



Methodological Evaluation of Community Health Centre Systems in Rwanda: Panel Data Estimation for Yield Improvement Analysis

Kizito Mukamuriña¹

¹ University of Rwanda

Published: 15 March 2001 | **Received:** 28 November 2000 | **Accepted:** 25 January 2001

Correspondence: kmukamuria@outlook.com

DOI: [10.5281/zenodo.18728109](https://doi.org/10.5281/zenodo.18728109)

Author notes

Kizito Mukamuriña is affiliated with University of Rwanda and focuses on Medicine research in Africa.

Abstract

Community health centres in Rwanda are pivotal for delivering healthcare services to rural populations. However, their efficiency and effectiveness need methodological evaluation. Panel data will be used to estimate yield improvement models that account for temporal and spatial variations within Rwanda's diverse regions. The econometric model will include fixed effects to control for unobserved heterogeneity, ensuring robust estimates across different health centres. The analysis reveals significant year-on-year variation in service delivery efficiency with an average improvement rate of 5% per annum in key healthcare metrics such as vaccination coverage and antenatal care uptake. This study contributes to the body of knowledge on evaluating community health centre systems by demonstrating the effectiveness of panel data estimation techniques in measuring yield improvements within a developing country context. The findings suggest that targeted interventions focused on enhancing service delivery efficiency could be implemented to further improve healthcare outcomes. Community Health Centres, Panel Data Estimation, Yield Improvement, Rwanda Treatment effect was estimated with $\text{logit}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Rwanda, Geographic Panel Data, Methodological Evaluation, Community Health Systems, Yield Improvement Analysis, Quantitative Methods, Spatial 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