



Methodological Assessment of District Hospital Systems in Tanzania Using Quasi-Experimental Designs for Efficiency Measurement

Nabuli Mwinyi^{1,2}, Kamasi Saitoti^{1,3}, Mwehebbbo Sanyafu²

¹ Tanzania Wildlife Research Institute (TAWIRI)

² University of Dar es Salaam

³ Catholic University of Health and Allied Sciences (CUHAS)

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Correspondence: nmwinyi@outlook.com

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Author notes

Nabuli Mwinyi is affiliated with Tanzania Wildlife Research Institute (TAWIRI) and focuses on Medicine research in Africa.

Kamasi Saitoti is affiliated with Catholic University of Health and Allied Sciences (CUHAS) and focuses on Medicine research in Africa.

Mwehebbbo Sanyafu is affiliated with University of Dar es Salaam and focuses on Medicine research in Africa.

Abstract

This review article assesses the methodological approaches used to evaluate district hospital systems in Tanzania, with a focus on efficiency measurement. Quasi-experimental designs are reviewed, including regression discontinuity (RD) and difference-in-differences (DiD), with a focus on their application to healthcare settings and the challenges of data collection in rural areas. One specific challenge identified is the need for more consistent and reliable data sources across different districts, which can affect the accuracy of efficiency measurements. This review highlights the importance of robust data collection methods and the potential utility of RD designs over DiD when dealing with heterogeneous treatment effects in district hospitals. Researchers are advised to prioritise building a comprehensive database that includes multiple sources of information, such as electronic health records and administrative databases. Treatment effect was estimated with $\text{text}\{logit\}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, Tanzanian, quasi-experimental, econometrics, healthcare delivery, performance measurement, spatial analysis*

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