African Materials Engineering

Methodological Assessment of Quasi-Experimental Design in Evaluating Cost-Effectiveness of Water Treatment Facilities in Nigeria [2007]

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Abstract

Water treatment facilities in Nigeria face challenges related to cost-effectiveness due to varying environmental conditions and technological advancements. A quasi-experimental design was employed, utilising statistical models for analysis. Uncertainty in findings is considered within a 95% confidence interval. The methodological assessment revealed significant variation in cost-effectiveness metrics across different regions of Nigeria. Quasi-experimental design provided valuable insights into the variability of water treatment facility costs and effectiveness in Nigerian settings. Further research should explore regional-specific factors influencing cost-effectiveness to inform policy decisions. Water Treatment Facilities, Quasi-Experimental Design, Cost-Effectiveness, Nigeria The maintenance outcome was modelled as $Y\{\} = beta0 + beta1\,X\{\} + ui + varepsilon\{\}$, with robustness checked using heteroskedasticity-consistent errors.

Keywords: *Geographic, Africa, Quasi-experimental, Design, Evaluation, Systems, Methodology, Water, Quality*

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