



Methodological Assessment and Efficiency Gains in District Hospitals Systems within Kenya: A Panel Data Approach

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Abstract

District hospitals in Kenya play a crucial role in healthcare delivery, yet their operational efficiency remains under scrutiny. The study employs a multi-step data collection process including interviews with stakeholders and secondary data analysis. A fixed effects model will be used, estimating the impact of various factors on operational efficiency. Panel-data analysis revealed significant variation in hospital performance across districts, indicating that context-specific interventions are necessary for improvement. The panel-data approach offers a robust framework for understanding district hospitals' efficiency gains, providing actionable insights for policy makers and practitioners. Policy initiatives should prioritise the development of tailored intervention strategies based on local hospital performance data. District Hospitals, Kenya, Panel Data, Efficiency Gains, Fixed Effects Model Treatment effect was estimated with $text\{logit\}(\pi) = \beta_0 + \beta^T p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: African healthcare, District hospitals, Efficiency measurement, Panel data analysis, Stochastic frontier analysis, Econometric methods, Health system evaluation

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