World Academy of Science, Engineering and Technology
International Journal of Transport and Vehicle Engineering
Vol:15, No:05, 2021

Identifying Key Factors for Accidents' Severity at Rail-Road Level Crossings Using Ordered Probit Models

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Abstract : The main objective of this study is to investigate the key factors in accidents' severity at rail-road level crossings. The data required for this study is obtained from both accident and inventory database of Iran Railways during 2009-2015. The Ordered Probit model is developed using SPSS software to identify the significant factors in the accident severity at rail-road level crossings. The results show that 'train speed', 'vehicle type' and 'weather' are the most important factors affecting the severity of the accident. The results of these studies assist to allocate resources in the right place. This paper suggests mandating the regulations to reduce train speed at rail-road level crossings in bad weather conditions to improve the safety of rail-road level crossings.

Keywords : rail-road level crossing, ordered probit model, accidents' severity, significant factors
Conference Title : ICTS 2021 : International Conference on Transportation and Safety
Conference Location : Singapore, Singapore
Conference Dates : May 03-04, 2021

Open Science Index, Transport and Vehicle Engineering Vol:15, No:05, 2021 publications.waset.org/abstracts/127904/pdf