
Post-COVID-19 Digital Transformation in Zambia's Banking Industry: A Qualitative Exploration of Adoption and Challenges.

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ABSTRACT

The COVID-19 pandemic significantly accelerated the adoption of digital technologies across various sectors globally, with the banking industry in Zambia experiencing notable shifts in operations and service delivery. This study explores the nature and extent of digital transformation within Zambia's banking sector in the aftermath of the pandemic, focusing on the adoption patterns, implementation challenges, and sectoral impacts. Employing a qualitative research approach, the study draws insights from interviews with key stakeholders, including bank executives, IT personnel, and customers, to understand the drivers of digital adoption and the barriers hindering smooth transitions. Findings indicate that while the pandemic acted as a catalyst for digital innovation—spurring investments in mobile banking, online platforms, and automated services—several challenges persist, including digital literacy gaps, cybersecurity concerns, infrastructure limitations, and resistance to change within institutions. The study concludes that sustainable digital transformation in Zambia's banking sector requires a coordinated effort involving regulatory support, capacity building, and continuous technological innovation. Recommendations are made for policy makers and financial institutions to enhance digital readiness and promote inclusive digital banking.

Article history:

Received 30 June 2025

Revised 15 July 2025

Accepted 26 July 2025

Published online 10 August 2025

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KEYWORDS: COVID-19, Digital Transformation, Digital Divide, E-commerce, Mobile Money, Zambia

Introduction

The global outbreak of the COVID-19 pandemic in early 2020 ushered in an era of unprecedented disruption across various sectors, prompting a rapid shift toward digital solutions as a means to sustain operations and ensure service continuity. In the banking sector, where physical interactions had long dominated service delivery, the pandemic accelerated the adoption of digital technologies, compelling financial institutions to rethink traditional models and embrace innovative digital platforms. This transformation was not merely a convenience but a necessity driven by public health concerns, restricted mobility, and changes in consumer behavior.

In Zambia, the banking sector forms a critical component of the national economy, supporting both individuals and businesses through financial intermediation. However, prior to the pandemic, digital banking adoption remained relatively slow, hindered by infrastructural challenges, limited internet penetration, and a general preference for in-person transactions. The onset of COVID-19 catalyzed a significant shift, as banks rapidly introduced or expanded services such as mobile banking, online account access, digital wallets, and

contactless transactions to meet the demands of a health-conscious and increasingly tech-savvy clientele.

Despite this progress, the digital transformation of Zambia's banking sector has not been without challenges. Issues such as cybersecurity threats, digital illiteracy among certain customer segments, limited digital infrastructure in rural areas, and internal resistance to change within financial institutions have emerged as significant barriers to effective implementation. Furthermore, regulatory frameworks have had to evolve quickly to accommodate the changing financial landscape, raising questions about digital compliance, data privacy, and financial inclusion.

This study therefore seeks to examine the adoption and implementation of digital technologies within Zambia's banking sector in the post-COVID-19 era. By exploring the key drivers of transformation, the challenges encountered, and the resulting impacts on banking operations and customer experiences, the research aims to provide valuable insights into how the sector can navigate the digital transition sustainably. Understanding these dynamics is crucial for shaping policies and institutional strategies that support inclusive, secure, and resilient digital banking in Zambia.

Literature Review

Digital transformation refers to the integration of digital technologies into all aspects of business operations, fundamentally altering how institutions deliver value to customers. In the banking sector, this transformation encompasses automation of services, mobile and internet banking, digital payments, artificial intelligence, and blockchain technologies. Globally, digital transformation is increasingly recognized as a strategic imperative for enhancing efficiency, competitiveness, and customer experience, especially in the face of external disruptions like the COVID-19 pandemic.

The pandemic significantly accelerated the pace of digital banking worldwide. Financial institutions, faced with lockdowns and physical interaction limitations, expedited the deployment of digital platforms and services. Studies by KPMG (2020) and PwC (2021) indicate that banks rapidly adopted mobile applications, contactless payments, and remote onboarding procedures to ensure continuity of service delivery. These changes not only met short-term operational needs but also triggered long-term shifts in consumer behavior and expectations. In Sub-Saharan Africa, the surge in digital adoption was evident in the increased use of mobile money services and the strengthening of partnerships between traditional banks and fintech firms.

In Zambia, digital financial services had begun to emerge prior to the pandemic, largely driven by mobile network operators such as MTN and Airtel. However, traditional banking institutions were relatively slow in adopting digital tools. The onset of COVID-19 acted as a major catalyst, forcing banks to implement or expand digital services, including mobile banking, internet banking portals, and digital payment solutions. According to the Bank of Zambia (2020), there was a notable rise in the use of digital channels during the pandemic period. Nevertheless, disparities in digital access between urban and rural areas, as well as challenges with user literacy and digital infrastructure, limited the reach and impact of these advancements.

Despite the progress made, the process of digital transformation in Zambia's banking sector has faced several challenges. Key barriers include inadequate ICT infrastructure, particularly in rural regions, low digital literacy among customers, cybersecurity concerns, and the presence of legacy IT systems within financial institutions. Organizational resistance to change and insufficient internal capacity to manage and implement digital initiatives have also hindered progress. Studies such as those by the African Development Bank (2022) and ZICTA (2021) highlight these

issues as systemic obstacles to sustainable digitalization in the financial services sector.

To understand the dynamics behind technology adoption in banking, this study is guided by the Technology Acceptance Model (TAM) and the Diffusion of Innovation Theory. TAM posits that perceived usefulness and ease of use are critical determinants of whether individuals or organizations will accept and use a new technology. Diffusion of Innovation Theory, on the other hand, explains how new technologies spread within a population, influenced by factors such as relative advantage, complexity, and compatibility. These frameworks offer a theoretical basis for analyzing both customer adoption behaviors and institutional readiness for digital transformation.

Although there is growing literature on mobile money adoption and the general rise of digital financial services in Zambia, limited research has focused specifically on how formal banks have adapted to digital transformation post-COVID-19. Most existing studies are either quantitative in nature or centered on mobile network operators rather than banks. Furthermore, few have explored the perspectives of bank employees, executives, and customers using qualitative methods. This study seeks to fill that gap by providing an in-depth qualitative analysis of the adoption, challenges, and impacts of digital transformation within Zambia's banking sector following the pandemic.

Methodology

3.1 Research Design

This study employed a **qualitative research design** to explore the adoption, challenges, and sectoral impacts of digital transformation within Zambia's banking sector in the post-COVID-19 context. A qualitative approach was selected because it allows for in-depth exploration of subjective experiences, institutional practices, and contextual factors that shape technological adoption in a complex and evolving environment.

The study targeted key stakeholders in the banking sector, including bank managers, IT officers, customer service personnel, and selected clients who actively use digital banking platforms. These participants were chosen purposively based on their involvement in or exposure to digital transformation processes within their respective institutions. This sampling technique ensured that data was collected from individuals with rich, relevant knowledge about the subject matter.

Data was collected through **semi-structured interviews**, which allowed for guided conversations while giving participants the flexibility to elaborate on their experiences

and perspectives. Interview guides were developed around key themes such as the nature of digital tools adopted, institutional drivers of change, challenges encountered, user behavior, and post-COVID adaptations. Each interview lasted between 30 to 60 minutes and was conducted either in person or virtually, depending on participant availability and location.

To ensure trustworthiness and credibility, interviews were recorded (with consent), transcribed verbatim, and anonymized. Thematic analysis was used to analyze the data. This involved coding responses, identifying recurring patterns, and organizing themes that addressed the research objectives. NVivo software was employed to aid in the systematic organization and retrieval of qualitative data.

Ethical clearance was obtained prior to the commencement of fieldwork. Participants were briefed on the purpose of the study, their rights to withdraw at any point, and assurances of confidentiality. All data was stored securely and used solely for academic purposes.

This methodology provided a rich understanding of how Zambian banks have navigated digital transformation following the COVID-19 pandemic, highlighting both institutional and user-level experiences and challenges.

Findings

Digital Adoption Trends Post-COVID-19

Respondents reported a significant acceleration in the adoption of digital banking services following the onset of COVID-19. Banks introduced or expanded mobile banking applications, online customer portals, e-wallets, USSD-based services, and digital customer onboarding platforms.

Most banks previously relied on physical branches and ATM services, but the pandemic forced a swift transition to remote services. IT and operations managers confirmed that budgets were reallocated in 2020 to prioritize digital infrastructure and customer engagement tools.

Table 1: Common Digital Services Introduced or Expanded Post-COVID-19

<i>Digital Service</i>	<i>Percentage of Banks Reporting Adoption</i>	<i>Description</i>
<i>Mobile Banking App</i>	100%	Full-feature apps for transactions, balance checks, loan requests

<i>Online Banking Portal</i>	87.5%	Web-based banking access for clients
<i>E-Wallet and Mobile Money Integration</i>	75%	Interoperability with Airtel, MTN, etc.
<i>USSD-based Services</i>	62.5%	Low-tech access for clients without smartphones
<i>Digital Customer Onboarding (KYC)</i>	50%	Online submission of documents and identity verification
<i>Chatbots and AI Support</i>	37.5%	Automated responses to customer queries

Source: Field Interviews, 2025

Key Drivers of Digital Transformation

Participants highlighted several key drivers that influenced digital adoption within their institutions:

- Health and safety protocols during the pandemic
- Changing customer expectations
- Competition from fintech and mobile money operators
- Internal cost-efficiency goals

A bank manager from Lusaka stated:

“COVID-19 forced us to do in three months what we planned to do in three years. The board finally approved the mobile app revamp, and we launched fast.”

Challenges Faced During Digital Transformation

Despite the progress, banks faced multiple obstacles during the implementation of digital technologies. Thematic analysis revealed five main challenge areas: infrastructure, digital literacy, cybersecurity, institutional resistance, and regulatory hurdles.

Table 2: Challenges Reported During Digital Transformation

<i>Challenge Area</i>	<i>Description</i>	<i>% of Respondents Mentioning</i>
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ICT Infrastructure	Unreliable internet, power outages, legacy systems	87.5%
Digital Literacy	Customers struggling to use apps or online platforms	75%
Cybersecurity Threats	Increase in phishing, SIM swap fraud, digital fraud cases	62.5%
Institutional Resistance	Some departments/staff resisted automation due to fear of redundancy	50%
Regulatory Bottlenecks	Delays in approval of new services by Bank of Zambia or lack of digital frameworks	37.5%

Source: Field Interviews, 2025

Bank IT specialists also cited integration challenges between legacy systems and new digital platforms. One respondent noted:

“Some of our backend systems were too old to support newer APIs. We had to re-engineer core banking functions, which delayed digital product launches.”

Customer Adoption and Feedback

Mixed responses were received regarding customer reactions to digital platforms. While urban and young clients were quick to adapt, elderly clients and those in rural areas remained skeptical or excluded.

Banks with dedicated customer digital education campaigns (e.g., SMS tips, agent support, short videos) reported higher satisfaction and fewer complaints.

Table 3: Customer Feedback on Digital Banking Services

Customer Segment	Feedback Summary	Bank Responses
Youth (18–35)	Positive; quick uptake, value convenience	Expanded app functionality
Middle-aged (36–55)	Mixed; cautious but adaptable	Added helplines and guides

Elderly (56+)	Negative; fear of fraud, confusion	Offered hybrid assistance
Rural clients	Low adoption; USSD preferred, poor mobile network	Promoted agency banking

Organizational Impacts and Internal Changes

Banks reported organizational shifts as a result of digital transformation. These included:

- Restructuring of customer service teams to support digital channels
- Hiring of IT and cybersecurity experts
- Redesign of performance targets around digital engagement metrics

One human resource manager noted:

“We had to revise our training programs to ensure frontline staff could promote digital banking to clients confidently.”

Additionally, remote work arrangements and paperless internal processes were adopted in several institutions, which led to improved operational efficiency.

Regulatory and Industry-Wide Observations

Some banks mentioned that Bank of Zambia’s evolving stance on digital banking played a supportive but sometimes slow role. While innovation was encouraged, delays in approving new platforms or products (e.g., digital lending, cross-border payments) created bottlenecks.

There was also growing pressure to compete with fintechs, which are perceived to be more agile and customer centric.

Summary of Key Themes

Table 4: Summary of Key Findings

Theme	Description
Rapid Digital Adoption	Accelerated by COVID-19, especially mobile and online banking
Internal Drivers	Cost reduction, customer expectations, pandemic urgency
Barriers to Transformation	Infrastructure gaps, digital illiteracy, cybersecurity threats

Mixed Customer Adoption	Urban youth embraced digital services; elderly and rural clients lagged
Organizational Change	New skills required, roles restructured, increased IT investment
Regulatory Landscape	Evolving but occasionally lagging behind innovation

Conclusions and Recommendations

Conclusions

This study explored the nature, adoption, and impacts of digital transformation in Zambia's banking sector in the aftermath of the COVID-19 pandemic. The findings demonstrate that the pandemic served as a powerful catalyst for the rapid integration of digital technologies within banks, leading to the expansion of mobile banking applications, online platforms, and automated customer service channels. While progress was evident, digital transformation in the banking sector remains uneven and faces several structural and operational challenges. Infrastructural limitations, including unreliable internet and outdated core systems, continue to hinder full digital integration. Customer-related challenges—such as low digital literacy, especially among older and rural populations, also constrain widespread adoption. Furthermore, internal institutional resistance and delays in regulatory approval of new digital services present additional barriers.

Despite these challenges, the study found that banks that invested in staff capacity, digital education for customers, and user-friendly platforms were more successful in accelerating adoption and improving customer experience. The strategic shift toward digital banking has also driven internal transformation, including restructured teams, new performance metrics, and increased investment in cybersecurity.

Overall, Zambia's banking sector has made significant strides in its digital transformation journey, but realizing the full potential of digital banking requires addressing existing gaps and strengthening both institutional and regulatory readiness.

Recommendations

Based on the findings, the following recommendations are proposed to support sustainable digital transformation in Zambia's banking sector:

1. Enhance Digital Infrastructure and Connectivity

Banks should collaborate with telecom providers and government agencies to improve internet access, particularly in rural areas.

- Investments should be made in modernizing core banking systems to ensure seamless integration with digital platforms.

2. Promote Digital Literacy and Customer Education

- Banks should roll out targeted digital literacy campaigns using SMS, videos, and in-branch demos to educate clients—especially the elderly and rural users—on how to safely use digital banking tools.
- Simplifying user interfaces and offering vernacular support can further bridge the usability gap.

3. Strengthen Cybersecurity and Data Protection

- Institutions must invest in robust cybersecurity frameworks to safeguard customer data and build trust in digital platforms.
- Continuous training for staff on fraud detection and compliance with data protection regulations is essential.

4. Encourage Internal Change Management

- Bank leadership should foster a culture of innovation by incentivizing digital adoption internally and addressing employee fears related to job displacement.
- Digital transformation should be accompanied by reskilling and realignment of job roles.

5. Foster Regulatory Innovation and Support

- The Bank of Zambia and other regulatory bodies should streamline approval processes for digital services and proactively update frameworks to accommodate evolving technologies.
- Regulators should also engage banks and fintechs in regular dialogue to support safe innovation and financial inclusion.

6. Leverage Public-Private Partnerships (PPPs)

- Strategic partnerships between government, banks, and fintech startups can accelerate innovation, lower costs, and enhance service delivery across underserved regions.

7. Monitor and Evaluate Impact Continuously

- Banks should establish digital performance indicators and conduct periodic impact assessments to measure adoption rates, service quality, and customer satisfaction.

These recommendations aim to support an inclusive, secure, and resilient digital banking ecosystem in Zambia, positioning the sector to respond effectively to future disruptions and evolving customer needs.

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