African Legislative Studies (Political Science focus)

Methodological Assessment of Secondary School Systems in Nigeria Using Panel Data for Efficiency Analysis

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Abstract

This study examines secondary school systems in Nigeria by employing panel data analysis to evaluate efficiency gains across the country. This research utilizes a fixed effects model estimated using Stata software. The panel data covers several years and regions in Nigeria, allowing for an assessment of school efficiency over time. The analysis reveals significant variations in the operational efficiency of secondary schools across different regions, with some schools demonstrating efficiencies up to 85%. Despite challenges, this study highlights that targeted interventions could substantially enhance educational outcomes and resource utilization in Nigerian secondary school systems. Policy recommendations include the implementation of technology-driven solutions for resource management and the provision of training programmes for teachers to improve teaching methodologies. Model estimation used $\hat{\{\theta\}} = argmin\{\theta\} sumiell(yi, f\theta(\xi)) + \lambda lVert\theta rVert 2^2$, with performance evaluated using out-of-sample error.

Keywords: *Panel data, Nigeria, Education economics, Efficiency analysis, Fixed effects model, Econometrics, African education systems*

ABSTRACT-ONLY PUBLICATION

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