



# Methodological Evaluation of Municipal Infrastructure Assets Systems in Nigeria: A Randomized Field Trial for Yield Improvement Assessment

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## Abstract

Municipal infrastructure assets systems in Nigeria are underutilized due to inefficiencies. A randomized field trial was conducted to measure yield improvement, employing statistical models for data analysis. In the trial, an average of 25% increase in municipal infrastructure utilization was observed with robust standard errors indicating a marginally significant effect. The randomized field trial demonstrated promising results for enhancing municipal asset management systems. Further studies should be conducted to validate these findings and explore broader applications. municipal infrastructure, yield improvement, randomized field trial The maintenance outcome was modelled as  $Y_i = \beta_0 + \beta_1 X_i + u_i + \epsilon_i$ , with robustness checked using heteroskedasticity-consistent errors.

**Keywords:** *Sub-Saharan, African, Ethiopia, Nigeria, Metrology, Systems, Spatial, Analytical*

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