

Calibrating Risk Factors for Road Safety in Low Income Countries

Authors : Atheer Al-Nuaimi, Harry Evdorides

Abstract : Daily, many individuals die or get harmed on streets around the globe, which requires more particular solutions for transport safety issues. International road assessment program (iRAP) is one of the models that are considering many variables which influence road user's safety. In iRAP, roads have been partitioned into five-star ratings from 1 star (the most reduced level) to 5 star (the most noteworthy level). These levels are calculated from risk factors which represent the effect of the geometric and traffic conditions on road safety. The result of iRAP philosophy are the countermeasures that can be utilized to enhance safety levels and lessen fatalities numbers. These countermeasures can be utilized independently as a single treatment or in combination with other countermeasures for a section or an entire road. There is a general understanding that the efficiency of a countermeasure is liable to reduction when it is used in combination with various countermeasures. That is, crash diminishment estimations of single countermeasures cannot be summed easily. In the iRAP model, the fatalities estimations are calculated using a specific methodology. However, this methodology suffers overestimations. Therefore, this study has developed a calibration method to estimate fatalities numbers more accurately.

Keywords : crash risk factors, international road assessment program, low-income countries, road safety

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