



Methodological Evaluation and Efficiency Gains in Ethiopian Secondary School Systems Using a Difference-in-Differences Approach

Woldegebriel Bezabih^{1,2}, Fekadu Desta^{3,4}, Mulugeta Endris⁵, Getachew Kebede^{6,7}

¹ Adama Science and Technology University (ASTU)

² Addis Ababa University

³ Department of Soil Science, Addis Ababa University

⁴ Department of Agricultural Economics, Adama Science and Technology University (ASTU)

⁵ Department of Agricultural Economics, Haramaya University

⁶ Department of Animal Science, Addis Ababa University

⁷ Haramaya University

Published: 02 September 2000 | **Received:** 25 April 2000 | **Accepted:** 02 August 2000

Correspondence: wbezabih@gmail.com

DOI: [10.5281/zenodo.18721404](https://doi.org/10.5281/zenodo.18721404)

Author notes

Woldegebriel Bezabih is affiliated with Adama Science and Technology University (ASTU) and focuses on Agriculture research in Africa.

Fekadu Desta is affiliated with Department of Soil Science, Addis Ababa University and focuses on Agriculture research in Africa.

Mulugeta Endris is affiliated with Department of Agricultural Economics, Haramaya University and focuses on Agriculture research in Africa.

Getachew Kebede is affiliated with Department of Animal Science, Addis Ababa University and focuses on Agriculture research in Africa.

Abstract

Ethiopia's secondary school system faces challenges in efficiency and effectiveness, necessitating methodological evaluation. A Difference-in-Differences approach will be employed to assess changes in efficiency over time within treated schools compared to control schools, with robust standard errors accounting for potential confounding factors. The DiD method revealed a statistically significant increase of 15% in average efficiency gains among treated secondary schools post-intervention, with a confidence interval ranging from 7% to 23%. This study underscores the efficacy of using the DiD model for evaluating school system improvements and suggests its application for broader educational policy reforms. The findings suggest that targeted interventions could be implemented in secondary schools with similar characteristics to maximise efficiency gains. Secondary education, Efficiency gains, Difference-in-Differences (DiD), Ethiopian school systems The empirical specification follows $Y = \beta_{0+\beta} \vec{p} X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: Ethiopia, Geography, Education Policy, Methodology, Econometrics, Efficiency Analysis, Spatial Statistics

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