



Methodological Evaluation of District Hospitals Systems in Ethiopia Using Difference-in-Differences Model for Cost-Effectiveness Analysis

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Published: 09 November 2002 | **Received:** 06 June 2002 | **Accepted:** 12 September 2002

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DOI: [10.5281/zenodo.18741525](https://doi.org/10.5281/zenodo.18741525)

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Abstract

District hospitals in Ethiopia play a critical role in healthcare delivery but face challenges regarding resource allocation and effectiveness. A systematic literature review was conducted to identify studies that applied the difference-in-differences (DiD) model for measuring cost-effectiveness in Ethiopian district hospitals. The search included databases such as PubMed and Embase with specific inclusion criteria focusing on methodological rigor. The DiD model showed mixed results, with some studies indicating a positive impact of interventions but others suggesting no significant difference compared to control groups. While the DiD model demonstrated potential for cost-effectiveness analysis in Ethiopian district hospitals, there was heterogeneity across studies and methodological limitations need addressing. Future research should focus on standardising methodologies and increasing sample sizes to enhance robustness of 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: Ethiopia, District Hospitals, Methodology, Cost-Efficiency, Difference-in-Differences, Health Systems, Resource Allocation, Comparative Analysis

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