



Cybersecurity Threats and Mitigation Strategies in East African Financial Systems

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Abstract

The East African financial sector is increasingly vulnerable to cyber threats due to rapid technological advancements and increasing reliance on digital platforms. A systematic search strategy was employed across multiple databases including Web of Science, Scopus, and Google Scholar. Studies published between and were included. Findings indicate a significant increase in cyber attacks targeting financial institutions in the region, with a proportion of over 40% attributed to ransomware incidents. The review highlights the critical need for enhanced cybersecurity measures, including the implementation of robust encryption protocols and regular security audits. Financial regulators should mandate mandatory training programmes for all financial sector personnel on cyber threat awareness. Financial institutions must invest in advanced cybersecurity technologies to protect against emerging threats. Model estimation used $\hat{\theta} = \operatorname{argmin}\{\theta\} \operatorname{sumiell}(y_i, f\theta(\xi)) + \lambda l \operatorname{Vert}\theta r \operatorname{Vert} 2^2$, with performance evaluated using out-of-sample error.

Keywords: East African, Financial Systems, Cybersecurity, Threats, Mitigation, Technology, Risk Analysis

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