



Methodological Evaluation of Community Health Centre Systems in South Africa Using Difference-in-Differences for Efficiency Measurement

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Abstract

Community health centers (CHCs) in South Africa play a crucial role in primary healthcare delivery, yet their efficiency varies significantly. The study employed the DiD model to analyse pre- and post-intervention data from a sample of CHCs, accounting for potential confounders through fixed effects. We observed an average efficiency gain of 12% in CHC services post-intervention compared to control areas. The DiD model effectively captured the impact of policy changes on CHC performance, offering a robust tool for future evaluations. Policy makers should prioritise resource allocation and training programmes based on our findings. Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, African, Spatial, Econometrics, DID, Healthcare, Systems*

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