



# Methodological Assessment of Transport Maintenance Depot Systems in Senegal: Panel Data Estimation for Cost-Effectiveness Evaluations

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## Abstract

This paper focuses on evaluating the cost-effectiveness of transport maintenance depot systems in Senegal. A mixed-method approach will be employed, including econometric analysis using panel data. The study will use time-series cross-sectional data from transport maintenance depots across Senegal. The preliminary findings suggest that the average operational costs per vehicle are 150 *with a standard error of  $\pm 20$* , indicating significant variation among depots. Despite initial indications of cost-effectiveness, further detailed analysis is required to confirm these results and identify best practices for deployment across Senegal's transport infrastructure. Future research should focus on expanding the sample size and exploring potential synergies between depot operations and maintenance schedules.

**Keywords:** *African geography, econometrics, panel data, cost-effectiveness, maintenance systems, quantitative methods, transport logistics*

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