

Rail Bus Integration for Commuter Traffic in Colombo City

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Despite commuters often use more than one mode of transport even in a single journey, an intermodal coordination and organizational facilities of public transport service in Sri Lanka is yet to be developed. Transport Integration means coordination of two or more modes with an appropriately coordinated time table. Developing integration between transport modes is difficult in Sri Lanka as a number of stakeholders separately involve in a decentralized, sector fragmented transport service. In this context implementing an intermodal connectivity in the public transport system is a high priority requirement to improve the quality of the service.

Many of the passengers travel through Colombo city whenever they need to travel to other suburban areas within the Colombo Metropolitan Region. Consequence is unnecessary traffic congestion in the city which leads environmental pollution as well as disutility to passengers such as long trip length and travel time etc. Passengers who use rail are not facilitated with an intermodal connection up to their final destinations and hence they often have to walk over 200 m distance to get into buses. This may discourage passengers' use of railway. The railway transport carries only a 10% of the total demand in and around Colombo. Therefore a well coordinated Rail/Bus integrated system will be a cost effective strategy to overcome above problems as compared to more expensive road widening and highway infrastructure development etc. In this aspect rail stations closer to main roads such as Dematagoda, Bambalapitiya, Slave Island, Nugegoda, Dehiwala, Panadura, etc and surrounding bus stops could be taken as platforms to implement bus/rail integration.

In this paper the possibility of rail & bus integration within Colombo city limit to reduce the difficulties of public transport passengers is investigated. Dematagoda railway station and adjoining bus stops were taken as a case study to identify the current situation and the need of the connectivity in between Dematagoda station and bus stop especially towards Borella. Data from a comprehensive travel survey that has been conducted during the period from June to August 2009 is used for the analysis. The paper identify the travel characteristics of passengers, demand for intermodal connectivity of the rail & bus passengers and their travel requirements to minimize the difficulties of their journeys.

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It is found that 66% of railway passengers use bus as their access mode to railway and 63% bus passengers use railway as the access mode at the Dematagoda railway station. A higher percentage of bus and rail passengers have home based work trips. However, there is no significant difference in trip purposes between rail and bus passengers. The railway can therefore, be expected to attract all types of trips.

It is shown that there is a potential to improve the quality of the public transport service for commuter satisfaction by providing proper integration between the two modes. To achieve the desired results it is necessary to provide a rail/road based public transport network for feeder routes. The urban and suburban public transport system could be planned and developed focusing on rail-based transport corridors.