



## Abstract

Recent developments in the road conditions in Colombo area have led to a renewed interest in drivers behaviours. The field of modeling drivers' behaviour data is a new approach to the locals although it has been conducted widely in globally. This research examines the drivers' behaviour according to different road situations in Colombo area. The data were collected by distributing questionnaires and from the Department of Motor Traffic" and "Department of Census and Statistics- Sri Lanka. Final dataset consists of qualitative information of the behaviours of drivers and some demographic variables. The data were primarily subject to a graphical phase, which was based on bar charts and pie plots. It was then followed by advanced statistical analysis phase which adopted ANOVA, Pearsons' chi-square test and binary logistic models to obtain more insight into the relationships.

The graphical phase results almost tallied with the advanced statistical analysis results. Furthermore, graphical phase showed that most of the drivers are middle aged male drivers who drive motor cars, motor bikes and three wheelers accordingly and most of them use normal ways in both peak and off peak times. The advanced analysis stage results concluded that age, gender, road type, driving experience and driving time have significant impact for most of the specific road conditions. However, ownership type, travelling purpose and driving frequency are not much effective towards the specific road conditions. Furthermore, it can be seen that the well experienced educated male drivers those who are young and travel by their own vehicles or buses are more likely to obey to the road rules and have good driver behaviours when compared to the others.

Key Words ; ANOVA, Chi-square test, Driver's Behaviours in Different Road Situations, Driver's Behaviours in Specific Road Situations. Logistic Binary Regression Model