



Methodological Evaluation of District Hospitals Systems in Nigeria: Panel Data Estimation for Cost-Effectiveness Analysis

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Abstract

District hospitals in Nigeria play a critical role in healthcare delivery, yet their operational efficiency remains under scrutiny. We employed econometric techniques to analyse panel data from multiple hospitals over a five-year period. Our model includes fixed effects for each hospital to account for unobserved heterogeneity. The estimated cost-effectiveness ratio suggests that while significant resources are allocated, there is room for improvement in resource utilization and patient care efficiency. Our findings indicate potential areas of inefficiency within the system, necessitating targeted interventions to enhance service delivery. Policy makers should prioritise investment in training staff and upgrading infrastructure to improve hospital performance. Nigeria, district hospitals, cost-effectiveness analysis, panel data, resource allocation 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: Nigerian, panel-data, econometrics, cost-effectiveness, healthcare-systems, district-hospitals, geographical-diversity

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