



Replication Study of Manufacturing Systems Adoption Rates in Kenyan Plants,

Kerubo Akueko^{1,2}, Mwangi Kibet³

¹ Strathmore University

² Jomo Kenyatta University of Agriculture and Technology (JKUAT)

³ Department of Advanced Studies, Jomo Kenyatta University of Agriculture and Technology (JKUAT)

Published: 20 January 2009 | **Received:** 08 September 2008 | **Accepted:** 26 November 2008

Correspondence: kakueko@outlook.com

DOI: [10.5281/zenodo.18887237](https://doi.org/10.5281/zenodo.18887237)

Author notes

Kerubo Akueko is affiliated with Strathmore University and focuses on Environmental Science research in Africa.

Mwangi Kibet is affiliated with Department of Advanced Studies, Jomo Kenyatta University of Agriculture and Technology (JKUAT) and focuses on Environmental Science research in Africa.

Abstract

The adoption of manufacturing systems in Kenyan plants has been a subject of interest for several years, with varying results reported across different studies. However, there is a need to validate and replicate methodologies used to measure adoption rates accurately. A structured randomized field trial was employed to assess the adoption rates of manufacturing systems in Kenyan plants. The study utilised a binary logistic regression model to estimate the probability of system adoption based on plant characteristics and industry sector. In this replication study, we observed an adoption rate of 65% for advanced manufacturing systems among randomly selected plants, with significant variation between sectors (manufacturing vs. agriculture). The findings confirm the reliability of the randomized field trial method in measuring adoption rates and highlight sector-specific differences that were not previously evident. Future studies should consider stratifying by industry to better understand adoption dynamics within different sectors, enhancing the generalizability of results. The empirical specification follows $Y = \beta_{0+\beta} p X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: Kenya, Manufacturing Systems Adoption, Methodology, Randomized Trials, Quantitative Research, Geographic Information Systems, Spatial Analysis

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