African Diplomacy and International Affairs (Political Science focus)

ICT Infrastructure Development and Economic Growth Nexus in Ethiopia: A Longitudinal Analysis

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Abstract

This study examines the relationship between Information and Communication Technology (ICT) infrastructure development and economic growth in Ethiopia. A cross-sectional time-series regression model was employed to analyse the impact of ICT investment on GDP per capita. Robust standard errors were used to account for potential heteroscedasticity and autocorrelation. The estimated coefficient suggests a significant positive relationship between ICT infrastructure development and economic growth, with an elasticity of around 0.7 in favour of growth. This study contributes to the literature by providing empirical evidence on the effectiveness of ICT investment in fostering economic growth in Ethiopia. Policy makers should prioritise investments in ICT infrastructure to stimulate economic development. ICT Infrastructure, Economic Growth, Regression Analysis, Ethiopian Economy Model estimation used $\hat{\{\theta\}} = argmin\{\theta\} sumiell(yi, f\theta(\xi)) + \lambda lVert\theta rVert 2^2$, with performance evaluated using out-of-sample error.

Keywords: *African Geography, ICT Infrastructure, Economic Growth, Regression Analysis, Development Economics, Information Systems, Longitudinal Studies*

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