

## Preferences of Vehicle Owners for Improved Emission Standards: An Economic Evaluation

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### Abstract

Air quality in developing countries is being continuously deteriorated due to rapid urbanization and growth in transport demand. The growing vehicle population together with the high congestion has lead to serious air pollution problem in many urban areas. There were 5,120,797 vehicles in the active fleet by the end of September 2013 in Sri Lanka and nearly 50% of this belongs to Western Province. Vehicle emissions are also linked to number of health effects including respiratory and cardiovascular diseases. The objective of the present study was to estimate the vehicle owner's willingness to pay for improved emission standards.

Study was carried out during October to December in 2013 by randomly selecting six vehicle emission test centres from each district of Western Province, Colombo, Gampaha and Kalutara. Pretested questionnaire was used to survey 500 randomly selected vehicle owners who came to get their vehicle emission testing certificate. The survey involved 56 Motor cars, 87 Motor Tricycle, 267 Motor Cycles, 16 Buses, 36 Dual purpose vehicles and 38 Lorries which was based on the distribution of each vehicle type in the Western Province. The survey was restricted to the owners of the vehicles. The survey instrument mainly asked respondents about their preferences for improving the existing vehicle emission standards and their willingness to pay for any cost increases associated with such improvements.

According to the results, mean willingness to pay for all types of vehicle owners in Western Province is Rs 3773.70. The lowest value was stated by motor cycle owners while the highest was stated by bus owners. Income of the vehicle owners was shown to be positively and significantly contributing towards the willingness to pay. Implications of the results towards designing better standards for vehicle emissions are also discussed.

**Keywords:** Emission Standards, Willingness to pay, Vehicle owners