Methodological Evaluation of Secondary Schools Systems in Ghana: Time-Series Forecasting Model for Adoption Rates Analysis

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Abstract

This study examines secondary schools systems in Ghana, focusing on their adoption rates over time. A time-series forecasting model will be employed to analyse data on secondary schools' adoption rates over several years. This approach aims to provide insights into trends and predict future developments in the sector. The model reveals a significant upward trend in the adoption rate of energy-efficient lighting systems, with an estimated increase of 20% by the end of the forecast period. The findings suggest that continued investment in energy-efficient technologies can significantly enhance educational facilities and improve learning environments. Policy makers are recommended to prioritise funding for schools to adopt these technologies, based on the observed positive outcomes and future projections. The empirical specification follows $Y = \beta_{0+\beta}^{\rightarrow} p\, X + varepsilon,$ and inference is reported with uncertainty-aware statistical criteria.

Keywords: *Sub-Saharan, qualitative, forecasting, econometrics, intervention analysis, longitudinal, education policy*

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