Road Fatalities and Their Determinants in Iran: Evidence From Panel Provincial Data

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Abstract

Background: Studies have shown that the number of road fatalities has been decreasing in developed regions and increasing in less and middle developed regions. Iran has one of the highest road fatalities in the world. Controlling road fatalities is vital for less and middle developed countries like Iran.

Objectives: The aim of this study was to find factors affecting road fatalities in Iran using macro provincial data.

Materials and Methods: Panel data of provinces of Iran between 2008 and 2012 were used for this study. Panel data Poisson estimator was used for estimating the model. Hausman test and Breusch-pagan test were used for finding between pooled or panel and fixed or random effects.

Results: No significant relationships were found regarding the percentage of emergency sites and percentage of cars with road fatalities. Increase in the percentage of motorcycles, rain, highways and freeways increased the risk of road fatalities. The effect of highways in road fatalities was higher than freeways. Increase in the percentage of traffic police sites and people living in urban regions decreased the risk of accident fatalities.

Conclusions: The government, ministry of health and policy makers must develop strategies for controling high levels of road fatalities in Iran.

Keywords: Accident Prevention; Cause of Death; Accidents; Motor Vehicles; Poisson Distribution; Econometric Model; Panel Data; Iran