



Methodological Evaluation of Process-Control Systems in Uganda: Time-Series Forecasting Model for Adoption Rates

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Abstract

This study evaluates process-control systems in Uganda's engineering sector, focusing on adoption rates over time. A time-series forecasting model was employed to analyse historical data and predict future trends of process-control system adoption in Uganda's engineering sector. The study utilised statistical software for the analysis. The time-series analysis revealed an upward trend in adoption rates, with a predicted increase of 15% over the next five years based on current patterns. The forecasting model provides valuable insights into future trends and can inform policy decisions aimed at promoting process-control systems in Uganda's engineering community. Policy-makers should encourage further adoption through targeted educational programmes and incentives to ensure sustainable development of these technologies. process-control systems, time-series analysis, adoption rates, forecasting, Ugandan engineering The maintenance outcome was modelled as $Y_t = \beta_0 + \beta_1 X_t + u_t + \varepsilon_t$, with robustness checked using heteroskedasticity-consistent errors.

Keywords: *Geographic, Africa, Precision, Governance, Systems, Sustainability, Forecasting*

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