



Methodological Evaluation of District Hospitals Systems in Senegal Using Difference-in-Differences Approach for Cost-Effectiveness Assessment

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Abstract

District hospitals in Senegal play a crucial role in healthcare delivery, yet their performance varies significantly across regions. A DID model will be employed to analyse changes in healthcare outcomes before and after system reforms, with baseline data collected from selected hospitals as controls. The analysis reveals substantial improvements in outpatient care accessibility by 30% post-reform, though variability persists across regions. Despite regional disparities, the overall cost-effectiveness of the reform is deemed positive based on a robust DID model with estimated standard errors. Further studies should explore factors contributing to regional variations and implement targeted interventions in underserved areas. Treatment effect was estimated with $\text{text}\{ \logit \}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, healthcare delivery, cost-effectiveness, econometrics, impact evaluation, randomized controlled trials, geographic information systems*

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