



# Methodological Evaluation of Community Health Centre Systems in Ethiopia: Panel Data Estimation for Measuring Adoption Rates

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## Abstract

Community health centers (CHCs) in Ethiopia play a critical role in providing essential healthcare services to underserved populations. A mixed-methods approach combining quantitative panel data analysis with qualitative interviews was employed. Panel Data Estimation techniques were used for measuring adoption rates across different time periods. In a specific region, the estimated adoption rate of preventive healthcare services reached 75% over two years. The study provides robust estimates on CHC adoption in Ethiopia and highlights the need for continuous monitoring and improvement. Further studies should focus on long-term sustainability and cost-effectiveness of these health centers. Community Health Centers, Panel Data Estimation, Adoption Rates, 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, longitudinal study, panel data, qualitative assessment, health systems, community engagement, outcome measurement

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