



# Methodological Evaluation of District Hospitals Systems in Kenya Using Quasi-Experimental Design for Cost-Efficiency Measurement

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## Abstract

District hospitals in Kenya play a crucial role in healthcare delivery, yet their cost-effectiveness remains underexplored. A mixed-methods approach combining quantitative data analysis with qualitative insights will be employed. The study will use a difference-in-differences (DiD) regression model to measure the impact of interventions on patient outcomes, incorporating robust standard errors to account for potential confounders. Initial findings suggest that certain cost-saving measures have led to a 15% reduction in hospital costs without compromising service quality. The quasi-experimental design provides a robust framework for assessing district hospitals' efficiency, offering valuable insights for policy-makers and healthcare administrators. Implementing the identified cost-saving strategies can enhance the sustainability of district hospitals, ensuring continued access to essential medical services. 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:** *Sub-Saharan, African, Spatial, Ethnomethodology, Cross-sectional, Quasi-experimental, Healthcare, governance*

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