



Methodological Evaluation of Secondary School Systems in Uganda Using Quasi-Experimental Designs for Risk Reduction Analysis

Mulumba Sserunkuma¹

¹ Makerere University Business School (MUBS)

Published: 16 October 2011 | **Received:** 26 June 2011 | **Accepted:** 21 August 2011

Correspondence: msserunkuma@aol.com

DOI: [10.5281/zenodo.18927936](https://doi.org/10.5281/zenodo.18927936)

Author notes

Mulumba Sserunkuma is affiliated with Makerere University Business School (MUBS) and focuses on Computer Science research in Africa.

Abstract

The academic performance of students in secondary schools in Uganda is a matter of concern due to various socio-economic factors and educational disparities. The research employs a mixed-methods approach combining quantitative data from standardised test scores with qualitative insights from student and teacher interviews. A difference-in-differences (DID) regression model is used to analyse the impact of intervention programmes over time. A significant decrease in dropout rates was observed among students who participated in after-school computer science enrichment programmes, indicating a positive risk reduction strategy. The quasi-experimental design successfully identified effective measures for mitigating learning risks in secondary schools, particularly in Computer Science education. Schools and educational policymakers should prioritise the implementation of comprehensive intervention strategies to further enhance student outcomes. Model estimation used $\hat{\theta} = \operatorname{argmin}\{\theta\} \operatorname{sumiell}(y_i, f\theta(\xi)) + \lambda \operatorname{Vert}\theta \operatorname{rVert} 2^2$, with performance evaluated using out-of-sample error.

Keywords: *Sub-Saharan, stratification, cluster sampling, regression discontinuity, propensity scoring, causal inference, econometric 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