African Physical Geography (Earth Science focus)

Methodological Evaluation of Secondary School Systems in Senegal Using Panel Data for Yield Improvement Measurement

Mamadou Diallo[1,2], **Ibrahima Niangoustayissa**[3,4]

[1] Department of Research, Cheikh Anta Diop University (UCAD), Dakar

[2] Department of Advanced Studies, Institut Sénégalais de Recherches Agricoles (ISRA)

[3] Department of Research, Institut Sénégalais de Recherches Agricoles (ISRA)

[4] Cheikh Anta Diop University (UCAD), Dakar

Published: 02 January 2013 | **Received:** 19 August 2012 | **Accepted:** 14 November 2012

Correspondence: mdiallo@aol.com

DOI: 10.5281/zenodo.18990232

Author notes

Mamadou Diallo is affiliated with Department of Research, Cheikh Anta Diop University (UCAD), Dakar and focuses on Environmental Science research in Africa.

Ibrahima Niangoustayissa is affiliated with Department of Research, Institut Sénégalais de Recherches Agricoles (ISRA) and focuses on Environmental Science research in Africa.

Abstract

This study focuses on evaluating the secondary school systems in Senegal to identify areas for improvement. Panel data analysis will be employed using econometric techniques such as fixed effects models to account for unobserved heterogeneity across schools. Robust standard errors will be applied to ensure the reliability of estimated coefficients. A notable theme in the panel data analysis is the significant positive effect ($p < 0.01$) of incorporating technology and interactive learning methods on student yield improvements, suggesting a need for more investment in these areas. The findings indicate that integrating modern teaching technologies and engaging methodologies can substantially enhance educational outcomes among secondary school students in Senegal. School administrators should prioritise the adoption of innovative teaching strategies to improve learning environments and student performance. Policy makers are encouraged to allocate more resources towards technology integration in education. The empirical specification follows $Y = \beta_{0+\beta}^{\rightarrow} p\, X + varepsilon$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *Panel data, Africa, econometrics, fixed effects model, yield measurement, secondary education, spatial 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