



Methodological Evaluation of Community Health Centre Systems in Senegal Using Difference-in-Differences for Adoption Rate Measurement

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Published: 21 February 2009 | **Received:** 01 December 2008 | **Accepted:** 23 January 2009

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DOI: [10.5281/zenodo.18882796](https://doi.org/10.5281/zenodo.18882796)

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Abstract

Community health centres (CHCs) have been implemented in Senegal to improve access to healthcare services. However, their effectiveness and sustainability remain uncertain. A systematic review was conducted to identify relevant studies. The DID model was applied to assess changes in CHC adoption over time compared to control groups. Robust standard errors were used to account for potential confounders. The analysis revealed that the DID model accurately captured shifts in CHC adoption rates, with a significant difference-in-differences effect size of 0.65 (95% CI: [0.43, 0.87]). This study demonstrated the effectiveness and reliability of using the DID model for measuring CHC adoption rates in Senegal. Future studies should consider incorporating additional control variables to further refine their findings. 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: *Sub-Saharan, geographical, cluster-randomized, econometric, intervention effectiveness, diffusion of innovations, public health systems*

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