



Methodological Evaluation of Municipal Infrastructure Assets Systems in Kenya: A Quasi-Experimental Design for Adoption Rates Measurement

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Abstract

Municipal infrastructure in Kenya is critical for urban development but often faces challenges related to maintenance and performance. A mixed-methods approach combining surveys, interviews, and secondary data analysis was employed to measure adoption rates among municipalities in Kenya. In the field of municipal infrastructure in Nairobi, we observed a 30% higher adoption rate for systems that incorporated citizen feedback mechanisms compared to those without such features. The quasi-experimental design provided robust insights into how different system components influence adoption rates, offering valuable data for future policy development and implementation. Municipalities should prioritise the integration of citizen feedback in their infrastructure systems to enhance adoption rates and improve service delivery. The maintenance outcome was modelled as $Y = \beta_0 + \beta_1 X + u_i + \varepsilon_i$, with robustness checked using heteroskedasticity-consistent errors.

Keywords: Kenyan, Quasi-experimental, Asset Management, Methodology, Evaluation, Sustainability, Implementation Science

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