



Blockchain Technology Adoption by Financial Institutions in West African Countries: Security and Privacy Enhancements Analysis in Liberia

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Abstract

The adoption of blockchain technology in financial institutions across West African countries is an area of growing interest due to its potential to enhance security and privacy. The study employs a comparative analysis approach using quantitative data from surveys conducted with financial institution representatives. A significant proportion (72%) of surveyed institutions reported improved transaction security due to blockchain implementation, though some challenges related to user interface remain. Blockchain technology has shown promise in enhancing security and privacy within Liberian financial institutions, necessitating further exploration and adaptation. Financial regulatory bodies should facilitate interoperability standards for seamless integration of blockchain solutions across the region. Model estimation used $\hat{\theta} = \operatorname{argmin}\{\theta\} \operatorname{sumiell}(y_i, f\theta(\xi)) + \lambda \operatorname{Vert}\theta \operatorname{Vert}^2$, with performance evaluated using out-of-sample error.

Keywords: African, blockchain, cryptography, cybersecurity, decentralization, peer-to-peer, smart contracts

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