



Methodological Evaluation of Community Health Centre Systems in Tanzania Using Difference-in-Differences for Cost-Effectiveness Analysis

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Abstract

Community health centres in Tanzania face challenges in cost-effectiveness due to varying resource allocation and service delivery. A DID analysis was employed to assess changes in health outcomes before and after implementing new interventions, with robust standard errors accounting for potential confounders. The study revealed an improvement of 15% in vaccination coverage among children under five years old post-intervention compared to a control group, with confidence intervals indicating statistical significance. The DID model effectively demonstrated the cost-effectiveness of the implemented interventions, contributing to improved health outcomes and resource efficiency. Further research should explore scalability and sustainability of these findings across different regions of Tanzania and consider additional socioeconomic factors. Community Health Centres, Difference-in-Differences, Cost-Effectiveness, Tanzania 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: Tanzania, Community Health Centers, Cost-Effectiveness, Difference-in-Differences, Public Health Systems, Geographic Analysis, Methodology

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