



Methodological Evaluation of District Hospitals Systems in Rwanda Using Panel Data Analysis for Yield Improvement

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Abstract

District hospitals in Rwanda face challenges in yielding optimal healthcare outcomes. Panel-data estimation was employed to assess yield improvement, with robust standard errors accounting for within-cluster correlation. The analysis indicated that investment in training healthcare professionals led to an average 15% increase in patient satisfaction scores (95% CI: [8%, 22%]). The study underscores the critical role of human capital development in enhancing hospital performance, offering a concrete example for other African contexts. District health authorities should prioritise investment in staff training and retention to improve healthcare delivery. Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: District hospitals, Rwanda, Panel data, Econometrics, Health economics, Methodology, Africa

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