



Evaluating Municipal Infrastructure Assets Systems in Nigeria Through Panel Data Estimation for Yield Improvement

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Abstract

Nigerian municipal infrastructure assets systems face challenges in efficient operations and yield measurement. Panel data econometric models were employed to analyse the municipal infrastructure systems' performance across multiple time periods and entities. Robust standard errors were used to account for potential heteroscedasticity and autocorrelation. The analysis revealed a significant positive impact of investment on yield improvement, with municipalities investing more than

5 million achieving an average annual yield increase of $12\frac{\%}{three}$ years. This study underscores the importance of

$Y_{it} = \beta_0 + \beta_1 X_{it} + \epsilon_{it}$, with robustness checked using heteroskedasticity-consistent errors.

Keywords: Pan-African, Municipal, Econometrics, Panel Data, Asset Management, Efficiency, Sustainability

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