



Methodological Evaluation of Industrial Machinery Fleets Systems in Rwanda Using Quasi-Experimental Design for Adoption Measurement

Kabugho Mukasa¹

¹ Department of Sustainable Systems, University of Rwanda

Published: 03 March 2010 | **Received:** 23 October 2009 | **Accepted:** 26 January 2010

Correspondence: kmukasa@aol.com

DOI: [10.5281/zenodo.18907979](https://doi.org/10.5281/zenodo.18907979)

Author notes

Kabugho Mukasa is affiliated with Department of Sustainable Systems, University of Rwanda and focuses on Engineering research in Africa.

Abstract

Industrial machinery fleets are crucial for Rwanda's economic development, yet their adoption rates have been inconsistent. A quasi-experimental design was employed, incorporating surveys and observational data collection methods. Statistical models were used for analysis, including logistic regression with robust standard errors. The survey revealed that a significant proportion (65%) of machinery systems in Rwanda have been adopted within the past year, with higher adoption rates observed among larger enterprises. Quasi-experimental designs provide valuable insights into the adoption dynamics of industrial machinery fleets in Rwanda, offering robust methods for future studies. Further research should focus on understanding the specific factors that drive adoption and explore potential barriers to full implementation. industrial machinery, fleet management, adoption measurement, quasi-experimental design The maintenance outcome was modelled as $Y \{ \} = \beta_0 + \beta_1 X \{ \} + u_i + \text{varepsilon} \{ \}$, with robustness checked using heteroskedasticity-consistent errors.

Keywords: *Rwanda, African context, industrial adoption, quasi-experimental design, intervention study, resource management, analytics*

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