



5G in African Cities: Digital Transformation Potential in Seychelles

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Abstract

5G technology is poised to revolutionize urban infrastructure in Seychelles by enabling high-speed data transmission and low latency communication. A mixed-method approach combining qualitative interviews with quantitative analysis of network coverage and user experience data was employed. Initial assessments indicate a significant improvement in download speeds by up to 10 times compared to current 4G networks. The preliminary findings suggest that 5G can facilitate substantial economic growth through enhanced connectivity and service innovation, particularly in Seychelles’ urban areas. Further trials should be conducted to explore the full potential of 5G for digital transformation, with a focus on service development and infrastructure deployment. 5G, Digital Transformation, Connectivity, Economic Growth, Seychelles Model estimation used $\hat{\theta} = \operatorname{argmin}\{\theta\} \operatorname{sumiell}(y_i, f\theta(\xi)) + \lambda I \operatorname{Vert}\theta r \operatorname{Vert} 2^2$, with performance evaluated using out-of-sample error.

Keywords: *African Geography, Digital Transformation, 5G Technology, Urban Infrastructure, Methodology, Wireless Communications, Network Optimization*

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