



# Methodological Evaluation of District Hospitals Systems in Tanzania Using Panel Data for Measuring Adoption Rates

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## Abstract

District hospitals in Tanzania face challenges related to resource allocation and service delivery efficiency. A comprehensive review was conducted using systematic methods, including a literature search across multiple databases. The review aimed to identify and synthesize studies that utilised panel data techniques to evaluate hospital system adoptions. Panel data estimation revealed significant variation in adoption rates among hospitals, with some adopting services at a rate of up to 85%. The use of panel data methodology provided valuable insights into the dynamics and success factors of healthcare system adoptions within district hospitals in Tanzania. Further research should explore additional variables influencing adoption rates and consider longitudinal studies for more robust conclusions. Treatment effect was estimated with  $\text{text}\{logit\}(\pi) = \beta_0 + \beta^* p X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** African healthcare, panel data analysis, health systems reform, district hospitals, resource allocation, service delivery, evaluation methods

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