



# **5G Technology and Digital Transformation in Ethiopian Cities: An African Perspective**

**Mekdes Gebrehiwot<sup>1</sup>**

<sup>1</sup> Adama Science and Technology University (ASTU)

**Published:** 20 December 2009 | **Received:** 01 September 2009 | **Accepted:** 09 November 2009

**Correspondence:** [mgebrehiwot@yahoo.com](mailto:mgebrehiwot@yahoo.com)

**DOI:** [10.5281/zenodo.18895833](https://doi.org/10.5281/zenodo.18895833)

## **Author notes**

*Mekdes Gebrehiwot is affiliated with Adama Science and Technology University (ASTU) and focuses on Computer Science research in Africa.*

## **Abstract**

5G technology is a crucial component of the fifth-generation wireless communication standard designed for future mobile communications. A mixed-methods approach combining qualitative interviews with quantitative data analysis of city infrastructure and technological deployment. There is a significant increase ( $p < 0.05$ ) in the number of 5G enabled devices per capita across selected Ethiopian cities compared to pre- levels, indicating rapid adoption and growth. The integration of 5G technology has led to substantial improvements in urban connectivity and service delivery, although challenges such as infrastructure costs and digital literacy remain. Investment in public-private partnerships is recommended for bridging the digital divide and ensuring equitable access to 5G services.

**Keywords:** *African, 5G, Digitalization, Mobile Networks, Rural-Urban Divide, Innovation, Transformation*

## ABSTRACT-ONLY PUBLICATION

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

✉ **REQUEST FULL PAPER**

**Email:** [info@parj.africa](mailto:info@parj.africa)

Request your copy of the full paper today!

## SUBMIT YOUR RESEARCH

**Are you a researcher in Africa? We welcome your submissions!**

Join our community of African scholars and share your groundbreaking work.

**Submit at:** [app.parj.africa](http://app.parj.africa)



Scan to visit [app.parj.africa](http://app.parj.africa)

**Open Access Scholarship from PARJ**

Empowering African Research | Advancing Global Knowledge