

The impact of different road damage factors on the pavement of local roads (JKR U2/U3) in Malaysia

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ABSTRACT

In terms of infrastructure transportation system many governments in developed countries focus on monitoring the actual reliability of their local roads. There have been major research studies aimed at developing modeling methods for anticipating possible vulnerability of such networks. The present contribution is to evaluate the high load effects of heavy trucks towards pavement damage due to fatigue, leading to cracking, distortion, and permanent deformation of the local roads (JKR U2/U3) which produce rutting in Malaysia. As such, the improper usage of these roads, and consequent rutting, will give negative impact to drivers. This paper is aimed at discussing the impact of different road damage factors influencing local road (JKR U2/U3) in Malaysia in selected area of Ampang Jaya. The coefficient of determination (R^2) of the regression model developed using WarpPLS and SPSS was 0.71. Furthermore, the correlation between truck properties and road damage is discussed. Highlighting the importance of the statistical relationship between different factors that cause the local road (JKR U2 and U3) to be damaged.

KEYWORDS

Factors influencing local road; Local road (JKR U2/U3) damage; Observation method; Statistical relationship

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