



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

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### Abstract

The development of Information and Communication Technology (ICT) infrastructure is increasingly recognised as a critical factor in driving economic growth across various sectors. A mixed-method approach was employed, combining quantitative data analysis with qualitative insights from expert interviews and case studies. The analysis revealed that a moderate increase in ICT investment has led to a 5% growth rate in GDP over the last five years. The study also identified key themes such as internet connectivity and digital skills training as pivotal for sustained economic development. This research concludes that improving ICT infrastructure can significantly contribute to Ethiopia's economic growth, though challenges remain in terms of equitable access and technological sophistication. To maximise the benefits of ICT investments, it is recommended to prioritise public-private partnerships, targeted digital skills programmes, and fostering innovation ecosystems. ICT Infrastructure, Economic Growth, Ethiopia, Computer Science Model estimation used  $\hat{\theta} = \operatorname{argmin} \{ \theta \} \operatorname{sumiell} ( y_i, f\theta ( \xi ) ) + \lambda \operatorname{Vert} \theta \operatorname{Vert} 2^2$ , with performance evaluated using out-of-sample error.

**Keywords:** Ethiopia, ICT Infrastructure, Technological Development, Economic Growth, Information Society, Modelling, Empirical Analysis

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This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

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