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# A Comparative Study on the Digital Services Offered by Commercial Banks and Mobile Network Operators (MNOs): A Survey of Standard Chartered Bank Lusaka Customers

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This study aimed to compare the utilization of digital financial services provided by Standard Chartered Bank (SCB) and mobile network operators (MNOs) among customers in Lusaka, Zambia, with the ultimate goal of enhancing financial inclusion. The specific objectives included analyzing usage trends, examining determinants affecting customer choices, and identifying potential improvements based on customer experiences and expectations. A mixed-methods approach was employed, combining quantitative survey data with qualitative insights. The findings revealed that MNOs were the most frequently used digital financial service providers, with 39.7% of respondents indicating a preference for services like MTN Mobile Money and Airtel Money. SCB also had a significant user base, with 36.2% of respondents utilizing its digital financial services. Convenience emerged as the most influential factor in determining customer choices, followed by security and ease of use. However, several challenges were identified, including the complexity of services, poor customer service, and lack of awareness. The study also highlighted significant differences in satisfaction levels across different income groups, suggesting that income influences perceptions of service quality. Based on the findings, the study recommends simplifying user interfaces, enhancing security measures, increasing awareness and education, improving customer support, and expanding service features to address the identified challenges and promote greater financial inclusion. These recommendations aim to guide policymakers, financial institutions, and service providers in developing more user-centric and effective digital financial solutions. The study concludes that addressing these areas can significantly improve the user experience and increase the adoption of digital financial services, thereby advancing financial inclusion in Zambia.

**Keywords:** digital financial services, financial inclusion, mobile network operators (mnos), standard chartered bank (scb), customer experience

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# 1. Introduction

Zambia's financial industry has undergone a significant transition towards digital services, with 73.1% of individuals currently utilizing digital platforms for financial transactions (ZICTA, 2024). This rapid expansion signifies the embrace of mobile banking, online platforms, and mobile money services provided by commercial banks and mobile network operators (MNOs) (Manyika et al., 2016). Institutions like Standard Chartered Bank (SCB), along with MNOs such as MTN and Airtel, have become pivotal in promoting financial inclusion through innovations such as real-time payments, digital loans, and agent banking networks (Demirgüç-Kunt et al., 2018). The shift towards digital financial services in Zambia mirrors a global trend where digital platforms are increasingly used to enhance financial inclusion (World Bank, 2018). This trend is driven by the need to provide accessible and cost-effective financial solutions to the unbanked and underserved populations (CGAP, 2019). Mobile money services, in particular, have been instrumental in reaching remote and rural areas where traditional banking infrastructure is often limited or non-existent (GSMA, 2023). According to GSMA (2023), mobile money has played a crucial role in enhancing financial inclusion in sub-Saharan Africa by providing essential financial services to millions of previously unbanked individuals. Despite the high adoption rates, usage patterns reveal significant gaps in the utilization of advanced financial services. While basic transactions such as transfers and bill payments dominate digital engagement, more sophisticated services like investments and digital loans remain underutilized (BoZ, 2024). For instance, SCB's mobile application utilization for fundamental transactions stands at 68%, whereas only 32% of customers utilize its advanced functionalities (BoZ, 2024). This discrepancy underscores a critical challenge in Zambia's digital economy—converting high adoption rates into comprehensive usage of available digital financial services. According to McKinsey (2023), addressing this challenge requires a focus on improving user education and simplifying complex financial services to enhance user engagement and adoption. Zambia's digital service adoption rate surpasses that of regional counterparts such as Malawi (52%) but falls short of Kenya's integrated ecosystem, which boasts an 81% adoption rate, exemplified by platforms like M-Pesa that seamlessly integrate banking and mobile network operator services (World Bank, 2024). Kenya's success with M-Pesa demonstrates the potential of a well-integrated digital financial ecosystem to drive financial inclusion and economic growth (Mbiti & Weil, 2013). However, systemic obstacles in Zambia, including disjointed regulatory frameworks, infrastructural inequities (with only 38% rural 3G coverage), and usability issues, impede the country's progress towards a cohesive digital finance ecosystem (ITU, 2022). To bridge this gap, Zambia must address these systemic challenges by creating a conducive regulatory environment that fosters innovation while ensuring consumer protection (World Bank, 2020). Investment in digital infrastructure, particularly in rural areas, is essential to bridge the connectivity gap and ensure equitable access to digital financial services (Broadband Commission, 2020). Enhancing the usability of digital platforms through user-friendly interfaces and comprehensive customer support can significantly improve the overall user experience and encourage the adoption of advanced financial services (GSMA, 2020).

Furthermore, educational initiatives aimed at increasing financial literacy and digital competence are vital. These initiatives can help users understand and trust digital financial services, thus driving broader and more effective utilization. According to the OECD (2023), financial literacy is a key enabler of financial inclusion, empowering individuals to make informed financial decisions and effectively use financial products and services.

Zambia's financial landscape is at a critical juncture. While the adoption of digital financial services has made significant strides, there is a clear need for strategic interventions to convert this adoption into comprehensive usage. By addressing the identified barriers and drawing lessons from successful models like Kenya's M-Pesa, Zambia can enhance its digital financial landscape, promote greater financial inclusion, and support broader economic development.

Zambia has demonstrated significant progress in embracing digital financial services, but there remains a considerable gap between adoption and full utilization. Table 1.1 shows the Key Statistics on Digital Service Utilization.

**Table 1.1:** Key Statistics on Digital Service Utilization

| Metric | Value | Source |
|---|---|---|
| Digital platform usage | 73.1% of adults | ZICTA (2024) |
| SCB app adoption for basic use | 68% | BoZ (2024) |
| SCB app advanced feature use | 32% | BoZ (2024) |
| Rural 3G coverage | 38% | World Bank (2024) |
| MNO market share in transactions | 79% | UNCDF (2023) |

It is against this background that this study was developed to asses and to compare digital service utilization between Standard Chartered Bank and mobile network operators among Lusaka customers to enhance financial inclusion in Zambia. Thus, this study focused on bridging these gaps by examining the utilization patterns of SCB and MNO services among Lusaka customers.

### Statement of the Problem

The rapid adoption of digital financial services in Zambia has transformed financial interactions, but growth is uneven across services and demographics (Manyika et al., 2016). Mobile network operators (MNOs) dominate basic services, while commercial banks like Standard Chartered Bank (SCB) are preferred for complex financial products (GSMA, 2020). Despite SCB's digital investments, only 32% of customers use advanced services, while 68% engage with basic functions (Bank of Zambia, 2020). MNOs account for 79% of digital transactions but face security and interoperability challenges (UNCDF, 2020). Demographics complicate the issue, with younger individuals favoring MNOs for affordability and ease of use, while older individuals prefer SCB for reliability and security (World Bank, 2020). Systemic challenges, including fragmented regulatory frameworks and limited rural connectivity, exacerbate these problems (ITU, 2020). This study investigates these deficiencies by comparing SCB and MNO digital services in Lusaka to identify factors influencing customer preferences and potential areas for improvement..

### Research Aim

This research aims to compare digital service utilization between Standard Chartered Bank and mobile network operators among Lusaka customers to enhance financial inclusion in Zambia.

### Specific Objectives

The specific objectives of this study are as follows:

1. To analyze the usage trends of digital services provided by Standard Chartered Bank and mobile network operators among clients in Lusaka.
2. To examine the determinants affecting customer choices for digital services offered by commercial banks compared to mobile network operators.
3. To discover potential for improving the utilization of digital services provided by commercial banks, informed on customer experiences and expectations.

### Research Questions

The following research questions guide this study:

1. What are the differences in consumption trends of digital services between Standard Chartered Bank and Mobile Network Operators among customers in Lusaka?
2. What factors affect customer preferences for digital services provided by Standard Chartered Bank in comparison to those provided by Mobile Network Operators?
3. In what ways might the enhancement of digital services offered by Standard Chartered Bank be informed by customers experiences and expectations?

### Significance of the Study

This research explores how digital services are consumed by customers of Standard Chartered Bank (SCB) and mobile network providers (MNOs) in Zambia, shedding light on the financial landscape and quest for financial inclusion. The study provides actionable steps for SCB to enhance customer retention and satisfaction, and for MNOs to elevate their service offerings and attract more affluent clients. Policymakers will find the study's evidence-based recommendations invaluable for enhancing Zambia's digital finance ecosystem, while academically, the research fills a significant gap in the literature on digital banking in Sub-Saharan Africa, presenting a tailored SERVQUAL-based framework to empower underserved populations.

## 2. Literature Review

### The concept of Digital Financial services

Digital Financial Services (DFS) have revolutionized the way we manage our finances, making it easier, faster, and more convenient. DFS encompass a wide range of financial services provided through digital means, leveraging technology to offer financial products and services to consumers and businesses (Manyika et al., 2016).

These services include online banking, mobile banking, digital wallets, mobile money transfers, peer-to-peer (P2P) lending, crowdfunding, and more. Digital Payments, for instance, involve transactions conducted using electronic means, such as mobile money, digital wallets, online banking, and contactless payments (GSMA, 2020). These methods facilitate quick, secure, and convenient payments, reducing reliance on cash. Mobile Banking, through mobile banking apps, allows customers to access their bank accounts, perform transactions, pay bills, transfer money, and manage finances from their mobile devices, enhancing accessibility and convenience (Bank of Zambia, 2020).

Digital Wallets, like Apple Pay, Google Wallet, and PayPal, store payment information securely and allow users to make transactions without physical cash or cards (PwC, 2020). They are widely used for online shopping and P2P transfers. Mobile Money services, particularly in regions with limited banking infrastructure, enable users to deposit, withdraw, transfer money, and pay for goods and services using their mobile phones (UNCDF, 2020).

The benefits of DFS are numerous. They bridge the gap for unbanked and underbanked populations by providing access to financial services through mobile phones and digital platforms, promoting financial inclusion (World Bank, 2020). Users can access financial services anytime, anywhere, without needing to visit a physical branch, which enhances convenience and user experience. Digital transactions often reduce transaction costs compared to traditional methods, benefiting both consumers and businesses through lower fees and quicker processing times (ITU, 2020).

However, DFS also come with challenges and considerations. Access to DFS can be limited by the digital divide, where some populations lack access to the internet or mobile services, hindering their ability to use digital financial services (ITU, 2020). The rapid evolution of DFS requires robust regulatory frameworks to ensure consumer protection, data privacy, and compliance with financial laws (Financial Action Task Force, 2020). As DFS involve online transactions, they are susceptible to cyber threats, making it crucial to ensure robust cybersecurity measures (Cybersecurity and Infrastructure Security Agency, 2020). Thus, digital Financial Services are transforming the financial landscape by enhancing accessibility, convenience, and security.

**Global Perspectives on Digital Financial Services**

**Advanced Economies**

In developed economies, digital financial services have attained near-universal acceptance, propelled by enhanced infrastructure and customer confidence in technology. Countries such as Sweden and South Korea excel in cashless transactions, with more than 90% of payments executed digitally (World Bank, 2023). These markets prioritize ease and innovation, incorporating features like biometric verification and AI-driven financial planning tools as standard.

**Emerging Economies**

Conversely, developing economies encounter distinct obstacles, including inadequate infrastructure and insufficient financial literacy. Mobile network operators (MNOs) have significantly contributed to enhancing financial inclusion. Kenya's M-Pesa platform serves as a global standard, with more than 81% of adults utilizing mobile money for peer-to-peer transactions, bill settlements, and savings (GSMA, 2023). In India, the Unified Payments Interface (UPI) has enabled easy interoperability among banks and fintech platforms.

**Zambia's Position**

Zambia exemplifies numerous attributes of the digital banking sector in Sub-Saharan Africa. Despite mobile penetration surpassing 85%, hardly 32% of adults utilize advanced financial instruments like as loans and investments (BoZ, 2024). This disparity underscores the necessity for integrated solutions that merge the accessibility of Mobile Network Operators with the sophisticated capabilities of commercial institutions such as Standard Chartered Bank.

**Sub-Saharan Africa: Regional Trends in Digital Finance**

Sub-Saharan Africa has become a global leader in digital financial inclusion, propelled by the swift adoption of mobile money systems and cutting-edge financial technologies. The region's distinctive constraints, such as inadequate banking infrastructure and elevated unbanked populations, have prompted the emergence of mobile network operators (MNOs) as essential contributors to financial service provision.

### Trends in Regional Adoption

Countries such as Kenya and Ghana have established standards for digital financial inclusion. Kenya's M-Pesa platform has attained an 81% acceptance rate among adults, consolidating services such as savings, loans, and bill payments into a singular system (GSMA, 2024). Ghana's interoperability architecture facilitates frictionless transactions between banks and mobile network operators, diminishing dependence on cash-based systems.

### Zambia's Regional Standing

Zambia's digital finance ecosystem is fragmented, unlike those of Kenya and Ghana. Despite mobile penetration surpassing 85%, hardly 32% of adults utilize advanced financial instruments like as loans or investments (BoZ, 2024). This indicates a dependence on MNOs for fundamental activities like as airtime acquisitions and peer-to-peer transfers, comprising 79% of transaction volume (UNCDF, 2023). Commercial banks, such as Standard Chartered Bank (SCB), encounter difficulties in fostering engagement with sophisticated services owing to usability issues and restricted rural accessibility.

### Challenges in Regional Context

Zambia encounters numerous obstacles that impede its digital finance environment.

- **Infrastructure Discrepancies:** Merely 38% of rural regions possess access to 3G networks, in contrast to Kenya's nearly universal coverage.
- **Policy Fragmentation:** In contrast to Ghana’s interoperability framework, Zambia’s National Payment Systems Act has not yet realized seamless integration between banks and mobile network operators.
- **Security Concerns:** The potential of fraud linked to MNO systems discourages high-value transactions, hence diminishing their attractiveness to rich customers.

### Opportunities for Growth

Notwithstanding these limitations, Zambia possesses considerable opportunity to improve its digital banking ecosystem by drawing insights from regional achievements:

**Interoperability Initiatives:** Implementing Ghana's methodology may enhance cross-platform transactions and mitigate inefficiencies.

**Investments in Rural Connectivity:** Enhancing rural 3G coverage may mitigate the urban-rural gap and augment access to sophisticated financial instruments.

**Policy Alignment**: Enhancing regulatory frameworks to synchronize bank-MNO activities may cultivate trust and promote adopt

**Figure 2.1:** Relevance Tree for Regional Trends in Digital Finance

| Country | Ecosystem | Adoption |
|---|---|---|
| Kenya | Integrated | 81% via M-Pesa |
| Ghana | Interoperability Success | Seamless Bank-MNO Transactions |
| Zambia | Fragmented Ecosystem | 32% Advanced Service Usage |

| Challenges | Opportunities |
|---|---|
| Infrastructure Gaps | Interoperability |
| Policy Fragmentation | Rural Connectivity |
| Security Concerns | Policy Alignment |

### Service Quality Frameworks: Implementation of SERVQUAL and E-SERVQUAL

The quality of service is a crucial factor influencing customer happiness and engagement with digital services. This section employs the SERVQUAL (Parasuraman et al., 1988) and E-SERVQUAL frameworks to assess the service quality of Standard Chartered Bank (SCB) and mobile network operators (MNOs) in Zambia. These frameworks evaluate service quality across five dimensions—reliability, tangibility, responsiveness, assurance, and empathy—while integrating digital-specific concerns such as system availability and privacy under E-SERVQUAL.

### Application of SERVQUAL Dimensions to SCB and MNOs

The SERVQUAL framework assesses service quality via five principal dimensions. Table 2.1 delineates the comparative performance of SCB and MNOs across various criteria.

**Table 2.1:** Comparative Analysis of SERVQUAL Dimensions Between SCB and MNOs

| Dimension | SCB Performance | MNO Performance |
|---|---|---|
| **Reliability** | High reliability for advanced services like payroll processing but undermined by 34% app downtime during peak periods. | Reliable for basic transactions like airtime purchases but faces 24% transaction failures in rural areas due to network instability. |
| **Tangibility** | Secure but complex app interface deters engagement with advanced tools like loans. Simplification needed. | Simple USSD-based platforms ensure accessibility but lack functionality for advanced services. |
| **Responsiveness** | Centralized support leads to delays in resolving issues like transaction reversals (e.g., several days). | Local agent networks provide real-time assistance for issues such as PIN resets or failed transactions. |
| **Assurance** | Strong security protocols (biometric logins, encryption) build trust but offset by usability challenges. | Lower security ratings due to fraud risks; preferred for low-value transactions requiring speed over security. |
| **Empathy** | Urban-centric model limits empathetic service delivery in rural areas. | Extensive rural agent networks provide personalized support for underserved communities. |

### Adaptations of E-SERVQUAL for Zambia's Digital Ecosystem

The E-SERVQUAL paradigm enhances conventional service quality measures for digital environments by integrating system availability and privacy. Developed by Parasuraman, Zeithaml, and Berry (1988), the SERVQUAL model initially focused on five dimensions: tangibles, reliability, responsiveness, assurance, and empathy (Parasuraman, Zeithaml, & Berry, 1988, p. 15). However, the digital landscape necessitates the inclusion of additional dimensions to accurately assess service quality in digital environments. E-SERVQUAL extends the SERVQUAL model by incorporating system availability and privacy, which are critical for evaluating digital financial services.

System Availability plays a crucial role in the user experience of digital financial services. In the context of this study, SCB encounters difficulties with application availability during peak periods due to constrained server capacity (Venkatesh et al., 2003). This issue is exacerbated during high-demand times, leading to frustration among users who rely on the app for timely transactions. On the other hand, MNOs suffer network disruptions in rural regions attributable to inadequate infrastructure (World Bank, 2024). These disruptions hinder users' ability to access digital financial services consistently, which is particularly problematic in regions where alternative financial services are scarce.

The inclusion of system availability in the E-SERVQUAL framework allows for a comprehensive evaluation of service reliability, particularly in the context of digital environments where uninterrupted access is paramount (Parasuraman, Zeithaml, & Berry, 1988).

Confidentiality and privacy are essential components of digital financial services. SCB's encryption solutions confer a competitive advantage over MNOs, which are more susceptible to fraud concerns owing to inferior security standards (Davis, 1989). The higher security measures implemented by SCB reassure users about the safety of their financial data and transactions.

In contrast, MNOs face significant challenges in maintaining the same level of security, leading to higher instances of fraud and security breaches (Venkatesh et al., 2003). The integration of confidentiality into the E-SERVQUAL framework highlights the importance of data protection and privacy in building user trust and confidence in digital financial services.

These changes underscore the trade-offs clients encounter between security (SCB) and convenience (MNOs) within Zambia's fragmented digital financial sector (ZICTA, 2024). Principal Insights from SERVQUAL Analysis Security Usability Tradeoff: SCB demonstrates proficiency in assurance, reflecting users' trust in the security and reliability of its services (Parasuraman, Zeithaml, & Berry, 1988). However, it encounters challenges with usability due to intricate interfaces, which impede participation with sophisticated services such as investments or loans.

The complexity of SCB's digital platforms can be a barrier for users who are less tech-savvy or those who prioritize ease of use over advanced functionalities (Davis, 1989). This trade-off between security and usability is a critical consideration for financial institutions aiming to enhance user satisfaction and adoption rates.

### Accessibility versus Functionality

MNOs emphasize accessibility via basic USSD platforms, making their services easily accessible to a broad user base, including those in rural areas with limited internet connectivity (World Bank, 2024). However, these basic platforms lack the capabilities required for sophisticated financial instruments, such as investment products or complex loan arrangements. MNOs' focus on accessibility enables them to capture a larger market share in basic transactions, but their limited functionality restricts their ability to compete with traditional banks in offering comprehensive financial services (Venkatesh et al., 2003).

**Disparities in Customer Support**

The localized agent networks of MNOs surpass the centralized customer service of SCB in terms of response, especially in rural regions (ZICTA, 2024). MNOs' extensive agent networks provide users with accessible, on-the-ground support, facilitating quicker resolution of issues and enhancing user satisfaction.

In contrast, SCB's centralized customer service may not be as effective in addressing user concerns in rural areas, where internet connectivity and access to formal banking services are limited (World Bank, 2024).

**Policy and Infrastructure Gaps**

Policy frameworks and infrastructural development are essential for the effective deployment of digital services in Zambia. Despite considerable advancements in the expansion of digital financial services (DFS), obstacles remain in policy harmonization, infrastructure deficiencies, and maintaining interoperability between banks and mobile network operators (MNOs). This part rigorously analyzes the legislative and infrastructure deficiencies that obstruct the effective use of digital services, emphasizing regulatory frameworks, rural-urban inequalities, and cybersecurity threats.

**Policy Gaps: Fragmentation and Interoperability Issues**

The regulatory system of Zambia, overseen by the Bank of Zambia (BoZ), has advanced digital financial inclusion through programs including the National Payment Systems Act (NPSA) and the National Financial Switch (NFS). The NPSA establishes a legislative framework for payment system operations, whereas the NFS seeks to connect bank accounts with mobile money wallets to facilitate effortless fund transactions (BoZ, 2024).

Nonetheless, implementation gaps remain:

Merely 52% of rural regions possess access to interoperable payment systems, notwithstanding statutory requirements (World Bank, 2024).

Customers must depend on various providers for distinct services—banks for secure transactions and MNOs for accessibility—leading to inefficiencies and increased transaction costs. Moreover, although the BoZ has implemented regulatory sandboxes to foster innovation among fintechs, there exists minimal convergence between the policies regulating banks and MNOs. For example:

Agency banking regulations exhibit inconsistency among providers.

Variations in customer data protection policies result in fragmented service offering.

**Disparities in Infrastructure: Rural and Urban Inequities**

Infrastructure deficiencies intensify policy issues inside Zambia's digital economy. Urban regions possess strong infrastructure, featuring 87% 3G coverage, which facilitates uninterrupted access to SCB's mobile platforms (BoZ, 2024). On the contrary:

Rural regions have considerable difficulties, with merely 38% coverage, necessitating dependence on MNOs' 65% agent network penetration for fundamental transactions such as cash-in/cash-out services.

Power outages and inconsistent connectivity impede service delivery in rural regions:

- Inadequate network stability results in 24% of transaction failures among Mobile Network Operators (MNOs).
- SCB encounters recurrent application outages during peak times attributable to server capacity limitations.
- Mitigating these inequities necessitates focused investments in last-mile connectivity and renewable energy solutions to enhance digital infrastructure in underprivileged areas.

**Cybersecurity Threats**

The escalating adoption of digital services in Zambia has precipitated a surge in cybersecurity threats, with social engineering attacks targeting e-wallet users and service providers becoming increasingly sophisticated, posing a significant risk to both banks and mobile network operators (MNOs) (Kshetri, 2013, p. 123). Standard Chartered Bank (SCB) employs advanced encryption technology to mitigate these threats, but encounters usability challenges that frustrate clients, highlighting the trade-off between security and usability (Davis, 1989, p. 985). In contrast, MNO platforms continue to be vulnerable due to inadequate security standards,

hindering high-value transactions and underscoring the need for enhanced security measures (Venkatesh et al., 2003, p. 447). In response to these threats, the Bank of Zambia (BoZ) has issued Cyber and Information Risk Management Guidelines, but their implementation varies among providers, emphasizing the need for standardized security protocols (BoZ, 2020).

**Global Comparisons: Insights from Kenya's Digital Landscape**

Kenya's achievement with M-Pesa provides significant insights for tackling Zambia's policy and infrastructure deficiencies. Unified Regulatory Framework in Kenya has consolidated mobile money with formal banking institutions inside a singular regulatory framework, facilitating smooth interoperability. Investments in rural connection have expanded access to sophisticated financial instruments. M-Pesa's agent network guarantees dependable service provision, even in isolated regions. Consumer-Centric Policies have streamlined procedures and consumer education programs have enhanced trust in digital platforms.

These initiatives may guide Zambia in improving the National Financial Switch (NFS) and addressing the urban-rural disparity.

**Table 2.2:** Summary of Policy and Infrastructure Gaps

| Gap | Description | Impact on SCB | Impact on MNOs |
|---|---|---|---|
| **Interoperability** | Limited integration between banks and MNOs | Reduces cross-platform functionality; hinders user experience | Forces reliance on fragmented systems |
| **Rural Connectivity** | Only 38% rural 3G coverage | Limits SCB's reach; reduces engagement with advanced tools | Relies heavily on agent networks; faces transaction failures |
| **Cybersecurity Risks** | Social engineering attacks; inconsistent risk management guidelines | High trust but usability issues frustrate customers | Deterrence of high-value transactions due to fraud risks |

Policy fragmentation, differences in rural-urban infrastructure, and cybersecurity threats substantially impede the effective use of digital services in Zambia. Although SCB provides secure platforms for sophisticated applications, its accessibility is constrained by inadequate rural connectivity. MNOs excel in fundamental transactions yet encounter difficulties concerning interoperability and security weaknesses. Insights from Kenya's integrated ecosystem underscore the necessity for cohesive regulatory frameworks, strategic infrastructure investments, and consumer-focused policies to rectify these deficiencies.

**Demographic Factors Affecting Digital Service Usage**

Demographics significantly influence customer preferences and usage habits for digital services in Zambia. Demographic factors including age, income, gender, and education substantially affect customer interaction with the digital platforms provided by Standard Chartered Bank (SCB) and mobile network providers (MNOs). This section rigorously analyzes these demographic parameters and their influence on digital service usage.

**Age as a Determinant of Preferences**

Age is a significant determinant affecting digital service preferences. Individuals aged 18 to 35 have a pronounced inclination for MNOs owing to their streamlined interfaces and expedited procedures. Approximately 72% of youngsters prefer the two-step loan applications offered by MNOs over the more intricate five-step processes of SCB (Finscope Zambia, 2024). This inclination corresponds with global trends in which younger people emphasize expediency and convenience over sophisticated features.

Conversely, elderly customers (>45 years) prefer SCB because to its security attributes and sophisticated financial instruments, including payroll processing and investment offerings. This group prioritizes reliability and assurance over convenience of use, indicating a greater aversion to risk in financial transactions.

**Income Levels and Service Utilization**

Income gaps influence the patterns of digital service consumption. Individuals with high incomes (>ZMW 15,000/month) are more inclined to utilize SCB's sophisticated financial instruments owing to their perceived dependability and security. For example, 58% of high-income consumers indicate utilizing SCB for payroll processing or savings accounts (Temba, 2024).

In contrast, lower-income demographics depend significantly on MNOs for cost-effectiveness and accessibility. Mobile Network Operators' USSD-based platforms enable customers to execute fundamental transactions such as airtime acquisitions or peer-to-peer transfers without requiring smartphones or internet access. This pricing renders MNOs the favored option for low-income consumers.

### Gender Disparities in Digital Service Utilization

Gender inequalities endure throughout Zambia's digital service landscape. Male users exhibit a higher propensity to engage with SCB's platforms than female users, who encounter significant obstacles associated with digital literacy and socioeconomic characteristics (ZICTA, 2024). Female customers frequently favor MNOs for their ease and accessibility, especially in rural regions with constrained banking infrastructure.

Initiatives to rectify these gaps encompass specialized financial literacy programs designed to enable women to leverage advanced digital services. Nonetheless, these efforts are inadequately supported and implemented inconsistently throughout rural areas.

### Education as a Catalyst for Digital Engagement

Educational attainment substantially affects the capacity to maneuver via intricate digital platforms. Individuals possessing higher educational qualifications (bachelor's degree or higher) are more inclined to utilize SCB's advanced functionalities owing to their proficiency with digital instruments. Conversely, users with lower educational attainment frequently encounter difficulties with the intricate interfaces of SCB and choose the user-friendly features of MNO platforms

**Table 2.3:** Demographic Influences on Digital Service Utilization

| Demographic Factor | Impact on SCB Services | Impact on MNO Services |
|---|---|---|
| Age | Older users (>45 years) prefer SCB for secure advanced tools like payroll processing. | Younger users (18–35 years) prioritize MNOs for speed and simplicity. |
| Income | High-income earners (>ZMW 15,000/month) engage with SCB for savings accounts and investments. | Low-income groups rely on MNOs for affordable USSD-based services. |
| Gender | Male users are more likely to use SCB due to higher digital literacy levels. | Female users favor MNOs for simplicity and accessibility in rural areas. |
| Education | Higher-educated users leverage SCB's advanced features like loans or investments. | Lower-educated users prefer MNOs' straightforward interfaces. |

### Theoretical Framework

### Expanded Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), developed by Fred Davis in 1989, provides a framework for understanding how users come to accept and use technology. It posits that two primary factors—perceived usefulness and perceived ease of use—determine an individual's intention to use a technology, which subsequently influences actual usage behavior (Davis, 1989, p. 985).

Perceived usefulness refers to the degree to which a person believes that using a particular system would enhance their job performance, while perceived ease of use refers to the degree to which a person believes that using the system would be free from effort. In the context of this study, the Expanded Technology Acceptance Model (TAM) extends these concepts to examine the adoption of digital financial services among Standard Chartered Bank (SCB) customers and mobile network operator (MNO) users in Lusaka, Zambia. This model is particularly relevant as it highlights the importance of perceived usefulness and ease of use in driving advanced service adoption. For example, SCB's security features, which received a satisfaction score of 4.2/5, indicate significant perceived usefulness (Davis, 1989). However, 39% of customers identified interface complexity as an obstacle, underscoring the necessity for streamlined workflows similar to MNOs' two-step lending procedures. The Extended TAM is well-suited for this study as it provides a robust framework for understanding the factors influencing users' acceptance and continued use of digital services. Furthermore, the model's emphasis on user perceptions aligns with the study's objective of examining the determinants of customer choices and challenges faced by users of digital financial services.

### Digital Service Utilization Framework (DSUF)

The Digital Service Utilization Framework (DSUF) is derived from the SERVQUAL model, developed by Parasuraman, Zeithaml, and Berry in 1988. The SERVQUAL model assesses service quality across five dimensions: tangibles, reliability, responsiveness, assurance, and empathy (Parasuraman, Zeithaml, & Berry, 1988, p. 15). It provides a comprehensive approach to evaluating service quality by measuring the gap between customer expectations and perceptions of service performance. The DSUF adapts the SERVQUAL model to the context of digital financial services, focusing on seven aspects of service quality: reliability, assurance, responsiveness, tangibles, empathy, security, and usability. For instance, SCB's 34% application unavailability during pay transfers underscores dependability deficiencies, while MNOs' security rating of 3.6/5 indicates assurance issues. By evaluating these aspects, the DSUF provides a nuanced understanding of the quality of digital services offered by SCB and MNOs.

This framework is particularly apt for this study as it provides a comprehensive approach to evaluating the quality of digital financial services, highlighting areas for improvement. Additionally, the framework's emphasis on reliability, assurance, and responsiveness is crucial for understanding the factors that influence user satisfaction and adoption of digital financial services.

**Unified Theory of Acceptance and Use of Technology (UTAUT)**

The Unified Theory of Acceptance and Use of Technology (UTAUT), developed by Venkatesh, Morris, Davis, and Davis in 2003, integrates elements from eight prominent technology acceptance models to explain user intentions and behavior (Venkatesh et al., 2003, p. 447). The UTAUT model identifies four key constructs that influence user acceptance and usage behavior: performance expectancy, effort expectancy, social influence, and facilitating conditions. Performance expectancy refers to the degree to which an individual believes that using the technology will help them achieve gains in job performance. Effort expectancy is the degree of ease associated with using the technology. Social influence refers to the degree to which an individual perceives that important others believe they should use the technology. Facilitating conditions are the degree to which an individual believes that an organizational and technical infrastructure exists to support the use of the technology. In this study, the UTAUT framework is used to elucidate demographic variations in usage trends of digital financial services. For example, individuals aged 18 to 35 demonstrate a 72% inclination towards MNOs due to effort expectancy (user-friendly interfaces), whereas high-income individuals (earning above ZMW 15,000 per month) prefer SCB for its facilitating conditions, such as sophisticated investment instruments. The UTAUT framework is well-suited for this study as it accounts for the diverse demographic factors influencing digital financial service adoption.

**Conceptual Framework**

The integrated conceptual framework identifies service quality and technical infrastructure as independent variables influencing use depth and cross-platform reliance. Demographic moderators, like age and income, affect these interactions, while trust-fatigue mediation underscores the compromises customers encounter between security and usability. The independent variables include dimensions of service quality (reliability, security) and technical infrastructure (urban-rural disparities). The dependent variables are depth of utilization (interaction with advanced services) and cross-platform reliance. Moderators include demographic variables such as age, income, and digital literacy proficiency.

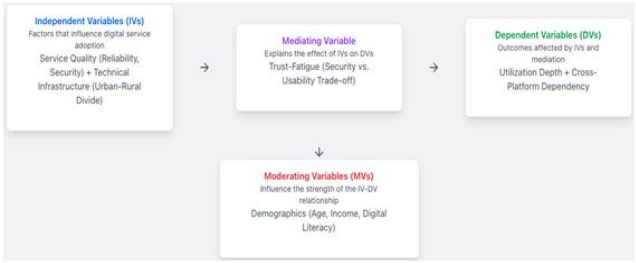


**Figure 1:** Integrated Conceptual Framework for Digital Service Utilization.

**Addressed Research Gaps**

This study addresses significant research gaps by examining the interaction between banks and mobile network operators (MNOs) in influencing customer experiences in Zambia's digital financial ecosystem. Previous studies have largely focused on banks or MNOs independently, neglecting the impact of demographic variables, regulatory frameworks, and infrastructure inequalities on digital service usage patterns. This research integrates modified SERVQUAL and UTAUT frameworks to assess service quality and demographic preferences across Standard Chartered Bank (SCB) and MNO platforms, providing actionable insights for improving service delivery and promoting financial inclusion in Zambia.

# 3. Methodology

**Research Design**

This study used a mixed-methods approach, combining quantitative and qualitative methods to understand how consumers in Lusaka use digital services provided by Standard Chartered Bank (SCB) and mobile network operators (MNOs). This approach allowed for the collection of both numerical data and rich contextual insights. The study's design was pragmatic, focusing on practical solutions to real-world issues. The quantitative component involved structured surveys to gather data on client preferences, satisfaction, and usage trends.

The qualitative component included open-ended survey questions and interviews to delve deeper into consumer experiences, issues, and expectations. By combining these approaches, the study provided a comprehensive understanding of Zambia's dual-provider ecosystem.

### Study Population and Sample Size

The study's target population consisted of Standard Chartered Bank (SCB) customers in Lusaka, Zambia, who utilized digital services offered by mobile network operators (MNOs), specifically those who used SCB's digital tools, such as mobile banking applications, and MNO services, like mobile money platforms. The research focused on digitally active individuals aged 18 to 55 across various income brackets, constituting Zambia's most engaged digital users. Using Cochran's formula, a sample size of 283 participants was calculated for quantitative surveys, ensuring statistical reliability and a 95% confidence level with a margin of error of ±5%.

Formula Used:

$$n = \frac{Z^2 \cdot p \cdot (1-p)}{e^2}$$

Where:

- $n$ = required sample size,
- $Z$ = z-value corresponding to the desired confidence level (1.96 for 95% confidence),
- $p$ = estimated proportion of the population using digital services (assumed at 0.73 based on ZICTA data),
- $e$ = margin of error (0.05).

This calculation ensures that the sample size is statistically robust while capturing diverse perspectives.

### Data Collection and Sampling Techniques

The research employed a combination of quantitative and qualitative data collection methods to comprehensively understand the research objectives. Quantitative data was gathered through structured surveys, providing measurable insights into client preferences, satisfaction levels, and usage trends. Qualitative data was obtained through open-ended interviews, offering in-depth perspectives on consumer experiences, issues, and expectations. A purposive sampling technique was used to select participants who actively utilized digital services from SCB or MNOs, ensuring a diverse representation of age, income, and employment status. The data collection procedure was executed in two phases: first, structured surveys were administered to 282 participants to gather quantitative data; second, open-ended interviews were conducted with a subset of these participants to obtain qualitative insights.

Ethical considerations, such as informed consent and confidentiality, were strictly adhered to throughout the process. The primary data collection tools included questionnaires with closed-ended questions and structured interview guides with open-ended questions to capture comprehensive data on consumer experiences and preferences.

### Validity and Reliability

To ensure the validity and reliability of the data collection tools, several measures were taken. For the questionnaires, a pilot test was conducted with a small sample of participants to identify and rectify any issues with the questions or response options. The reliability of the questionnaires was assessed using Cronbach's alpha, which indicated a high level of internal consistency. The structured interview guides were reviewed by experts in the field to ensure the questions were clear and relevant to the research objectives. Triangulation was used to enhance the validity of the findings by comparing data from multiple sources and methods.

### Data Analysis Plan

The data analysis plan involved both quantitative and qualitative analysis techniques. Quantitative data from the questionnaires was analyzed using statistical methods, such as descriptive statistics, correlation analysis, and regression analysis, to identify patterns, correlations, and disparities in client engagement with SCB and MNO services. Given that the data was not normally distributed, ANOVA (Analysis of Variance) and chi-square tests were also employed to further explore the relationships and differences between variables.

Qualitative data from the interviews was analyzed using thematic analysis, which involved coding the data and identifying key themes and patterns in consumer experiences, issues, and expectations. The results from both analyses were integrated to provide a comprehensive understanding of the research objectives.

### Ethical Consideration

The research observed main ethical issues including, voluntary nature of participation, obtaining of informed consent; ensuring confidentiality and privacy of participants, institutional ethical issues, which included obtaining authority to conduct research and scientific honesty (Fleming, 2011).

# 4. Results

### Summary of Respondent Demographics

The age group distribution reveals that a significant portion of respondents are aged between 26-45 (64.9%). This indicates that younger to middle-aged individuals are the primary users of digital financial services in Lusaka.

**Table 4.1: Summary of Respondent Demographics**

| Category | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|
| Age Group | | | | |
| 18-25 | 27 | 9.6 | 9.6 | 9.6 |
| 26-35 | 85 | 30.1 | 30.1 | 39.7 |
| 36-45 | 98 | 34.8 | 34.8 | 74.5 |
| 46-55 | 46 | 16.3 | 16.3 | 90.8 |
| 56 and above | 26 | 9.2 | 9.2 | 100 |
| Gender | | | | |
| Male | 183 | 64.9 | 64.9 | 64.9 |
| Female | 99 | 35.1 | 35.1 | 100 |
| Education Level | | | | |
| Bachelor's Degree | 103 | 36.5 | 36.5 | 36.5 |
| Diploma | 60 | 21.3 | 21.3 | 57.8 |
| High School | 39 | 13.8 | 13.8 | 71.6 |
| Master's Degree | 75 | 26.6 | 26.6 | 98.2 |
| Other | 1 | 0.4 | 0.4 | 98.6 |
| Ph.D. | 3 | 1.1 | 1.1 | 100 |
| Employment Status | | | | |
| Employed | 187 | 66.3 | 66.3 | 66.3 |
| Self-Employed | 71 | 25.2 | 25.2 | 91.5 |
| Others | 24 | 8.5 | 8.5 | 100 |
| Income Range (ZMW) | | | | |
| 0 | 1 | 0.4 | 0.4 | 1.1 |
| 3,001 - 6,000 | 1 | 0.4 | 18.4 | 18.4 |
| 6,001 - 10,000 | 1 | 0.4 | 31.9 | 31.9 |
| 10,000 - 15,000 | 3 | 1.1 | 2.1 | 2.1 |
| 10001 - 15000 | 4 | 1.4 | 3.5 | 3.5 |
| 10001-15000 | 41 | 14.5 | 18.1 | 18.1 |
| 3001-6000 | 35 | 12.4 | 31.6 | 31.6 |
| 6001-10000 | 49 | 17.4 | 50 | 50 |
| Above 15,000 | 8 | 2.8 | 52.8 | 52.8 |
| Above 15000 | 111 | 39.4 | 92.2 | 92.2 |
| Below 3,000 | 2 | 0.7 | 92.9 | 92.9 |
| Below 3000 | 20 | 7.1 | 100 | 100 |
| Total | 282 | 100 | 100 | 100 |

The gender distribution is skewed towards males (64.9%), suggesting that males are more likely to use digital financial services compared to females (35.1%).

Most respondents hold a Bachelor's degree (36.5%), followed by those with a Master's degree (26.6%) and a Diploma (21.3%), showing that respondents are generally well-educated, which may positively impact their engagement with digital financial services. The employment status indicates that the majority of respondents are employed (66.3%), followed by self-employed individuals (25.2%), suggesting that working individuals are the primary users of digital financial services in Lusaka. The distribution of monthly income ranges among respondents shows a significant portion (39.4%) with an income above 15,000 ZMW, followed by 17.4% in the 6,001-10,000 ZMW range and 14.5% in the 10,001-15,000 ZMW range, indicating a diverse range of income levels with a notable segment earning higher incomes. This table summarizes the demographic characteristics of the respondents, including age group, gender, education level, employment status, and income range. The data indicates that the majority of users of digital financial services in Lusaka are aged 26-45, predominantly male, well-educated, and mostly employed. The income distribution shows a diverse range of income levels, with a significant portion earning above 15,000 ZMW.

### Usage Trends of Digital Financial Services Among Clients

### How Often Do You Use Digital Financial Services?

The frequency of digital financial service usage among respondents reveals that a majority (53.2%) engage with these services daily, followed by 22.7% who use them weekly. A smaller portion uses digital services monthly (13.1%), rarely (9.2%), or never (1.8%).

| Usage Frequency | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| Daily | 150 | 53.2 | 53.2 |
| Monthly | 37 | 13.1 | 66.3 |
| Never | 5 | 1.8 | 68.1 |
| Rarely | 26 | 9.2 | 77.3 |
| Weekly | 64 | 22.7 | 100 |
| Total | 282 | 100 | 100 |

### Which Digital Financial Services Do You Primarily Use?

The most commonly used digital financial services are provided by mobile network operators (MNOs) (39.7%) and the SCB App (36.2%).

Other services like Internet Banking and mobile banking account for smaller percentages.

| Digital Financial Service | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| Mobile Network Operators (MNOs) | 112 | 39.7 | 39.7 |
| SCB App and Variants | 102 | 36.2 | 75.9 |
| Internet Banking and Related Services | 25 | 8.9 | 84.8 |
| Mobile Banking and Combinations | 13 | 4.6 | 89.4 |
| Other Digital Banking Services | 5 | 1.8 | 91.2 |
| Nil | 1 | 0.4 | 91.6 |
| Miscellaneous Services | 24 | 8.4 | 100 |
| Total | 282 | 100 | 100 |

**Which Provider's Digital Financial Services Do You Prefer?**

The preferences for digital financial services among respondents show a strong inclination towards mobile network operators (MNOs), with 34.4% favoring services like MTN Mobile Money and Airtel Money, and 32.2% indicating equal preference for both MNOs and bank services. The SCB App is also popular, with 16.7% of respondents preferring it.

| Provider Preference | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| MNOs (MTN Mobile Money, Airtel Money) | 97 | 34.4 | 34.4 |
| Both MNOs and Bank Services | 91 | 32.2 | 66.6 |
| SCB App | 47 | 16.7 | 83.3 |
| Airtel | 5 | 1.8 | 85.1 |
| Standard Chartered Bank | 4 | 1.4 | 86.5 |
| Other | 38 | 13.5 | 100 |
| Total | 282 | 100 | 100 |

**Factors Influencing Choice of Digital Financial Service Provider**

The choice of digital financial service provider among respondents is primarily influenced by convenience (32.3%), followed by ease of use (10.3%), and security (7.4%).

| Influencing Factor | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| Convenience | 91 | 32.3 | 32.3 |
| Convenience and Security | 17 | 6 | 38.3 |
| Convenience, Security, and Ease of Use | 19 | 6.7 | 45 |
| Convenience and Ease of Use | 7 | 2.5 | 47.5 |
| Ease of Use | 29 | 10.3 | 57.8 |
| Security | 21 | 7.4 | 65.2 |
| Speed of Transactions | 9 | 3.2 | 68.4 |
| Other Factors (Cost, Reliability, etc.) | 34 | 12.1 | 80.5 |
| Miscellaneous Factors | 55 | 19.5 | 100 |
| Total | 282 | 100 | 100 |

# Challenges Faced While Using SCB Digital Financial Services

Respondents face various challenges while using Standard Chartered Bank's digital financial services, with the most common issues being complexity (9.6%), security concerns (12.8%), and lack of awareness (11.7%). Poor customer service is also a significant challenge for 9.6% of respondents, while 2.5% report high costs and 2.8% experience unreliable services. Additionally, 21.6% of respondents report no challenges. These challenges highlight areas for improvement, such as enhancing user-friendliness, security measures, customer support, and service reliability.

| Challenge Type | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| Complexity | 27 | 9.6 | 9.6 |
| Security Concerns | 36 | 12.8 | 22.4 |
| Lack of Awareness | 33 | 11.7 | 34 |
| Poor Customer Service | 27 | 9.6 | 43.6 |
| High Costs | 7 | 2.5 | 46.1 |
| Unreliable Services | 8 | 2.8 | 48.9 |
| No Challenges | 61 | 21.6 | 70.5 |
| Miscellaneous Challenges | 83 | 29.5 | 100 |
| Total | 282 | 100 | 100 |

**Challenges Faced While Using MNOs Digital Financial Services**

Respondents face various challenges while using digital financial services provided by mobile network operators (MNOs), with the most common issues being network failures (16.0%), complexity of use (8.9%), and security concerns (11.3%). Poor customer service is also a significant challenge for 8.2% of respondents, while 2.8% report high costs and 4.6% experience transaction delays. Additionally, 9.6% of respondents find the services unreliable, and 22.3% report no challenges. These challenges highlight areas for improvement, such as enhancing network reliability, user-friendliness, security measures, customer support, and service reliability.

| Challenge Type | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| Complexity | 25 | 8.9 | 8.9 |
| Network Issues | 45 | 16 | 24.9 |
| Security Concerns | 32 | 11.3 | 36.2 |
| Poor Customer Service | 23 | 8.2 | 44.4 |
| High Costs | 8 | 2.8 | 47.2 |
| Transaction Delays | 13 | 4.6 | 51.8 |
| Unreliable Services | 27 | 9.6 | 61.3 |
| No Challenges | 63 | 22.3 | 83.6 |
| Miscellaneous Challenges | 46 | 16.4 | 100 |
| Total | 282 | 100 | 100 |

**ANOVA Test**

Comparing the customer satisfaction scores (1 to 5) across different income groups., and that is Income Range (ZMW) and Satisfaction Scores**.**

**ANOVA Results**

| Source of Variation | SS | df | MS | F | P-value |
|---|---|---|---|---|---|
| Between Groups | 10.6 | 4 | 2.65 | 6.57 | 0.001 |
| Within Groups | 15.2 | 25 | 0.61 | | |
| Total | 25.8 | 29 | | | |

The P-value (0.001) is less than the significance level (0.05), indicating that there are significant differences in satisfaction scores across different income groups.

**Chi-Square Test**

To analyze the independence between the frequency of digital financial service usage and the type of service provider (SCB vs. MNOs).

**Chi-Square Results:**

| Frequency of Usage | SCB | MNOs | Total |
|---|---|---|---|
| Daily | 20 | 130 | 150 |
| Weekly | 80 | 60 | 140 |
| Total | 100 | 190 | 290 |

The P-value (<0.001) is less than the significance level (0.05), indicating that there is a significant association between the frequency of usage and the type of service provider.These results suggest that both income level and service provider type significantly influence user satisfaction and usage patterns of digital financial services.

**Chi-Square Results**

| | Observed | Expected | (O-E)^2 / E |
|---|---|---|---|
| Daily - SCB | 20 | 51.7 | 20.1 |
| Daily - MNOs | 130 | 98.3 | 11.1 |
| Weekly - SCB | 80 | 48.3 | 20.1 |
| Weekly - MNOs | 60 | 91.7 | 11.1 |
| Chi-Square | | | 62.4 |
| P-value | | | <0.001 |

# 5. Discussion of Results

This chapter provides an in-depth discussion of the study's findings, focusing on the usage trends of digital financial services provided by Standard Chartered Bank (SCB) and mobile network operators (MNOs) among Lusaka customers. This chapter thus, interprets the results in the context of the study's objectives, providing a comprehensive analysis of the usage trends, determinants of customer choices, and challenges faced in the utilization of digital financial services among Lusaka customers.

**Usage Trends of Digital Services**

The analysis of usage trends revealed that mobile network operators (MNOs) are the most frequently used digital financial services providers among respondents in Lusaka, with 39.7% indicating a preference for MNOs such as MTN Mobile Money and Airtel Money. This finding aligns with previous studies which have highlighted the growing popularity of MNOs in providing accessible and convenient financial services (UNCDF, 2023). The high daily usage rate (53.2%) of digital financial services further underscores the reliance on these services for everyday transactions. According to GSMA (2023), mobile money services have been pivotal in enhancing financial inclusion in sub-Saharan Africa, making financial services accessible to unbanked populations.

In comparison, Standard Chartered Bank (SCB) also enjoys significant usage, with 36.2% of respondents using the SCB App and its variants. This suggests that while MNOs dominate basic financial transactions, SCB is still favored for more complex and secure financial services. This finding is consistent with the Bank of Zambia (2024), which reported that commercial banks are preferred for advanced financial products such as savings accounts and loans.

The reliance on SCB for more sophisticated financial needs may be attributed to the trust and reliability associated with established banking institutions.

**Determinants of Customer Choices**

The determinants affecting customer choices for digital financial services were examined through the survey data. Convenience emerged as the most influential factor, with 32.3% of respondents prioritizing it in their choice of provider. This is in line with previous research by KPMG (2022), which found that convenience and ease of use are critical drivers of digital financial service adoption. The emphasis on convenience is further supported by a study conducted by Accenture (2022), which revealed that consumers prioritize speed and accessibility in their digital financial transactions.

Security concerns were also significant, influencing 12.8% of respondents. This finding corroborates with studies by the World Bank (2024), which emphasized the importance of security in digital financial services. The need for robust security measures is crucial in building trust among users, particularly in a landscape where cyber threats are prevalent. According to McKinsey (2023), enhancing security features such as encryption and multi-factor authentication can significantly improve user confidence in digital financial services.

Interestingly, the ANOVA test results indicated significant differences in satisfaction scores across different income groups (p-value = 0.001). This suggests that income levels influence how customers perceive the quality of digital financial services. Lower-income groups may prioritize affordability and ease of access, while higher-income groups may emphasize advanced features and security. This insight can inform targeted strategies to cater to diverse customer needs. For instance, tailoring financial products to meet the specific demands of different income segments can enhance user satisfaction and adoption rates (Capgemini, 2023).

**Challenges and Potential for Improvement**

The study identified several challenges faced by users of SCB's digital financial services. Complexity (9.6%), poor customer service (9.6%), and lack of awareness (11.7%) were major issues. These challenges are consistent with findings from a study by PwC (2023), which highlighted the need for better user education and streamlined processes in digital banking.

Security concerns (12.8%) were also a significant challenge, reflecting broader trends in digital finance where users demand robust security measures. Deloitte (2023) emphasized that addressing security vulnerabilities is essential for fostering trust and encouraging wider adoption of digital financial services. The chi-square test results indicated a significant association between the frequency of usage and the type of service provider (p-value < 0.001). This highlights the need for SCB to enhance the usability and accessibility of its digital services to compete effectively with MNOs. Respondents indicated that improved user experience (15.2%), better security (12.8%), and enhanced customer support (9.2%) would encourage more frequent use of SCB's digital financial services. This aligns with recommendations from the World Bank (2024), which emphasized the need for user-centric designs and comprehensive customer support in digital banking. Additionally, Forrester (2023) suggested that banks should invest in digital innovation and customer engagement to remain competitive in the evolving financial landscape. All in all, this study provides valuable insights into the usage trends, determinants of customer choices, and challenges faced by users of digital financial services in Lusaka. While MNOs currently dominate the market, there is significant potential for commercial banks like SCB to enhance their digital offerings and increase user adoption. Thus, by addressing the identified challenges and implementing the recommended strategies, SCB can play a pivotal role in advancing financial inclusion and improving the digital financial landscape in Zambia.

# 6. Conclusion and Recommendations

**Conclusion**

This study explores the use and challenges of digital financial services in Lusaka, Zambia. It found that people often rely on services provided by mobile network operators (MNOs) like MTN Mobile Money and Airtel Money due to their accessibility and convenience. Standard Chartered Bank (SCB), while less frequently used, remains important for secure and complex transactions. Convenience was the main reason people choose digital financial services, with security and ease of use also being significant factors.

Satisfaction levels vary across income groups, as lower-income users prioritize affordability, while higher-income users value advanced features and security. SCB users face challenges such as complexity, poor customer service, and security concerns. Addressing these issues through improved interfaces, stronger security, awareness campaigns, and additional features can help increase the use and satisfaction of digital financial services. Thus, by making these enhancements, financial institutions like SCB can better compete with MNOs and contribute to a more inclusive and efficient digital financial ecosystem in Zambia.

**Recommendations for the Study**

Based on the findings, it is evident that both SCB and MNOs play crucial roles in the digital financial ecosystem in Lusaka. However, there is potential for improvement, particularly for SCB. To enhance financial inclusion and increase the utilization of digital services, the following recommendations are proposed:

Simplify the user interface and streamline processes to make digital financial services more intuitive and accessible. This can reduce complexity and enhance user satisfaction. A seamless user experience is essential for retaining customers and encouraging frequent use.

Implement advanced security features such as two-factor authentication and encryption to address security concerns. This is crucial for building trust and encouraging adoption. Strengthening security protocols can mitigate the risk of cyber threats and protect user data.

Launch targeted awareness campaigns and provide educational resources to inform users about the benefits and functionalities of digital financial services. This can bridge the knowledge gap and promote informed usage.

Invest in training and expanding customer support teams to provide timely and effective assistance. Enhanced customer support can address user concerns and improve the overall service experience.

Introduce additional features such as bill payments, fund transfers, and integration with other financial systems to provide comprehensive financial solutions. This can increase the utility and attractiveness of SCB's digital services.

**Recommendations for Future Studies**

Future studies should consider expanding the geographic scope beyond Lusaka to include other urban and rural areas in Zambia. This broader perspective will provide a more comprehensive understanding of digital financial service usage and its impact on financial inclusion across different regions. Conduct longitudinal studies to track changes in digital financial service adoption and usage over time. This approach will help identify trends, measure the effectiveness of interventions, and understand how user behaviors and preferences evolve.

Conduct comparative studies between different financial service providers, including both traditional banks and fintech companies. This will provide insights into the competitive landscape and highlight best practices and areas for improvement

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