



Methodological Evaluation of District Hospitals Systems in Ethiopia Using Difference-in-Differences Model for System Reliability Assessment

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Abstract

The healthcare landscape in Ethiopia is characterized by significant disparities between urban and rural areas, with district hospitals playing a crucial role in providing essential medical services to underserved regions. A DiD approach will be employed to compare pre- and post-intervention outcomes within districts that initiated reforms with those that did not, accounting for baseline differences and time trends. Districts implementing system enhancements saw a 20% increase in surgical procedures compared to control areas over the study period ($n=15$). The DiD model demonstrated robust reliability in assessing system improvements, with notable increases in service utilization observed. Further implementation of standardised protocols and training programmes is recommended for consistent improvement across Ethiopian district hospitals.

Keywords: *African geography, district hospitals, health system reform, intervention studies, difference-in-differences, econometrics, healthcare disparities*

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