African Supply Chain Management

Methodological Assessment of Secondary School Systems in Ethiopia: Quasi-Experimental Design for Adoption Rate Measurement

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Published: 21 May 2011 | **Received:** 01 January 2011 | **Accepted:** 08 April 2011

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DOI: 10.5281/zenodo.18936908

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Abstract

The Ethiopian secondary school system is a critical component of educational infrastructure, yet its efficiency and effectiveness have not been thoroughly assessed. A quasi-experimental design is employed, incorporating pre- and post-intervention data collection methods. The study utilizes propensity score matching (PSM) to ensure comparability between treatment and control groups. An initial analysis suggests a significant improvement in adoption rates for computer science technologies among schools receiving intervention compared to those not exposed. The quasi-experimental approach provides robust evidence on the impact of technology adoption in Ethiopian secondary schools, enhancing educational outcomes. Further research should explore long-term effects and scalability of interventions across different regions. Secondary Schools, Quasi-Experimental Design, Adoption Rates, Propensity Score Matching Model estimation used $\hat{\{}\theta\}=argmin\{\theta\}sumiell(yi,f\theta(\xi))+\lambda lVert\theta rVert2^2$, with performance evaluated using out-of-sample error.

Keywords: *Sub-Saharan, stratification, regression analysis, randomized controlled trial, sampling methodology, inferential statistics, qualitative assessment*

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