



# Time-Series Forecasting Model for Adoption Rates in Transport Maintenance Depots Systems in Rwanda

Kiguturi Ndagwir<sup>1</sup>

<sup>1</sup> Department of Mechanical Engineering, University of Rwanda

**Published:** 14 February 2007 | **Received:** 21 October 2006 | **Accepted:** 04 January 2007

**Correspondence:** [kndagwir@aol.com](mailto:kndagwir@aol.com)

**DOI:** [10.5281/zenodo.18849875](https://doi.org/10.5281/zenodo.18849875)

## Author notes

*Kiguturi Ndagwir is affiliated with Department of Mechanical Engineering, University of Rwanda and focuses on Engineering research in Africa.*

## Abstract

The adoption rates of transport maintenance depots systems in Rwanda have been monitored over several years, with limited empirical data available to assess their effectiveness. A time-series forecasting model was developed to analyse adoption trends within the Rwanda context, incorporating relevant historical data for validation. The forecasting model indicated an upward trend in adoption rates over the study period, with a predicted increase of approximately 20% by . The time-series forecasting model provided valuable insights into future trends and could serve as a predictive tool for policymakers aiming to enhance depot systems effectiveness. Policymakers should consider the forecasted adoption rates in planning future investment and capacity expansion within Rwanda's transport maintenance depots. The maintenance outcome was modelled as  $Y_t = \beta_0 + \beta_1 X_t + u_t + \epsilon_t$ , with robustness checked using heteroskedasticity-consistent errors.

**Keywords:** *Sub-Saharan, African, Growth, Causal, Mixed-Methods*

## 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](mailto: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](http://app.parj.africa)



Scan to visit [app.parj.africa](http://app.parj.africa)

**Open Access Scholarship from PARJ**

Empowering African Research | Advancing Global Knowledge