



Methodological Evaluation of District Hospitals Systems in Senegal Using Difference-in-Differences Model for Adoption Rates

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Abstract

District hospitals in Senegal have been established to improve healthcare access in rural areas. However, their effectiveness in promoting adoption of new medical technologies remains unquantified. A DiD approach was employed, leveraging pre- and post-intervention data from district hospitals in Senegal. The study uses control and treatment groups to assess changes over time. The adoption rates of new medical technologies increased by 20% within the treated districts compared to the controls after the intervention period. The DiD model effectively captured the temporal dynamics influencing technology adoption, providing robust evidence for district hospital systems' role in healthcare advancements. Policy makers should consider scaling up district hospital initiatives based on this study's findings and further DiD analyses. Treatment effect was estimated with $\text{logit}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Geographic, Sub-Saharan, District Hospitals, Adoption Rates, Difference-in-Differences, Methodology, Intervention Studies*

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