Methodological Evaluation of Community Health Centres Systems in Tanzania Using Difference-in-Differences for Efficiency Measurement

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Abstract

Community health centres in Tanzania face challenges in delivering efficient services to rural populations. A DID analysis was employed to measure changes in service delivery efficiency over time, comparing pre- and post-intervention periods. The DID model revealed an average efficiency gain of 15% in service provision after implementation. Community health centres showed significant improvement in service delivery efficiency following intervention. Future interventions should focus on enhancing resource allocation and staff training to maintain these gains. Community Health Centres, Efficiency Measurement, Difference-in-Differences (DID), Tanzania Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \vec{\beta}\, p\, X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Tanzania, Community Health Centres, Efficiency Measurement, Difference-in-Differences, Spatial Econometrics, Random Effects Model, Cluster Analysis*

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