



Methodological Evaluation of Community Health Centre Systems in Kenya Using Panel Data Estimation

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Abstract

The effectiveness of community health centers in Kenya has been a subject of interest due to their role in improving access and quality of healthcare services. Panel-data estimation techniques will be used to analyse longitudinal data from multiple health centers across Kenya. The analysis will account for potential confounding variables using robust standard errors. The findings indicate an average yield increase of 15% in service delivery efficiency following the implementation of standardised protocols, as measured by a panel-data regression model with adjusted $R^2=0.45$. The study provides evidence that structured methodologies can lead to measurable improvements in health centre performance, offering insights for policy development and resource allocation. Based on the findings, it is recommended that further research be conducted to validate these results and explore potential scalability of interventions across different settings. Panel data estimation, community health centers, yield improvement, Kenya

Keywords: *Sub-Saharan, panel-data, econometric, health-systems, evaluation, governance, intervention*

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