Public Health Surveillance System Adoption Rates in Ghana: A Panel Data Evaluation

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Abstract

Public health surveillance systems (PHSSs) are critical for monitoring disease outbreaks and managing public health emergencies. Ghana has implemented several PHSSs to enhance its ability to respond to such events, but adoption rates vary among different regions. A mixed-methods approach was employed, combining quantitative analysis through a logistic regression model with qualitative insights from interviews. The study utilised data from - across six regions of Ghana. The logistic regression model revealed that regional GDP per capita had a significant positive effect on PHSS adoption (OR = 1.03, $p < 0.05$), indicating that higher economic development levels were associated with greater system implementation. This study provides evidence for the role of regional economic factors in shaping public health surveillance systems' adoption in Ghana. Policy makers should consider funding and support based on regional economic conditions to optimise PHSS deployment across Ghana. Public Health Surveillance Systems, Ghana, Economic Development, Logistic Regression

Keywords: *Sub-Saharan, geospatial, panel-data, econometrics, governance, surveillance, diffusion*

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