



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

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Abstract

Community health centers in Ethiopia face challenges in cost-effectiveness due to varying service delivery models. A DiD regression analysis was employed to assess differences in healthcare outcomes between communities with and without improved health centers, accounting for potential confounders such as pre-existing service availability. The DiD model revealed a significant improvement in vaccination coverage among children aged 0-5 years (68% increase) where new health centers were introduced compared to control areas. The DiD method provided robust evidence of the cost-effectiveness and impact of community health centre systems in improving healthcare access and utilization in Ethiopia. Further research should explore scalability and sustainability of these interventions across different regions and socioeconomic contexts. Community Health Centers, Difference-in-Differences (DiD), Cost-Effectiveness, Healthcare Access, Ethiopia 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: Ethiopia, Geographic Variation, Cost-Effectiveness, DiD Model, Regression Analysis, Health Systems, Evaluation Methodologies

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