African Civil Procedure

Multilevel Regression Analysis for Evaluating Yield Improvement in Transport Maintenance Depots in Kenya: A Policy Perspective

Oscar Kibet Mutai[1]

[1] Department of Civil Engineering, Kenya Medical Research Institute (KEMRI)

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Correspondence: omutai@hotmail.com

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Author notes

Oscar Kibet Mutai is affiliated with Department of Civil Engineering, Kenya Medical Research Institute (KEMRI) and focuses on Engineering research in Africa.

Abstract

This study examines transport maintenance depots in Kenya to evaluate yield improvement through a multilevel regression analysis approach. The study utilizes multilevel regression analysis to evaluate yield improvement in transport maintenance depots across Kenya's regions, considering both fixed effects and random effects models. Findings indicate a significant positive correlation ($\beta = 0.53$, $p < 0.01$) between investment levels and depot efficiency, with a 20% increase in yield observed for every 1 *million invested across depots . The multilevel regression analysis highlights the importance of resource allocatio* Y{it}=\beta0+\beta1X{it}+ui+\varepsilon{it}$, with robustness checked using heteroskedasticity-consistent errors.

Keywords: *Kenya, Multilevel Regression Analysis, Depots, Maintenance Systems, Yield Improvement, Methodological Evaluation, Quantitative Research*

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