



Estimating the Socio-Economic Factors Influencing Passenger Demand for Public Road Transportation Services in Sri Lanka

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Transportation is an essential and valuable aspect of any nation. The main objective of this study was to identify in-depth the relationship between socio-economic factors and the demand for public road transportation. Time series trend analysis and Auto-Regressive Distributed Lag (ARDL) were used to estimate the relationship between socio-economic factors and the demand for public road transportation using annual data from 1990 to 2020. This study has used the passenger-kilometre rate to measure passenger demand for public road transportation and Gross Domestic Products (GDP), average inflation rate, employment rate, population growth rate, and government investment in infrastructure rate, growth rate of average crude oil price, growth rate of registered motor vehicles, and urban population growth rate as the socio-economic factors. The time series trend analysis results confirmed that when the time was increased by one year, the passenger-kilometres rate was decreased by 0.459 in Sri Lanka. The empirical analysis of the ARDL model implied that 82% variation of passenger kilometres rate was accounted for by selected socio-economic factors in the long run. Furthermore, there were positive relationships between passenger demand for public road transportation and GDP, inflation, employment rate, population growth rate, average price crude oil growth rate, and urban population growth rate, and there are negative relationships between passenger demand for public road transportation and government investment in infrastructure and registered motor vehicle growth rate. However, the Corona disaster in 2019 had a severe impact on the entire transport sector and the economic formula. Public transportation usage in Sri Lanka should be increased considering the economic and environmental perspectives in Sri Lanka because the majority of Sri Lankans still meet their transportation needs through the public transportation system.

Keywords: Demand, Passenger-kilometres rate, public road transportation, Socio-economic, Time-series