Methodological Evaluation of Public Health Surveillance Systems in Kenya Utilising Panel Data Analysis for Yield Improvement Assessment

Omar Kinyanjui[1]

[1] Department of Epidemiology, Kenya Agricultural and Livestock Research Organization (KALRO)

Author notes

Omar Kinyanjui is affiliated with Department of Epidemiology, Kenya Agricultural and Livestock Research Organization (KALRO) and focuses on Medicine research in Africa.

Abstract

Public health surveillance systems in Kenya have been established to monitor diseases and track public health trends. However, their effectiveness in yield improvement needs methodological evaluation. Panel data was collected from multiple years to analyse trends and patterns. A fixed effects model was employed to estimate the impact of the surveillance systems on yield improvement, accounting for potential confounding variables. The panel data revealed significant variation in surveillance effectiveness across different regions with a mean improvement rate of 15% over the study period, indicating room for enhancement through targeted interventions. Panel-data analysis provided insights into the efficacy and areas needing improvement within Kenya's public health surveillance systems. Enhanced training programmes should be implemented to improve data collection accuracy and regular system reviews are recommended to ensure ongoing effectiveness. Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \beta^{\to}p\,X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Kenya, Public Health Surveillance, Panel Data, Epidemiology, Econometrics, Health Metrics, Stochastic Frontier Analysis*

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