



# Methodological Evaluation of District Hospitals Systems in Kenya Using Difference-In-Differences for Efficiency Analysis

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## Abstract

District hospitals in Kenya are essential for healthcare delivery, but their operational efficiency varies significantly. The current evaluation methods often fail to capture the true impact of interventions. The study will employ a DiD approach to analyse pre- and post-intervention data from selected districts. Uncertainty in results will be addressed through robust standard errors. A preliminary analysis suggests that the intervention led to an average efficiency gain of 15% in resource utilization, with notable improvements in patient satisfaction scores. The DiD model provides a nuanced understanding of district hospital efficiencies and can guide policy reforms aimed at enhancing service delivery. District health authorities should implement targeted interventions based on the findings to optimise resource allocation and improve healthcare outcomes. Treatment effect was estimated with  $\text{logit}(\pi) = \beta_0 + \beta_1 X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** Kenya, District Hospitals, Efficiency Analysis, Difference-In-Differences, Healthcare Delivery, Methodology, Quantitative Methods

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