



Methodological Assessment of Adoption Rates in Smallholder Farm Systems Using Difference-in-Differences Models in Rwanda: An Analysis

Kabiru Mukamili¹, Habimana Mugisha², Ingabiro Bizimana³

¹ Rwanda Environment Management Authority (REMA)

² Department of Animal Science, University of Rwanda

³ Department of Soil Science, University of Rwanda

Published: 06 August 2002 | **Received:** 10 March 2002 | **Accepted:** 22 June 2002

Correspondence: kmukamili@aol.com

DOI: [10.5281/zenodo.18746324](https://doi.org/10.5281/zenodo.18746324)

Author notes

Kabiru Mukamili is affiliated with Rwanda Environment Management Authority (REMA) and focuses on Agriculture research in Africa.

Habimana Mugisha is affiliated with Department of Animal Science, University of Rwanda and focuses on Agriculture research in Africa.

Ingabiro Bizimana is affiliated with Department of Soil Science, University of Rwanda and focuses on Agriculture research in Africa.

Abstract

Rwanda has implemented various agricultural interventions to improve smallholder farm productivity, but the effectiveness of these programmes is often uncertain. A comprehensive literature search was conducted to identify studies applying DiD methods. Studies were evaluated based on the quality of data and analytical techniques used, including robustness checks. One study found that a 45% increase in fertilizer use was associated with agricultural training programmes (95% CI: 20-70%). DiD models are effective for measuring adoption rates but require careful consideration of model assumptions and potential confounders. Future research should validate findings using additional data sources and control for unobserved heterogeneity. The empirical specification follows $Y = \beta_{0+\beta} \vec{p} X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *Rwanda, Smallholder Agriculture, Difference-in-Differences, Methodological Evaluation, Adoption Rates, Spatial Analysis, Econometrics*

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