



Methodological Evaluation of Transport Maintenance Depot Systems in Uganda: Quasi-Experimental Design for Risk Reduction Assessment

Mulumba Musoke¹

¹ Makerere University, Kampala

Published: 12 June 2009 | **Received:** 15 February 2009 | **Accepted:** 30 April 2009

Correspondence: mmusoke@yahoo.com

DOI: [10.5281/zenodo.18892301](https://doi.org/10.5281/zenodo.18892301)

Author notes

Mulumba Musoke is affiliated with Makerere University, Kampala and focuses on Engineering research in Africa.

Abstract

Transport maintenance depots (TMDs) play a critical role in ensuring the reliability and safety of transport infrastructure in Uganda. A mixed-method approach combining quantitative data analysis (using logistic regression) with qualitative interviews was employed to assess the impact of TMDs on risk reduction. The analysis revealed a significant decrease in equipment failure rates by 15% compared to baseline conditions, indicating an effective risk mitigation strategy within the TMD systems. This study provides empirical evidence supporting the benefits of TMDs in enhancing operational efficiency and safety in Ugandan transport infrastructure. Further research should explore scalability and cost-effectiveness of these findings across different regions to inform policy decisions. Transport maintenance depots, risk reduction, quasi-experimental design, logistic regression The maintenance outcome was modelled as $Y = \beta_0 + \beta_1 X + u_i + \text{varepsilon}$, with robustness checked using heteroskedasticity-consistent errors.

Keywords: *Sub-Saharan, Maintenance, Quasi-experiment, Quality Control, Risk Assessment, Infrastructure, Logistics*

ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

✉ **REQUEST FULL PAPER**

Email: info@parj.africa

Request your copy of the full paper today!

SUBMIT YOUR RESEARCH

Are you a researcher in Africa? We welcome your submissions!

Join our community of African scholars and share your groundbreaking work.

Submit at: app.parj.africa



Scan to visit app.parj.africa

Open Access Scholarship from PARJ

Empowering African Research | Advancing Global Knowledge