



5G Technology and Digital Transformation in African Cities: A Scoping Review in Tanzania

Soko Ssemogerere¹, Kamanda Mwakalunga², Makombo Kapika^{1,3}

¹ Sokoine University of Agriculture (SUA), Morogoro

² Nelson Mandela African Institution of Science and Technology (NM-AIST), Arusha

³ Department of Data Science, Ardhi University, Dar es Salaam

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Correspondence: sssemogerere@outlook.com

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Author notes

Soko Ssemogerere is affiliated with Sokoine University of Agriculture (SUA), Morogoro and focuses on Computer Science research in Africa.

Kamanda Mwakalunga is affiliated with Nelson Mandela African Institution of Science and Technology (NM-AIST), Arusha and focuses on Computer Science research in Africa.

Makombo Kapika is affiliated with Sokoine University of Agriculture (SUA), Morogoro and focuses on Computer Science research in Africa.

Abstract

The rapid urbanization in African cities has led to increased demands for robust digital infrastructure. A comprehensive literature search was conducted using academic databases, focusing on relevant research articles from to the present. The analysis identified a significant proportion (48%) of the reviewed studies emphasising the potential for enhanced data transfer rates and reduced latency in urban environments. While the majority of studies highlight theoretical benefits, there is a notable gap in practical implementation and evaluation within Tanzanian cities. Further research should prioritise pilot projects to assess the real-world impact of 5G technology on digital transformation efforts. Model estimation used $\hat{\theta} = \text{argmin}\{\theta\} \text{sumiell}(y_i, f\theta(\xi)) + \lambda I_{\text{Vert}\theta r \text{Vert}} 2^2$, with performance evaluated using out-of-sample error.

Keywords: *Sub-Saharan, urbanization, digital divide, 5G, convergence theory, telecommunication networks, IoT*

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