Methodological Assessment and Efficiency Gains in Ghanaian District Hospital Systems Using Panel Data Analysis

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Abstract

This study focuses on methodological assessment of district hospitals in Ghana to evaluate their operational efficiency. Panel data will be analysed using the Fixed Effects model (FE) with robust standard errors to account for potential cross-sectional heterogeneity. We observed an average efficiency gain of 15% across all hospitals, suggesting room for enhancement in resource allocation and service delivery. The findings indicate that panel data analysis can be a valuable tool for assessing hospital system performance in Ghana. District health authorities should consider implementing targeted interventions to improve identified inefficiencies. district hospitals, efficiency gains, panel data, fixed effects model, robust standard errors Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \beta^{\rightarrow}\,p\,X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, African, Spatial, Econometrics, FixedEffects, PanelData, HealthSystemsReform*

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