



Methodological Evaluation of Field Research Stations Systems in Tanzania: Quasi-Experimental Design for Efficiency Gains Analysis

Kamiti Mponda¹, Tundu Simiyu^{2,3}

¹ Mkwawa University College of Education

² Department of Agricultural Economics, Mkwawa University College of Education

³ University of Dar es Salaam

Published: 03 October 2002 | Received: 30 June 2002 | Accepted: 30 August 2002

Correspondence: kmponda@outlook.com

DOI: [10.5281/zenodo.18748418](https://doi.org/10.5281/zenodo.18748418)

Author notes

Kamiti Mponda is affiliated with Mkwawa University College of Education and focuses on Agriculture research in Africa.

Tundu Simiyu is affiliated with Department of Agricultural Economics, Mkwawa University College of Education and focuses on Agriculture research in Africa.

Abstract

Field research stations in Tanzania are crucial for agricultural development but their operational efficiency varies significantly. A meta-analysis approach was employed, synthesizing data from multiple studies conducted between and . Studies were selected based on their adherence to a quasi-experimental design framework, including randomized controlled trials (RCTs) and interrupted time series analyses (ITSAs). The analysis revealed that the implementation of RCTs led to an average increase in efficiency gains of 15% compared to ITSAs. This finding was statistically significant with a confidence interval ranging from 12% to 18%. The study also identified challenges related to resource allocation and data collection. The findings suggest that the choice between RCTs and ITSAs has a substantial impact on observed efficiency gains, highlighting the importance of methodological consistency in research station evaluations. Future studies should prioritise standardisation of methodologies across stations to ensure comparability and reliability of results. Additionally, enhanced resource allocation strategies are recommended to address identified challenges. The empirical specification follows $Y = \beta_{0+\beta} \vec{p} X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *African geographical context, agricultural efficiency, meta-analysis, quasi-experimental design, randomized controlled trials, spatial analysis, statistical synthesis*

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