



# Methodological Evaluation of Secondary School Systems in Rwanda Using Panel Data for Clinical Outcomes Measurement

Methodological  
Evaluation of Secondary  
School Systems

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## Abstract

This study evaluates the effectiveness of secondary school systems in Rwanda by analysing clinical outcomes data. A longitudinal analysis was conducted using secondary data from the Ministry of Education and Health in Rwanda. Mixed-effects regression models were employed to estimate the effects of school systems on clinical outcomes such as vaccination rates and malnutrition levels among students. The mixed-effects regression model revealed a significant positive correlation between better school infrastructure and improved vaccination coverage ( $p < 0.05$ ), suggesting that adequate facilities enhance immunization rates. This study underscores the importance of robust school systems in achieving health metrics, particularly in terms of preventive healthcare measures like vaccinations. Investment in school infrastructure should be prioritised to ensure equitable access to education and better health outcomes for students in Rwanda. secondary schools, clinical outcomes, panel data, mixed-effects regression, school infrastructure, vaccination rates The empirical specification follows  $Y = \beta_{0+\beta}^{-1} p X + varepsilon$ , and inference is reported with uncertainty-aware statistical criteria.

**Keywords:** Rwanda, Panel data, Methodology, School effectiveness, Clinical outcomes, Quantitative analysis, Educational evaluation, Longitudinal studies

## ABSTRACT-ONLY PUBLICATION

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

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