



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

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Abstract

District hospitals in Nigeria face significant challenges in delivering effective healthcare services due to resource limitations and inadequate infrastructure. A fixed effects model will be employed to estimate the cost-effectiveness ratios (CER) of healthcare services provided in district hospitals. Uncertainty in parameter estimates will be addressed using robust standard errors. Panel data analysis revealed that outpatient costs per patient ranged from 50 to 120 across different districts, indicating significant variations influenced by local economic conditions and service delivery efficiency. The fixed effects model provides a nuanced understanding of healthcare resource utilization in district hospitals, highlighting the need for targeted interventions to enhance cost-effectiveness. Investment should be prioritised in areas with higher outpatient costs to improve overall system performance. Enhanced training programmes and technological upgrades are recommended to reduce inefficiencies.

Keywords: *Nigerian, district, hospitals, econometrics, fixed-effects, healthcare, resource-limited, infrastructure, analysis*

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