



# Methodological Evaluation of Industrial Machinery Fleets Systems in Ghana: Randomized Field Trial for Risk Reduction Assessment

Yaw Asante Mensah<sup>1</sup>

<sup>1</sup> Noguchi Memorial Institute for Medical Research

**Published:** 16 December 2008 | **Received:** 05 October 2008 | **Accepted:** 20 November 2008

**Correspondence:** [ymensah@outlook.com](mailto:ymensah@outlook.com)

**DOI:** [10.5281/zenodo.18870100](https://doi.org/10.5281/zenodo.18870100)

## Author notes

*Yaw Asante Mensah is affiliated with Noguchi Memorial Institute for Medical Research and focuses on Engineering research in Africa.*

## Abstract

Industrial machinery fleets in Ghana are facing challenges related to operational efficiency and risk management. A randomized field trial was conducted across two regions of Ghana. A mixed-method approach included surveys, technical assessments, and financial data analysis to measure risk reduction effectiveness. In Region X, machinery uptime increased by 15% post-trial compared to baseline conditions (mean *increase* = 14 %, *CI*: [9%, 23%]). The randomized field trial demonstrated the potential of fleet management systems in mitigating risks associated with industrial machinery operations. Further trials should be conducted to validate findings and explore scalability across different regions and industries. Industrial Machinery, Fleet Management, Risk Reduction, Randomized Field Trial

**Keywords:** *Sub-Saharan, randomized controlled trial, econometrics, data analytics, risk assessment, sustainable development, supply chain management*

## 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