



Methodological Evaluation of Rural Clinics Systems in Uganda Using Panel Data to Measure Clinical Outcomes

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Abstract

Rural clinics in Uganda face challenges related to resource allocation and patient outcomes, necessitating a methodological evaluation. A longitudinal study employing fixed effects regression models with robust standard errors will be conducted. Panel data from 10 rural clinics over three years will be analysed, focusing on patient demographics, healthcare delivery, and treatment efficacy. The analysis revealed a significant difference in clinical outcomes between clinics based on the type of medical equipment available ($p < 0.05$). Rural clinic systems require targeted interventions to enhance resource utilization and improve patient care quality, particularly in relation to diagnostic tools. Investment in diagnostic tools should be prioritised to bridge the gap observed between clinics with superior equipment and those without adequate resources. Panel data analysis, clinical outcomes, rural healthcare systems, Uganda Treatment effect was estimated with $\text{text}\{logit\}(\pi) = \beta_0 + \beta_1 p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: Pan-African, longitudinal, panel-data, fixed-effects, econometrics, healthcare-systems, clinical-outcomes

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