Methodological Evaluation and Adoption Rates in District Hospitals Systems in Uganda Using Difference-in-Differences Approach

Kabaka Nabukeemeza[1,2]**, Otim Onyango**[3,4]**, Mukantubare Byamungu**[5]**, Mukasa Nalwady**[6,7]

[1] Department of Surgery, Makerere University Business School (MUBS)

[2] Medical Research Council (MRC)/UVRI and LSHTM Uganda Research Unit

[3] Kyambogo University, Kampala

[4] Department of Epidemiology, Makerere University Business School (MUBS)

[5] Makerere University Business School (MUBS)

[6] Department of Pediatrics, Makerere University Business School (MUBS)

[7] Department of Clinical Research, Medical Research Council (MRC)/UVRI and LSHTM Uganda Research Unit

Author notes

Kabaka Nabukeemeza is affiliated with Department of Surgery, Makerere University Business School (MUBS) and focuses on Medicine research in Africa.
Otim Onyango is affiliated with Kyambogo University, Kampala and focuses on Medicine research in Africa.
Mukantubare Byamungu is affiliated with Makerere University Business School (MUBS) and focuses on Medicine research in Africa.
Mukasa Nalwady is affiliated with Department of Pediatrics, Makerere University Business School (MUBS) and focuses on Medicine research in Africa.

Abstract

District hospitals in Uganda are pivotal to healthcare delivery, yet their effectiveness varies. Methodological evaluation is crucial for understanding adoption rates and improving service provision. This meta-analysis employs a difference-in-differences (DID) econometric model to analyse data from multiple districts, accounting for potential confounders such as socio-economic factors. Data were sourced from district health information system records and hospital reports. The analysis revealed significant differences in adoption rates across districts, with some areas showing a 30% higher implementation rate of new medical treatments compared to others. The DID model effectively captured the impact of contextual factors on intervention uptake, highlighting disparities that require targeted interventions and policy adjustments. District health authorities should prioritise training and support for healthcare providers in areas with lower adoption rates. Policy makers must also consider implementing incentives or penalties to enhance treatment delivery efficiency. Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \beta^{\neg}\,p\,X_i$, and uncertainty reported using confidence-interval based inference.

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