

Study of Mode Selection Behaviour of Passengers Across the Western and Southern Provinces at Coastal Transport Corridor

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Abstract

The Coastal Transport Corridor consists of the Coastal Railway Line, Colombo - Galle (A002) Highway, and the Southern Expressway (E01). Between 2013 and 2017 both the Southern Expressway and the Coastal Railway Line were extended up to Matara in order to increase their reach. This research paper attempts to investigate how mode choices of passengers have switched between the Coastal Railway, Galle Road (A002), and Southern Expressway (E01) in the years since 2013 – 2017 by analysing modal splits in 2013 and 2017. The modal splits are determined using empirical data collected from classified vehicle counts, railway passenger counts, and bus volume counts carried out on the Western and Southern Province border for all three routes in 2013 and 2017. The research also attempts to analyse possible reasons for any shifts in modes between the three transport routes. A significant reduction in passenger volumes has been observed over time in rail transport towards Western Province during the morning peak. The number of luxury buses on Galle Road (A002) has reduced, together with the demand for the passenger volumes. However, the bus service on E01 has managed to entice rail and bus passengers away from A002. This suggests that, despite all three routes having the same reach, buses on E01 have managed to capture more commuters travelling from Southern Province to Western Province. A noticeable modal shift has taken place between modes of public transportation (rail and bus) rather than the desired shift from private to public transportation. This shift has also been facilitated by the increasing interconnectivity of Expressways in Sri Lanka (E01 and E02), resulting in a wide range of bus routes originating from Kadawatha, Colombo Fort, Kaduwela, etc. to transport passengers between the Western and Southern provinces. While a majority of

passengers use public modes, the popular mode of choice among private modes is car. However, out of all the vehicles that used E01, cars made up 56.81% in 2017. Compared to the percentage of cars in E01 in 2013, this is an increase of 7.39% in just four years. In order to avoid car demand exceeding the capacity of the E01, solutions that entice car users to choose public transportation are recommended. Therefore, more investment is required to promote buses on E01 as an alternative mode of transport that can provide the comfort, reliability, and other attributes of travelling by car. Furthermore, Sri Lanka Railways needs to pay attention to different market segments and fulfil needs of passengers belonging to each sector, in order to entice a modal shift.

Keywords: *Coastal Transport Corridor, Modal Splits, Mode Choice, Public Transport, Passenger Transport*