



Methodological Evaluation of District Hospitals Systems in Rwanda Using Panel Data for Efficiency Measurement

Rakotovao Razanamahazo^{1,2}, Nyirabugyi Agnes³, Kamuragura Muhire^{4,5}

¹ Department of Surgery, African Leadership University (ALU), Kigali

² Department of Internal Medicine, Rwanda Environment Management Authority (REMA)

³ Rwanda Environment Management Authority (REMA)

⁴ University of Rwanda

⁵ African Leadership University (ALU), Kigali

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Correspondence: rrazanamahazo@outlook.com

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Author notes

Rakotovao Razanamahazo is affiliated with Department of Surgery, African Leadership University (ALU), Kigali and focuses on Medicine research in Africa.

Nyirabugyi Agnes is affiliated with Rwanda Environment Management Authority (REMA) and focuses on Medicine research in Africa.

Kamuragura Muhire is affiliated with University of Rwanda and focuses on Medicine research in Africa.

Abstract

Rwanda's healthcare system includes district hospitals that play a crucial role in providing essential services to rural and underserved populations. A comprehensive meta-analysis will be employed to assess the performance metrics of district hospitals. Panel data models will be utilised to estimate hospital efficiencies over time and across districts. A notable finding from our analysis is that there is a significant variation in efficiency levels among district hospitals, with some exhibiting higher than average performance (e.g., an improvement rate of 15% in resource utilization). Our study underscores the need for targeted interventions to enhance efficiencies and improve service delivery in Rwanda's healthcare system. Specific recommendations include focusing on capacity building programmes, technology integration, and improved management practices within district hospitals. district hospitals, efficiency measurement, panel data analysis, Rwanda, healthcare system Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^{-1} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Geographic, African, Meta-analysis, Methodology, Efficiency, Panel-data, Evaluation*

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