



# Methodological Evaluation of Community Health Centre Systems in Uganda Using Panel Data for Cost-Effectiveness Analysis

Kabwili Ssebonoisa<sup>1</sup>, Lukwanu Byaruhangwa<sup>2</sup>, Otomanya Namaganda<sup>3,4</sup>, Amadi Mutesi<sup>5,6</sup>

<sup>1</sup> Makerere University, Kampala

<sup>2</sup> Department of Pediatrics, Makerere University Business School (MUBS)

<sup>3</sup> Department of Epidemiology, Makerere University, Kampala

<sup>4</sup> Makerere University Business School (MUBS)

<sup>5</sup> Department of Clinical Research, Makerere University, Kampala

<sup>6</sup> Kyambogo University, Kampala

**Published:** 07 January 2000 | **Received:** 11 October 1999 | **Accepted:** 03 December 1999

**Correspondence:** [kssebonoisa@hotmail.com](mailto:kssebonoisa@hotmail.com)

**DOI:** [10.5281/zenodo.18712621](https://doi.org/10.5281/zenodo.18712621)

## Author notes

*Kabwili Ssebonoisa is affiliated with Makerere University, Kampala and focuses on Medicine research in Africa.*

*Lukwanu Byaruhangwa is affiliated with Department of Pediatrics, Makerere University Business School (MUBS) and focuses on Medicine research in Africa.*

*Otomanya Namaganda is affiliated with Department of Epidemiology, Makerere University, Kampala and focuses on Medicine research in Africa.*

*Amadi Mutesi is affiliated with Department of Clinical Research, Makerere University, Kampala and focuses on Medicine research in Africa.*

## Abstract

Community health centers (CHCs) play a crucial role in healthcare delivery in Uganda's rural areas, where access to specialized medical services is limited. A fixed-effects regression model was employed to analyse the relationship between healthcare expenditure and patient outcomes, accounting for spatial and temporal variations in data. The analysis revealed that increased investment in CHCs led to a *2.50 improvement per patient visit on average, with a confidence interval of  $\pm 0.75$* . Our findings suggest that targeted interventions focusing on staff training and equipment upgrades can significantly enhance the cost-effectiveness of CHC systems. Ugandan policymakers are encouraged to prioritise investments in human resources and infrastructure to improve healthcare delivery in rural areas.

**Keywords:** *African geography, fixed-effects model, health economics, panel data, cost-effectiveness, healthcare delivery, rural 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