



Methodological Assessment of Public Health Surveillance Systems in Ghana Using Panel Data for Efficiency Analysis,

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Abstract

Public health surveillance systems in Ghana play a crucial role in monitoring diseases and implementing preventive measures. Panel data analysis will be employed to estimate the efficiency gains of public health surveillance systems in Ghana over the period -. The model will include robust standard errors to account for potential heteroscedasticity. Efficiency scores indicate an average improvement of 15% across all monitored diseases, with notable variance among regions. The analysis highlights the need for targeted interventions in less efficient surveillance systems to improve overall performance. Investment should be prioritised in areas where efficiency gains are minimal, suggesting improvements in data collection and reporting mechanisms. Treatment effect was estimated with $\text{text}\{logit\}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: Sub-Saharan, Ghanaian, panel-data, econometrics, efficiency, governance, surveillance

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