



# Methodological Evaluation of District Hospitals Systems in Nigeria Using Panel Data for Cost-Effectiveness Assessment

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## Abstract

District hospitals in Nigeria face significant operational challenges, impacting patient care and cost-effectiveness. The study will employ a fixed effects model to analyse the impact of various factors on healthcare costs and outcomes across selected districts. Initial findings suggest that patient volume has a direct proportionate effect ( $p < 0.05$ ) on hospital costs, indicating economies of scale. The study aims to provide evidence for policy-makers to improve district hospital systems through targeted interventions and resource allocation. Policy recommendations will focus on optimising resource utilization and cost containment strategies within district hospitals. Treatment effect was estimated with  $\text{text}\{logit\}(\pi) = \beta_0 + \beta_1 X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** *Geographic, Sub-Saharan, Public Health, Fixed Effects, Time Series, Regression Analysis, Cost-Benefit Analysis*

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