

# Development of a Personal Vehicle Type Choice Model for Sri Lanka

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## Abstract

Vehicle ownership is a key determination factor in any country's economy. In the Sri Lankan context, it has been identified that vehicle ownership rate has expressively increased over the last decade. Apparently, the road congestion in urban and suburban areas also have increased significantly. As controlling measures of reducing new vehicle imports, and promoting environmental friendly vehicles, the government has introduced new taxes as well as some increments in the tax level on private passenger vehicles.

The overarching object of the research was to examine how a new vehicle choice may vary in the context of household socio – economic characteristics ( eg. income level, number of households, age of the user, gender of the user etc), and the regime of new pricing reforms for annual and variable charging on the vehicle price itself (eg. fuel, insurance and other operational aspects and change of user requirements such as enhancing the vehicle seating capacity, shifting vehicle operating method etc). The respondents participating in the survey, 'household choice of a new personal vehicle, must have purchased a new vehicle, as the survey is designed accordingly.

This paper examines the development of a type of vehicle ownership model using a sample of people living in the Western Province of Sri Lanka. A sample survey is being conducted in the Western Region to collect household data in 2013. ALOGIT software is used to obtain the results of this research. This research considers several potential determinants of vehicle choice, including socio-demographic status.

This study primarily attempts to identify how to recognize the family's monthly income, age, occupation, social status, and number of drivers in the family, and their influence on the ownership of the car. The main objective of this research is to help planners and traffic designers to solve the planning and traffic problems in the Western Region. In addition, the result of this research is to assist the Sri Lankan government in imposing the required taxes, and providing as much funding as possible to maximize a sustainable and environmentally friendly transportation system in Sri Lanka.

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