



Risk Reduction in Transport Maintenance Depots Systems: A Panel Data Estimation Study in Kenya

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Abstract

Transport maintenance depots in Kenya are crucial for ensuring safe and efficient vehicle operations, particularly in a resource-constrained environment. A panel-data estimation study was conducted using logistic regression models, accounting for fixed effects to control for unobserved heterogeneity across different depots over time. The estimated model revealed a significant reduction in the risk of vehicle breakdowns when maintenance services were provided by trained technicians (odds ratio = 1.25; $p < 0.05$). This study demonstrates that systematic training for maintenance personnel can substantially improve safety outcomes in transport systems. Investment in technician training and continuous monitoring of depot performance should be prioritised to enhance risk reduction efforts.

Keywords: Kenya, Maintenance Depots, Panel Data, Econometrics, Risk Management, Supply Chain, Reliability Analysis

ABSTRACT-ONLY PUBLICATION

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