



Methodological Evaluation of Community Health Centre Systems in Tanzania Using Difference-in-Differences for Efficiency Assessment

Kilimo Haji Kibet¹

¹ Department of Internal Medicine, Muhimbili University of Health and Allied Sciences (MUHAS), Dar es Salaam

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Correspondence: kkibet@outlook.com

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Author notes

Kilimo Haji Kibet is affiliated with Department of Internal Medicine, Muhimbili University of Health and Allied Sciences (MUHAS), Dar es Salaam and focuses on Medicine research in Africa.

Abstract

Community health centre systems in Tanzania have been established to improve access to healthcare services for underserved populations. However, their operational efficiency and effectiveness remain under scrutiny. The study employed a Difference-in-Differences regression analysis to compare pre- and post-intervention outcomes across a subset of health centres. The DiD model accounts for temporal trends and unobserved heterogeneity through the inclusion of fixed effects for each centre and year, with robust standard errors accounting for potential confounders. The difference-in-differences analysis revealed significant efficiency gains in service delivery post-intervention, particularly in diagnostic services (25% improvement) and patient follow-up rates (18%). This study provides empirical evidence on the effectiveness of community health centre systems in Tanzania, highlighting areas for further operational improvements. Further research should focus on implementing strategies to sustain these efficiency gains and expanding coverage to ensure equitable healthcare access across all districts. Treatment effect was estimated with $\text{text}\{logit\}(\pi) = \beta_0 + \beta_1 p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: Tanzania, Community Health Centres, Efficiency Measurement, Difference-in-Differences, Random Assignment, Spatial Econometrics, Regression Discontinuity Design

ABSTRACT-ONLY PUBLICATION

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