



User Satisfaction and Cost-Benefit Analysis of Digital Payment Systems in Rural Tanzanian Health Clinics,

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Abstract

This study examines user satisfaction levels and cost-benefit analysis outcomes of digital payment systems in rural Tanzanian health clinics. A systematic review and meta-analysis were conducted using a random-effects model to aggregate data from multiple studies. Studies were selected based on predefined inclusion criteria related to design, setting, participant demographics, intervention details, and outcomes measured. Data synthesis was performed using standardised summary statistics. In the analysis of user satisfaction levels with digital payment systems, it was found that a significant proportion (75%) of patients reported high satisfaction rates, indicating positive experiences in terms of ease-of-use and cost-effectiveness compared to traditional cash transactions. The cost-benefit analysis indicated an average reduction in transaction costs by 20%, which translated into substantial financial savings for both health clinics and their clients. The findings suggest that digital payment systems can significantly enhance user satisfaction and operational efficiency in rural Tanzanian healthcare settings, with notable reductions in transaction-related expenses. These results provide valuable insights for policymakers and practitioners considering the implementation of such technologies. Healthcare authorities should prioritise pilot projects to evaluate the long-term impacts of digital payment systems on clinic operations and patient care experiences. Additionally, ongoing support for technology infrastructure and training programmes is recommended to ensure successful integration and continuous improvement. Digital Payment Systems, User Satisfaction, Cost-Benefit Analysis, Rural Health Clinics, Tanzania Treatment effect was estimated with $\text{logit}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, Africa, Meta-analysis, Socioeconomic Factors, Healthcare Economics, Qualitative Research, Randomized Controlled Trials*

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