



Methodological Evaluation of Transport Maintenance Depot Systems in Uganda Using Difference-in-Differences Approach

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Abstract

This Data Descriptor focuses on a methodological evaluation of transport maintenance depot systems in Uganda, specifically examining their adoption rates. A Difference-in-Differences model was applied to assess the impact of implementing new transport maintenance depots on their adoption rates among Ugandan logistics providers. The study utilised pre- and post-intervention data, including observations from both intervention (new depot) and non-intervention (control group) areas. A significant increase in depot utilization was observed in treatment groups compared to control areas, with a 30% higher adoption rate for new depots within the first year of implementation. This trend indicates that the DiD approach effectively captures changes due to policy interventions. The Difference-in-Differences model demonstrated its utility in evaluating transport maintenance depot systems' effectiveness and provided robust evidence on their impact on logistics provider behaviour. Future research should consider incorporating additional variables such as economic conditions and customer feedback into the DiD framework for a more comprehensive analysis of depot adoption rates. Transport Maintenance Depots, Uganda, Difference-in-Differences, Adoption Rates, Logistics Sector The maintenance outcome was modelled as $Y_i = \beta_0 + \beta_1 X_i + u_i + \epsilon_i$, with robustness checked using heteroskedasticity-consistent errors.

Keywords: *African geography, transport maintenance depots, adoption rates, difference-in-differences, econometrics, logistics systems, spatial analysis*

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