Time-Series Forecasting Model for Evaluating Community Health Centre Systems in Ethiopia,

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Abstract

This study focuses on evaluating community health centre systems in Ethiopia, aiming to understand their reliability over time. A time-series analysis was conducted using data from to , with the model accounting for seasonality and random shocks. Robust standard errors were used to quantify uncertainty in forecasts. The model predicted a consistent trend of increasing patient visits by approximately 5% each year within the forecast period, highlighting system growth. The time-series forecasting model effectively captured the dynamics of community health centre systems and provided reliable predictions for future evaluations. Further studies should explore scalability of this model across different regions in Ethiopia to enhance healthcare planning. Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \beta^{\neg}\,p\,X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Ethiopia, Geographic Information Systems (GIS), Spatial Analysis, Data Mining, Time-Series Analysis, Predictive Analytics, Public Health Systems Evaluation*

ABSTRACT-ONLY PUBLICATION

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