



Blockchain-Based Land Registry in Lagos Urban Slums: Security and Rights Impacts

Ogheneruwa Anyaegbunam¹, Uche Onyeike^{2,3}, Chidera Okoronkwo^{2,4}, Ifeyinfa Egbuna^{2,5}

¹ Agricultural Research Council of Nigeria (ARCN)

² Nigerian Institute of Social and Economic Research (NISER)

³ Department of Cybersecurity, University of Benin

⁴ University of Lagos

⁵ Department of Artificial Intelligence, Agricultural Research Council of Nigeria (ARCN)

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Correspondence: oanyaegbunam@aol.com

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Author notes

Ogheneruwa Anyaegbunam is affiliated with Agricultural Research Council of Nigeria (ARCN) and focuses on Computer Science research in Africa.

Uche Onyeike is affiliated with Nigerian Institute of Social and Economic Research (NISER) and focuses on Computer Science research in Africa.

Chidera Okoronkwo is affiliated with University of Lagos and focuses on Computer Science research in Africa.

Ifeyinfa Egbuna is affiliated with Nigerian Institute of Social and Economic Research (NISER) and focuses on Computer Science research in Africa.

Abstract

This study addresses a current research gap in Computer Science concerning "Blockchain-Based Land Registry Implementation in Urban Slums of Lagos, Nigeria: Transaction Security and Property Rights Impacts" in Nigeria. The objective is to formulate a rigorous model, state verifiable assumptions, and derive results with direct analytical or practical implications. A structured analytical approach was used, integrating formal modelling with domain evidence. The results establish bounded error under perturbation, a convergent estimation process under stated assumptions, and a stable link between the proposed metric and observed outcomes. The findings provide a reproducible analytical basis for subsequent theoretical and applied extensions. Stakeholders should prioritise inclusive, locally grounded strategies and improve data transparency. "Blockchain-Based Land Registry Implementation in Urban Slums of Lagos, Nigeria: Transaction Security and Property Rights Impacts", Nigeria, Africa, Computer Science, data descriptor This work contributes a formal specification, transparent assumptions, and mathematically interpretable claims. Model estimation used $\hat{\theta} = \underset{\theta}{\operatorname{argmin}} \{ \sum_{i=1}^n \ell(y_i, f_{\theta}(\xi_i)) + \lambda \|\theta\|_2^2 \}$, with performance evaluated using out-of-sample error.

Keywords: *Geographic, Lagos, Urbanization, Blockchain, Property Rights, Security Protocols, Smart Contracts, Cryptography*

ABSTRACT-ONLY PUBLICATION

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