

## ANALYSIS OF USAGE AND PUBLIC SATISFACTION ON SOUTHERN EXPRESSWAY-SRI LANKA

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### ABSTRACT

The Southern Express Way (E-01 Southern Expressway), Sri Lanka's one of the prominent civil engineering constructions, was opened on 27<sup>th</sup> of November 2011. Since the opening it has been used by number of people keeping the foot prints in the history of Sri Lanka's transport sector. Most importantly, the passenger bus service of the Southern Expressway which is carried out by both Ceylon Transport Board (CTB) and Private bus owners has drawn a major attention as it provides benefits to all the classes of residents in Sri Lanka. Therefore, this study analyses the usage pattern, public satisfaction and suggest for further improvements which are to be done, on Southern Expressway passenger bus service and associated facilities. The data collection was carried out by distributing a questionnaire among passengers. Data analysis revealed that around 77% of users use the bus service for private purposes and they are satisfied with the bus service. It is also revealed that having public bus service in the expressway is much more beneficial to middle class or low income people. Majority suggests conducting the bus service from Colombo to Galle and vice versa instead of Maharagama. In terms of the time saving perspective, it is recommended the construction of network of expressways in Sri Lanka.

**Key words:** Southern expressway, Public transport, Facility

### 1. INTRODUCTION

Sri Lanka's first ever expressway (E-01 Southern Expressway) from Kottawa (in Colombo district) to Pinnaduwa (in Galle district) was opened on 27<sup>th</sup> of November 2011. The four lanes expressway links a 96 km length of section from Kottawa to Pinnaduwa. The newly constructed Galle Port access road of length 5 km then connects this Expressway to the Galle city. The expressway enables motorists to reach the city of Galle within one hour at the maximum speed of 100 km per hour.

The section from Galle to Matara of length 35 km is under construction and scheduled to be completed by 2013. Furthermore, there are plans to extend the Southern Expressway up to Hambantota connecting Mattala International Airport which is being constructed. The length of this section will be 75 km and surveys are being done to acquire land for this section of the Expressway.

The passenger bus service of the Southern Expressway is carried out by both Ceylon Transport Board (CTB) and Private buses. The buses commence from Maharagama and enter to the expressway from Kottawa and then complete the journey at Galle. Since it is the first experience of passenger service on a expressway in Sri Lanka, it is possible to arise many issues about usage, facilities and many other aspects. After reports of the Southern Expressway bus service hit the media,

increasing numbers of complaints and suggestions began to be reported through passengers.

Therefore, the primary objective of this study is to analyse the usage pattern, public satisfaction and suggest further improvements that have to be done, on Southern Expressway. Furthermore, it is also expected that the outcome generated from this study would eventually be used as a catalyst for maintaining the Southern Expressway as well as for the constructions of proposed expressways in Sri Lanka.

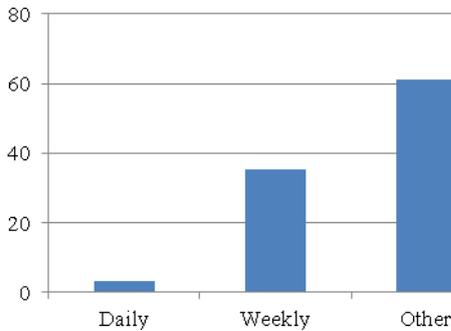
### 2. METHODOLOGY

The study was carried out by distributing a questionnaire among the passengers those who were travelling in both CTB and private buses under the permission from the Ceylon Transportation Board. The questionnaire was prepared based on a detail review of the literature and discussions conducted with expressway users [1]. The questionnaire was distributed among passengers in both bus routes that are from Maharagama-Kottawa to Galle and from Galle-Kottawa to Maharagama. In order to collect a standardized set of data which represent all the different types of users of the expressway, the questionnaire was distributed during both weekends and week days.

### 3. DATA ANALYSIS

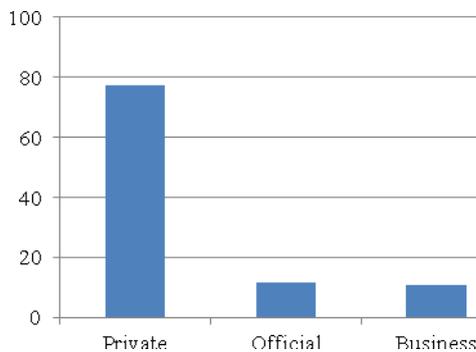
A total of 247 questionnaires were selected for the data analysis. Data analysis was conducted using univariate data analysis techniques with the support of the MS office Excel 2010 software package. The major outcomes of the analysis are as follows.

- Figure 1 illustrates the usage percentage on the basis of daily, weekly and other. As shown in the Figure 1, most of the people are not regular users of the expressway. There are only 3.24% & 35.22% of daily and weekly users, respectively. According to the comments and suggestions made by the passengers, it is clear that the relatively high price of the ticket as the main reason for restricting the number of daily users. On the other hand it is also suggested that the reduction of bus fair will make this service more profitable for the government as it will increase the number of people who are using this service daily.



**Figure 1: Expressway usage**

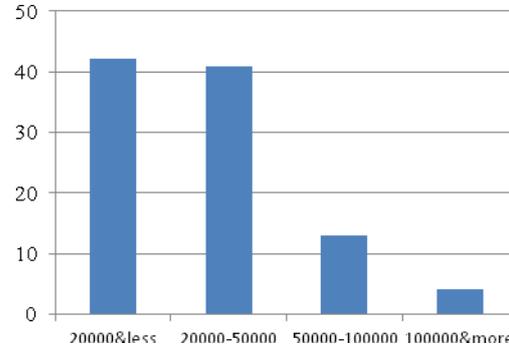
- Figure 2 represents the purpose of using the expressway as a percentage. As can be seen in Figure 2, around 77% uses the expressway for private purpose and only around 12% and 11% use it for official and private purposes respectively.



**Figure 2: Purpose of using the highway**

Figure 3 indicates that the most of the users (82.89%) have an income below 50,000 and 42% of them have an income of less than 20,000. This indicates that having public bus service in the expressway is much more beneficial to the middle

class or low income people who don't have a private vehicle or who can't afford to use a private vehicle regularly. This further suggests that having expressways for a developing country like Sri Lanka could lead to improve the people's living standards irrespective of their income.

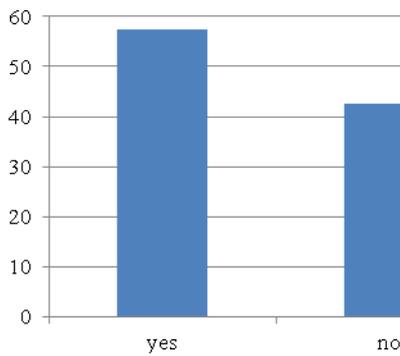


**Figure 3: Monthly income of users**

The analysis revealed that around 99% of the users are agreeing with the fact that the expressway saves their time. In terms of the time saving perspective, it can be recommended to construct network of expressways in Sri Lanka.

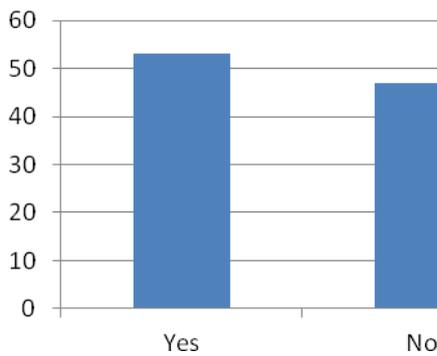
- It was also noted that 98% of the users are satisfied with the bus service.
- Furthermore, the analysis indicated that out of 67.2% who thinks that the express way users are aware of rule and regulations, 86.75% thinks they are properly practicing them.
- 90% of the people think that the Southern Expressway is useful in the future development of Sri Lanka and more expressways should be constructed. 88.26% of them think that more public facilities such as sanitary facilities, shops selling food items, resting areas should be constructed near exits and interchanges.
- Majority of the users are satisfied with the comfort ability (87.45%) and safety conditions (90%) of the buses.
- Majority (57.4%) of the uses say that the price of a ticket is reasonable. But the considerable amount of people (41%) think that it is not (Figure 4).
- Figure 5 shows how the passengers are satisfied with the number of buses available. As shown in Figure 5, a considerable number of people (around 45%) say that number of buses is not enough. However, the increase in number of buses should be done carefully as the number of travelers is a time dependent fact. This highlights the need of maintaining a

traveler data base regularly in the responsible authorities in order to make decisions in such circumstances.



**Figure 4: Answer for the question – if the price of ticket is reasonable**

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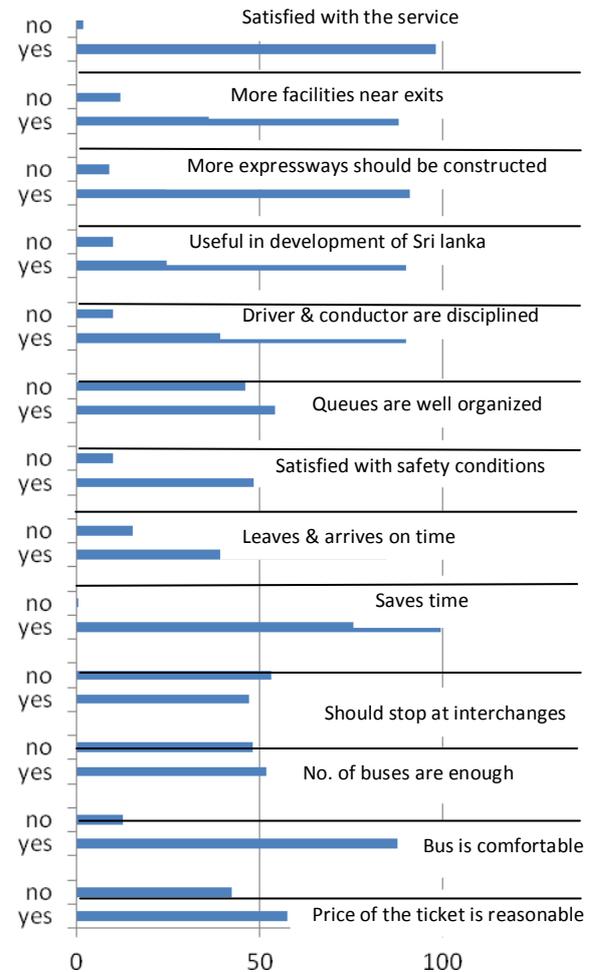


**Figure 5: Answer for the question on whether the number of buses is enough**

- Majority of the passengers say that bus should start from Colombo because Maharagama is a sub city and it should be stopped at all interchanges.
- Around 54% people request that there should be a bus service up to Matara. This further strengthens the necessity of expanding the Southern Expressway to Matara.
- Figure 6 shows the summary of the outcome.

#### 4. CONCLUSIONS

Most of the people are satisfied with the bus service and it is mainly used for private purposes. The public bus service in the expressway is much more beneficial to middle class or low income people. It can be suggested to conduct the bus service from Colombo to Galle and vice versa instead of Maharagama. In terms of the time saving perspective, it is recommended the construction of network of expressways in Sri Lanka. It can also be recommended to implement the online seat reservation system facility to improve the quality of the service.



**Figure 6: Summary of the outcome**

#### 5. REFERENCES

[1]. Mannering F.L., Kilareski W.P., Washburn S.S, Principles of Highway Engineering and Traffic Analysis, Third edition