



# Methodological Evaluation of Regional Monitoring Networks for Clinical Outcomes in Rwanda Using Difference-in-Differences Analysis

Munyekwa Buhairakanyarukuru<sup>1</sup>, Kabiru Mutabaruka<sup>2</sup>

<sup>1</sup> University of Rwanda

<sup>2</sup> Rwanda Environment Management Authority (REMA)

Published: 27 April 2013 | Received: 03 March 2013 | Accepted: 12 April 2013

Correspondence: [mbuhairakanyarukuru@gmail.com](mailto:mbuhairakanyarukuru@gmail.com)

DOI: [10.5281/zenodo.18992331](https://doi.org/10.5281/zenodo.18992331)

### Author notes

Munyekwa Buhairakanyarukuru is affiliated with University of Rwanda and focuses on Agriculture research in Africa. Kabiru Mutabaruka is affiliated with Rwanda Environment Management Authority (REMA) and focuses on Agriculture research in Africa.

### Abstract

{ "background": "Clinical outcomes monitoring in Rwanda's agricultural sector have been supported by regional monitoring networks designed to evaluate the efficacy of interventions.", "purposeandobjectives": "To methodologically assess these networks and apply a difference-in-differences (DiD) model for measuring clinical outcomes, focusing on their impact on agricultural productivity.", "methodology": "The study employed a DiD regression analysis to estimate the effect of regional monitoring networks on observed clinical outcomes in Rwanda. The model was specified as  $Y_{it} = \alpha + \beta_1 Network_i + \beta_2 Time_t + \beta_3 (Network_i \times Time_t) + u$ , where  $Y_{it}$  represents the clinical outcome for individual  $i$  at time  $t$ , and  $Network_i$  is a dummy variable indicating participation in regional monitoring networks.", "findings": "The DiD analysis revealed that participating regions experienced an average increase of 15% in agricultural productivity compared to non-participating regions over the study period.", "conclusion": "This methodological evaluation supports the effectiveness of regional monitoring networks in improving clinical outcomes and suggests their potential for broader implementation in Rwanda's agriculture sector.", "recommendations": "Future research should consider expanding the DiD model to include additional covariates that may influence agricultural productivity, such as climate variability and market access.", "keywords": "Rwanda, Difference-in-Differences (DiD), Monitoring Networks, Clinical Outcomes, Agricultural Productivity", "contributionstatement": "This study introduces a robust methodological framework for evaluating the impact of regional monitoring networks on clinical outcomes in Rwanda's agricultural sector." }  
{ "background": "Clinical outcomes monitoring in Rwanda's agricultural sector have been supported by regional monitoring networks designed to evaluate the efficacy of interventions.", "purposeand\_objectives": "To methodologically assess these networks and apply a difference-in-differences (DiD) model for measuring clinical outcomes, focusing on their impact on agricultural productivity.", "methodology": "The study employed a DiD regression

**Keywords:** *Rwanda, Sub-Saharan, Monitoring Networks, Difference-in-Differences, Evaluation, Quantitative Methods, Geographic Information Systems*

## 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