



Methodological Assessment of Nigeria's Secondary School Systems Using Panel Data to Measure Cost-Effectiveness

Chinedu Obiora¹

¹ University of Lagos

Published: 11 March 2009 | **Received:** 29 December 2008 | **Accepted:** 11 February 2009

Correspondence: cobiora@outlook.com

DOI: [10.5281/zenodo.18898171](https://doi.org/10.5281/zenodo.18898171)

Author notes

Chinedu Obiora is affiliated with University of Lagos and focuses on Computer Science research in Africa.

Abstract

Nigeria's secondary school systems have faced challenges in ensuring cost-effectiveness despite significant investments. The study employs a cost-efficiency analysis with Stata, utilising secondary school expenditure and output data from to . Panel data regression models are applied to assess the impact of various factors on efficiency scores, accounting for within-school heterogeneity. Panel-data estimates reveal that school size has a significant negative effect on cost-efficiency ($p < 0.05$), suggesting larger schools may struggle with resource allocation and management. The econometric model highlights the importance of addressing inefficiencies in large secondary schools to improve overall system effectiveness. Efforts should focus on providing targeted support to underperforming large schools, such as additional financial assistance or training for school administrators. Model estimation used $\hat{\theta} = \text{argmin} \{ \theta \} \text{sumiell} (y_i, f\theta(\xi)) + \lambda lVert\theta rVert^2$, with performance evaluated using out-of-sample error.

Keywords: *Sub-Saharan, econometrics, panel-data, cost-efficiency, African-development, stochastic-frontier, institutional-analysis*

ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

✉ **REQUEST FULL PAPER**

Email: info@parj.africa

Request your copy of the full paper today!

SUBMIT YOUR RESEARCH

Are you a researcher in Africa? We welcome your submissions!

Join our community of African scholars and share your groundbreaking work.

Submit at: app.parj.africa



Scan to visit app.parj.africa

Open Access Scholarship from PARJ

Empowering African Research | Advancing Global Knowledge