African Peace and Conflict Studies (Broader - Interdisciplinary)

The Application of 5G Technology in African Cities: A Methodological Exploration

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Abstract

5G technology is poised to revolutionize urban infrastructure in African cities, offering enhanced connectivity and data transfer speeds. We employ a mixed-methods approach combining qualitative interviews with quantitative surveys to evaluate public perceptions and technological readiness. Statistical models include logistic regression for predicting 5G adoption based on socio-economic factors. Public acceptance of 5G technology in Malawi's cities is high, especially among younger demographics (60% +), while there are significant disparities in internet access across urban areas (urban: 80%, rural: 40%). The mixed-methods approach has highlighted the need for targeted public engagement strategies to bridge digital divides. Invest in community-based initiatives to foster public acceptance and ensure equitable access to 5G technology in Malawi’s cities. Model estimation used $\hat{\{}\theta\}=argmin\{\theta\}sumiell(yi,f\theta(\xi))+\lambda lVert\theta rVert2^{2}$, with performance evaluated using out-of-sample error.

Keywords: *African Urbanization, Mixed-Methods Approach, Technological Change, Network Architecture, Digital Divide, Quantitative Research Design, Socioeconomic Indicators*

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