users, drivers, conductors, and private vehicle users, exploring their perceptions of current bus services, dislikes, anticipated improvements, and willingness to pay extra for enhanced transportation. The bus users, bus drivers, and conductors selected based on their direct roles within the bus system, while private vehicle users’ inclusion gauges their potential shift to public transport after facility enhancements.

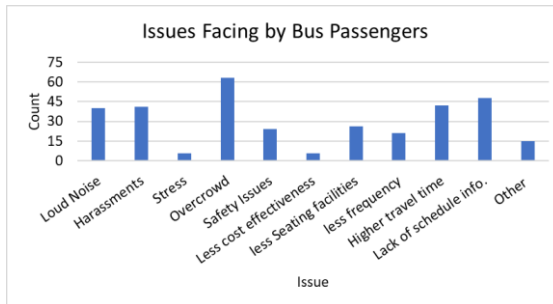
**Table 1.** Survey Locations and Sample Sizes

Land Use	Location	User Type	Sample (n)
Bus Stands/ Universities	Pettah Central Bus Stand, Pettah Private Bus Stand, University of Moratuwa	Passenger	86
		Drivers/ Conductors	50
Vehicle Parking Areas	Near Immigration and Emigration office, Battaramulla	Private	55
Super Markets	Keells Rajagiriya, Keells – Rajagiriya 2		
Universities	University of Moratuwa, UCL		

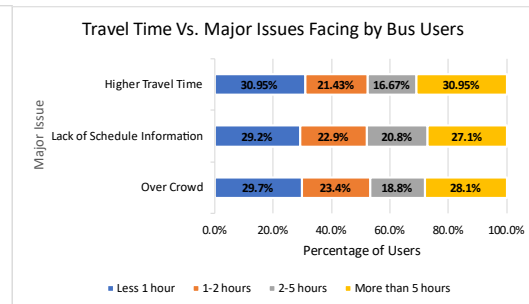
### 3. RESULTS AND DISCUSSION

#### 3.1. Bus Users

Based on Figure 1(a), the bus passengers’ perceived issues are (i) Overcrowding (73% = 63/86), (ii) Lack of information (56%=48/86), longer travel time (49%=42/86), Harassments (48%=41/86), Loud noise (47%=40/86) in the ascending order from the worst.



**Figure 1(a).** Issues Facing by Bus Passengers

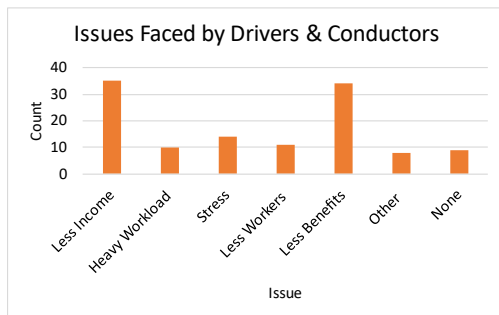


**Figure 1(b).** Disparity of Major Issues with Travel Time

Figure 1(b) depicts that there is no major difference in their perception of major issues against travel time. Regardless of their travel time (either short trips or longer trips), they demand less crowding, schedule information, and less travel time in their journey. Furthermore, it is important to assess how much extra the current bus passengers are willing to pay for a better and more convenient bus transportation service. Results reveal most passengers are open to a fare increase of up to 25%. Figure 3(b) displays bus users’ willingness to pay extra for improved transportation.

#### 3.2. Bus Operators

The operators (n=50) comprising both drivers and conductors were taken into account. The goal was to identify pertinent issues for the bus operators and their expectations for improvements in the transportation system. The following figure shows the issues faced by bus operators and their expected improvements.



**Figure 2(a).** Issues Facing by Bus Operators



**Figure 2(b).** Expected Improvements by Bus Operators

Figure 2(a) underscores bus operators’ concerns about low income and reduced benefits, highlighting the need to address their financial well-being for job satisfaction. Figure 2(b) emphasizes bus operators’ desire for income and benefits increase, as well as system integration and technological adoption. Drivers (80%) are more open to change compared to conductors (65.71%), highlighting the need to address concerns for their active participation in implementing new features and fostering cooperation.

### 3.3. Private Vehicle Users

Figure 3(a) indicates private vehicle users (n=55) favor private vehicles due to shorter travel times (47 respondents), safety (18), spaciousness (17), and air conditioning. Conversely, negative aspects of bus use include overcrowding (80%) and longer travel times (68%), aligning with bus users’ views. Yet, potential for modal shift exists if bus service improves comfort. Remarkably, 27% of private vehicle users are willing to pay 75-100% more for enhanced bus comfort. Most interestingly, nearly half (44%) of bus users express willingness to pay up to 25% extra for improved service quality.

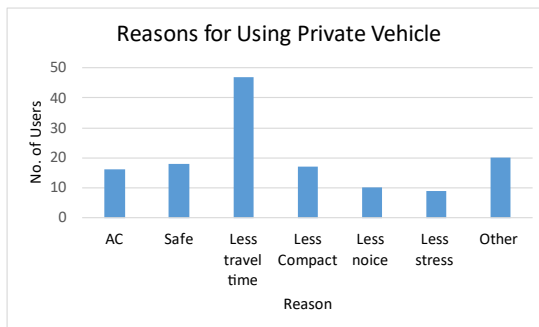


Figure 3(a). Reasons for Using Private Vehicles

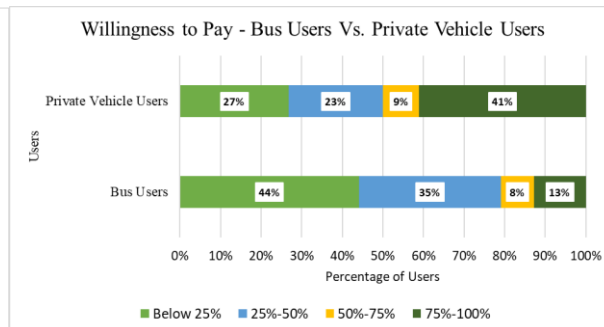


Figure 3(b). Comparison of Willingness to Pay Extra

## 4. CONCLUSION

According to the research findings, Sri Lanka’s bus system faces declining users due to overcrowding and increased travel times for both bus and private vehicle users. Financial difficulties and fewer advantages concern bus operators. Research further aims to analyze private vehicle users’ modal shift behavior via a stated preference survey. To address overcrowding, enhance travel time, and lower costs, policymakers should consider increasing public transport funding for fleet and infrastructure expansion. Smart transport solutions such as optimized routes and demand-based pricing can further incentivize service improvements.

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