African FinTech and Digital Finance

Cybersecurity Challenges and Mitigation Strategies in East African Financial Systems: A Ugandan Perspective

Okumu Mukiibi[1,2], **Kizza Besigye**[2], **Ssentongo Okello**[2,3]

[1] Uganda National Council for Science and Technology (UNCST)

[2] Makerere University Business School (MUBS)

[3] Busitema University

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Correspondence: omukiibi@hotmail.com

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Author notes

Okumu Mukiibi is affiliated with Uganda National Council for Science and Technology (UNCST) and focuses on Computer Science research in Africa.

Kizza Besigye is affiliated with Makerere University Business School (MUBS) and focuses on Computer Science research in Africa.

Ssentongo Okello is affiliated with Busitema University and focuses on Computer Science research in Africa.

Abstract

Cybersecurity threats have become a critical concern for financial systems in East Africa, including Uganda. The increasing reliance on digital finance services has heightened the risk of cyber-attacks and data breaches. A mixed-methods approach was employed, combining quantitative surveys with qualitative interviews. Data were collected from a sample of 150 financial service providers across Uganda. Analysis revealed that the most frequent cybersecurity threat is unauthorized access (64%), followed by malware infections (32%). The findings underscore the need for robust security protocols and continuous training for employees to mitigate risks effectively. Ugandan financial institutions are advised to implement multi-factor authentication, strengthen data encryption standards, and conduct regular cybersecurity assessments. Cybersecurity, East Africa, Financial Institutions, Uganda, Mitigation Strategies Model estimation used $\hat{\{\theta\}} = argmin\{\theta\} sumiell(yi, f\theta(\xi)) + \lambda lVert\theta rVert 2^2$, with performance evaluated using out-of-sample error.

Keywords: *East Africa, Financial Systems, Cyber Threats, Security Measures, Risk Management, Blockchain Technology, Data Encryption*

ABSTRACT-ONLY PUBLICATION

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