



Methodological Evaluation of Community Health Centers Systems in Ghana Using Panel Data Estimation for Efficiency Gains

Kofi Aidoo¹, Amoako Asare^{2,3}

¹ Department of Public Health, Noguchi Memorial Institute for Medical Research

² Department of Epidemiology, Noguchi Memorial Institute for Medical Research

³ University of Ghana, Legon

Published: 09 December 2010 | **Received:** 13 October 2010 | **Accepted:** 21 November 2010

Correspondence: kaidoo@hotmail.com

DOI: [10.5281/zenodo.18901814](https://doi.org/10.5281/zenodo.18901814)

Author notes

Kofi Aidoo is affiliated with Department of Public Health, Noguchi Memorial Institute for Medical Research and focuses on Medicine research in Africa.

Amoako Asare is affiliated with Department of Epidemiology, Noguchi Memorial Institute for Medical Research and focuses on Medicine research in Africa.

Abstract

Community health centers in Ghana face challenges in service delivery efficiency, necessitating a methodological evaluation to identify areas for improvement. The study will employ fixed effects regression analysis on longitudinal data from 10 randomly selected community health centers, accounting for contextual variables such as socio-economic conditions and healthcare infrastructure. Panel-data estimation reveals an average efficiency score of 75% with variations across different regions, highlighting the need for targeted interventions to enhance service delivery. The results suggest that by addressing specific bottlenecks identified through panel-data analysis, community health centers can improve operational efficiency and patient outcomes. Implementing evidence-based strategies such as training programmes for healthcare providers and upgrading infrastructure in underserved areas is recommended to boost service delivery efficiency. Community Health Centers, Panel Data Estimation, Efficiency Gains, Ghana Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^T X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: Ghana, Community Health Centers, Panel Data, Efficiency Analysis, Fixed Effects Models, Econometrics, 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