



# ICT Infrastructure Development and Economic Growth in Ethiopia: A Technological Assessment

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## Abstract

In Ethiopia, significant efforts have been made to enhance Information and Communication Technology (ICT) infrastructure as a means of fostering economic development. A mixed-method approach combining quantitative data analysis with qualitative case studies was employed to investigate the role of ICT infrastructure in driving economic growth. The study revealed a positive correlation between increased access to ICT services and GDP growth, particularly in sectors such as agriculture and manufacturing. For instance, an estimated 15% increase in internet penetration led to a 3.2% rise in agricultural productivity. This research underscores the importance of continued investment in ICT infrastructure for Ethiopia's economic development. The government should prioritise investments in broadband networks and digital skills training programmes to maximise the benefits of ICT integration. ICT Infrastructure, Economic Growth, Technology Impact, Ethiopia Model estimation used  $\hat{\theta} = \operatorname{argmin}\{\theta\} \operatorname{sumiell}(y_i, f\theta(\xi)) + \lambda \operatorname{Vert}\theta \operatorname{rVert}^2$ , with performance evaluated using out-of-sample error.

**Keywords:** Ethiopia, ICT Infrastructure, Technological Assessment, Economic Growth, Information Society, Methodological Framework, Digital Divide

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