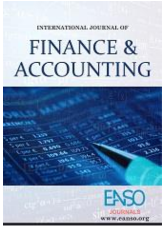

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Original Article

The Implications of Online Banking on Financial Inclusion in Banking Institutions: A Literature Review

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Online Banking, Financial Inclusion, Digital Banking, Financial Services Accessibility, Scopus, Digital Literacy, and Dimension.

ABSTRACT

The study aimed at understanding the implications of online banking on financial inclusion in banking institutions: A literature review on challenges and opportunities. It presents the challenges and opportunities of online banking globally. This study utilized a literature review approach. A comprehensive search was conducted across various academic databases, including Web of Science, Scopus, Dimensions, Google Scholar, and JSTOR, yielding a total of 563 documents. The search was performed using keywords such as “online banking,” “financial inclusion,” “digital banking challenges,” “financial inclusion opportunities,” and “banking institutions.” Boolean operators (e.g., “AND,” “OR”) were used to refine search results and retrieve relevant literature. After filtering, 31 documents were selected for in-depth review based on relevance to the study’s objectives, as evidenced in the reference section. This was after the inclusion and exclusion criteria to ensure the selection of pertinent literature. It was revealed that online banking has transformative potential to advance financial inclusion by making financial services more accessible and affordable. However, it faces challenges that can hinder its impact, including limited digital literacy, high transaction fees, and inadequate infrastructure in certain regions. Therefore, financial institutions should also work to reduce transaction costs and simplify online banking interfaces to accommodate users with low digital skills. Collaboration with financial firms could provide innovative solutions to these issues and improve service delivery.

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INTRODUCTION

Historical, financial inclusion in banking institutions has evolved significantly, driven by a need to provide accessible financial services to underserved populations. Traditionally, banks focused on serving affluent and middle-class customers, with services concentrated in urban areas and limited access for rural populations (Singh & Srivastava, 2020). The concept of financial inclusion emerged more prominently in the mid-20th century, with governments and financial institutions recognizing the importance of providing banking services to low-income and marginalized communities as a tool for economic development and poverty alleviation (Semusu & Turyasingura, 2023). Early efforts included expanding physical bank branches and setting up government-backed initiatives, such as cooperative banks and microfinance institutions, to cater for rural and underbanked populations (Kyabarongo et al., 2024).

In addition, the late 20th century saw technological advances, especially with the rise of mobile and online banking, which revolutionized financial inclusion by lowering operational costs and enabling banking in remote areas (Iwuchukwu et al., 2023; Kyabarongo et al., 2024). In the 21st century, digital finance, driven by innovations in mobile banking, fintech, and blockchain, has become a cornerstone of financial inclusion strategies even during the COVID-19 period (Sekiwu & Ocan, 2022). Today, online and mobile banking continue to play pivotal roles in reaching the unbanked, particularly in developing regions, enabling more individuals to access financial services and participate in the formal economy, thereby fostering economic growth and resilience worldwide (Siano et al., 2020).

Globally, the impact of online banking on financial inclusion across Latin America, Asia, and Europe has not been given much attention (Ozili, 2021). Research in these regions demonstrates varied effects, with significant adoption rates in Europe and Asia, while Latin America faces challenges related to infrastructure and digital literacy Pham and Doan (2020) highlighted the role of mobile banking and fintech innovations in closing the financial gap across these regions.

In Africa, online banking has become an essential tool for advancing financial inclusion, driven by the continent's rapid mobile penetration and the rise of fintech innovations (Siano et al., 2020). While traditional banking infrastructure remains underdeveloped in many areas, digital financial services are expanding access to banking for millions who previously lacked formal financial services (Mbabazi & Agaba, 2021). Mobile banking platforms, particularly, have empowered individuals in rural and underserved regions to save, transfer, and borrow money, reducing reliance on cash transactions. Agaba and Christine (2023) show that online banking significantly reduces transaction costs and expands accessibility, with platforms like M-Pesa in Kenya and mobile wallets across Nigeria and South Africa serving as regional success stories (Mulili, 2022). Nevertheless, challenges such as limited internet connectivity, regulatory constraints, and digital literacy gaps continue to hinder full inclusion.

Sub-Saharan Africa (SSA) has experienced remarkable growth in online banking adoption, largely due to its pioneering role in mobile money services (Kyabarongo et al., 2022). Mobile banking in SSA has allowed millions of previously unbanked individuals to access financial services, enhancing financial inclusion on an unprecedented scale (Tafotie, 2020). In countries such as Kenya, Tanzania, and Ghana, mobile money has become a key driver of financial inclusion, with studies revealing a positive correlation between mobile banking availability and the increase in formal banking participation. However, SSA still faces challenges in bridging the financial inclusion gap. Many rural

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regions continue to grapple with limited infrastructure, connectivity issues, and a lack of digital literacy (Freeman et al., 2020). For online banking to reach its full potential, these challenges must be addressed through targeted policies, increased digital literacy initiatives, and improved technological infrastructure to extend financial services further into underserved areas.

East African countries have seen significant advances in financial inclusion, largely driven by the success of mobile and online banking platforms. Kenya, Uganda, and Tanzania, in particular, have witnessed rapid growth in mobile money services, which have increased access to financial services for both urban and rural populations (Eton et al., 2021). Platforms like Kenya's M-Pesa have reshaped the financial landscape, facilitating digital transactions that bypass the need for traditional banking infrastructure. Online banking has also enabled small businesses to conduct transactions more efficiently, contributing to economic growth in the region. Nonetheless, some challenges remain, including limited internet access and high mobile data costs, which can restrict usage. Continued investment in digital infrastructure and tailored financial products will be crucial to sustain and expand financial inclusion efforts across East Africa.

In Uganda, online banking has been instrumental in promoting financial inclusion, especially in rural and underserved areas. The adoption of mobile banking services has provided many Ugandans with access to essential financial services, including savings, loans, and transfers, that were previously inaccessible (Moses et al., 2023). The Ugandan government has also supported financial inclusion initiatives, such as the National Financial Inclusion Strategy, which emphasizes the importance of digital financial services. Studies indicate that online banking has helped reduce transaction costs and provided a safer alternative to cash, thus contributing to economic resilience (John Bosco et al., 2023). However, challenges such as limited mobile network coverage in rural areas, low digital literacy, and high transaction fees hinder widespread adoption. For Uganda to fully harness the benefits of online banking, efforts must focus on enhancing internet connectivity, increasing digital literacy, and designing affordable financial products for low-income populations.

In Kabale District, online banking presents both opportunities and challenges for financial inclusion. Kabale is a predominantly rural district with a high reliance on agriculture, and access to traditional banking services is often limited due to infrastructure constraints. The introduction of mobile and online banking has enabled residents to conduct transactions remotely, offering a viable alternative to cash transactions (Bosco, 2021). Studies indicate that while online banking has expanded financial access in Kabale, issues like digital literacy, internet access, and network coverage remain significant barriers (Micheal et al., 2020). Furthermore, high transaction fees discourage frequent use of online banking among low-income residents. Addressing these obstacles requires targeted interventions, including training programs to enhance digital literacy and investment in reliable network infrastructure. Such efforts could significantly enhance financial inclusion in Kabale, enabling residents to participate more fully in the formal economy and improve their financial resilience (Phelix et al., 2020).

This paper is structured as follows: The first section introduces the Implications of online banking on financial inclusion. The second section outlines the methodology used in the study and the third section presents a review of the relevant literature. The fourth section presents the concluding section and discusses the policy implications of the study.

METHODOLOGY

This study utilized a literature review approach to explore the implications of online banking on financial inclusion in banking institutions, focusing on challenges and opportunities. A comprehensive search was conducted across various academic databases, including Web of Science, Scopus, Dimensions, Google Scholar,

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and JSTOR, yielding a total of 563 documents (Turyasingura et al., 2022). The search was performed using keywords such as “online banking,” “financial inclusion,” “digital banking challenges,” “financial inclusion opportunities,” and “banking institutions.” Boolean operators (e.g., “AND,” “OR”) were used to refine search results and retrieve relevant literature (KATEL et al., 2023). After filtering, 100 documents were selected for in-depth review based on relevance to the study’s objectives, as evidenced in the reference section (Chavula & Turyasingura, 2022). Each document was reviewed for insights into the role of online banking in enhancing or hindering financial inclusion, drawing from recent studies published within the last decade to ensure contemporary relevance.

An inclusion and exclusion criterion was established to ensure the selection of pertinent literature in line with the study conducted by Turyasingura et al. (2023) using bibliometric analysis. Studies that directly addressed online banking’s impact on financial inclusion, particularly in terms of accessibility, affordability, digital literacy, and infrastructure, were included. Articles focused exclusively on unrelated topics, such as traditional banking services or unrelated fintech products, were excluded. Additionally, literature discussing online banking challenges specific to financial inclusion was prioritized, while studies not covering both online banking and financial inclusion were omitted. This selection process ensured that only relevant studies contributed to the analysis, providing a robust foundation for understanding the opportunities and challenges presented by online banking in promoting financial inclusion.

LITERATURE REVIEW

Online banking, while instrumental in enhancing financial inclusion, faces several challenges that hinder its effectiveness. One major barrier is limited digital literacy, especially among low-income and rural populations, which impedes effective use of online banking services. Many potential users lack familiarity with digital platforms, which reduces adoption rates and risks marginalizing these groups further (Banna et al., 2022). Additionally, limited internet and mobile infrastructure in remote areas restrict access, especially in regions where network coverage and power supply are unreliable (Koomson et al., 2020). High transaction fees associated with online banking also pose a challenge, discouraging frequent use among low-income individuals. Privacy and security concerns around digital transactions further hinder user confidence, with cyberattacks and fraud risks potentially deterring adoption. Addressing these challenges requires targeted interventions to improve digital literacy, expand infrastructure, and reduce costs to ensure inclusive access and user trust.

On the other hand, online banking offers numerous opportunities to advance financial inclusion. It provides a low-cost and efficient means for banks to extend services to previously underserved areas, eliminating the need for physical branches. This is particularly impactful in rural regions, where traditional banking infrastructure is sparse (Demirgüç-Kunt et al., 2020). Online banking also offers convenience, allowing users to perform transactions anytime, which increases financial accessibility. Digital platforms can enable micro-loans, savings programs, and financial literacy initiatives tailored to low-income users, fostering greater economic empowerment. Moreover, the growing integration of mobile wallets with online banking creates further opportunities for collaboration between banks and fintech, expanding access to financial services beyond traditional banking customers (Tay et al., 2022). With supportive regulatory frameworks and continued technological innovation, online banking has the potential to make financial services more inclusive, particularly in developing regions.

Studies by Ahmad et al. (2020) demonstrate that online banking, through mobile platforms, has dramatically increased financial access for rural and low-income populations in Africa. By eliminating geographical constraints, digital banking provides greater convenience and lower transaction costs, which are essential in regions with limited brick-and-mortar bank branches.

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Similarly, Ankunda (2016) found that online banking's accessibility leads to increased financial literacy and participation in formal economies. Conversely, other studies, such as those by Adam and Dzang Alhassan (2021) indicate that while online banking has significantly improved inclusion rates, the digital divide in internet access, particularly in rural areas, still excludes a segment of the population. This divergence highlights the importance of improving digital infrastructure to maximize online banking's inclusive potential (Agaba et al., 2023).

On the other hand, scholars critique the reliance on internal audits, suggesting that it often creates a false sense of security. Kyabarongo et al. (2024) assert that some SACCOs focus too much on audits while neglecting other vital control mechanisms like segregation of duties and employee training. This critique illustrates a broader issue in internal control frameworks—an overemphasis on one component while underestimating the need for a comprehensive strategy involving multiple controls working synergistically. Therefore, a critical synthesis of these findings reveals the need for a balanced internal control system that not only focuses on financial audits but also incorporates governance, segregation of duties, and staff training. For example, Turyasingura and Moses (2023) show that when SACCOs adopt integrated internal control systems, their financial performance improves markedly, primarily through enhanced operational efficiency and reduced incidences of fraud. Connecting these arguments, it is clear that internal controls contribute to financial stability (Byanyima et al., 2025), but their effectiveness is contingent upon the proper implementation and integration of all control components (Johnson et al., 2021).

CONCLUSION AND POLICY RECOMMENDATIONS

In conclusion, online banking has a transformative potential to advance financial inclusion by making financial services more accessible and affordable. However, it faces challenges that can hinder its impact, including limited digital literacy, high transaction fees, and inadequate infrastructure in certain regions. Policymakers should focus on bridging the digital divide by improving internet connectivity, especially in rural areas, and enhancing digital literacy through targeted education programs. Banks should focus on reducing transaction costs and simplifying online banking interfaces to accommodate users with limited digital skills. They should also adopt artificial intelligence (AI) technology, as highlighted by Turyasingura et al. (2024) whose findings emphasize the critical need for collaboration among governments, industries, and academia to harness AI in achieving SDGs and addressing global challenges. Collaborating with financial firms can further drive innovation, offering tailored solutions to enhance service delivery and accessibility. Such partnerships can bridge technological gaps, improve user experiences, and contribute to broader economic inclusion and sustainable development efforts.

New Knowledge and Contribution to Development Agendas

This study generates new insights by identifying the interplay between online banking and financial inclusion challenges and opportunities, highlighting the need for a multifaceted approach involving technology, policy, and education globally than before. This knowledge may contribute to Uganda's Third National Development Plan (NDPIII) and the East Africa Vision by encouraging digital infrastructure development and increased financial literacy. By addressing gaps in digital banking access, this approach also aligns with the African Union Agenda 2063, which prioritizes inclusive growth and economic empowerment through technological innovation. Additionally, this study may support the UN Sustainable Development Goals (SDGs), particularly SDG 1 (No Poverty), SDG 8 (Decent Work and Economic Growth), and SDG 9 (Industry, Innovation, and Infrastructure) by promoting financial inclusion, which can lead to poverty reduction and economic resilience through improved access to financial services.

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