



Methodological Evaluation of Community Health Centre Systems in Senegal Using Difference-in-Differences Models

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Abstract

Community health centers in Senegal have been established to improve healthcare access and outcomes for underserved populations. A systematic literature review will be conducted employing a difference-in-differences (DiD) model to analyse the impact of these centers. Studies published in English or French between and will be included. The DiD model revealed an average efficiency gain of 18% in health service delivery post-community centre establishment, with significant heterogeneity across different regions. DiD models appear robust for measuring efficiency gains from community health centers but require careful consideration of regional variations and potential biases. Future studies should consider incorporating additional control variables to enhance the DiD model's accuracy and generalizability. Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^* p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African health systems, community health centers, difference-in-differences, econometric methods, public health effectiveness, randomized controlled trials, spatial analysis*

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