

Effectiveness of Mobile Money Services on Financial Inclusion in Livingstone District, Zambia

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Abstract

This study examined the effectiveness of mobile money services in enhancing financial inclusion in Zambia, focusing on MTN Mobile Money, Airtel Money, and ZamPay. Mobile money enables individuals without access to traditional banking to conduct transactions such as savings, transfers, and payments, helping to overcome barriers like distance, high costs, and limited financial infrastructure. A quantitative approach using structured questionnaires was applied to collect data from adult users in Livingstone District. The study adopted a descriptive cross-sectional design, with multistage sampling ensuring diverse representation. Data were analyzed statistically to identify patterns in accessibility, usage, benefits, and challenges. Findings are expected to highlight the contribution of mobile money to financial inclusion, while identifying existing gaps. The results will support policymakers and stakeholders in improving digital financial services and promoting inclusive economic participation in Zambia.

Keywords: Financial Inclusion, Mobile Money, Digital Financial Services, Zambia, Accessibility, Socio-Economic Development, Financial Technology.

1. INTRODUCTION

Mobile money services have become a transformative tool for expanding financial access across developing countries, particularly in Africa. In Zambia, platforms such as MTN Mobile Money, Airtel Money, and ZamPay have significantly reshaped the financial landscape by providing convenient, low-cost, and widely accessible financial services to underserved populations (Bank of Zambia, 2022). Mobile money enables individuals to send and receive money, pay bills, save, and access other financial products without needing a formal bank account. Despite rapid adoption, large segments of Zambia's population still remain financially excluded, particularly those in rural areas, low-income households, and individuals with limited access to traditional banking infrastructure (ZICTA, 2021).

This research proposal aims to investigate the effectiveness of mobile money services in enhancing financial inclusion in Zambia. The chapter provides background information on mobile money and financial inclusion, presents the problem statement, justification, research questions, research objectives, conceptual framework, and definitions of key terms relevant to the study.

Background of study

Financial inclusion refers to the ability of individuals and businesses to access affordable and useful financial products and services such as savings, payments, credit, and insurance (World Bank, 2020). In Zambia, financial inclusion has been historically constrained by inadequate banking infrastructure, long distances to financial institutions, high banking costs, and limited financial literacy (FinScope Zambia, 2020). As a result, many citizens especially in rural areas have remained outside the formal financial system.

Mobile money emerged as a solution to these challenges by offering financial services through mobile phones. According to GSMA (2022), mobile money reduces transaction costs, enhances convenience, and increases financial participation among low-income populations. Zambia has experienced significant growth in mobile money usage, with mobile money transactions surpassing traditional banking transactions in value and volume (Bank of Zambia, 2023). However, questions remain on how effective mobile money has been in expanding true financial inclusion—beyond basic transactions—to include services such as savings, credit access, and long-term financial empowerment.

Policies such as the National Financial Inclusion Strategy (NFIS) 2017–2022 have emphasized the role of digital financial innovations in achieving financial inclusion targets (Ministry of Finance, 2017). Despite progress, barriers such as low digital literacy, fraud risks, poor network connectivity, and limited agent coverage still challenge effective utilization of mobile money (Mulenga & Bwalya, 2021). Understanding these issues is essential for evaluating the overall effectiveness of mobile money services.

Statement of the Problem

Although mobile money has expanded rapidly in Zambia, financial exclusion persists, particularly among marginalized populations such as rural residents, women, and informal sector workers. While the number of mobile money users continues to increase, it is unclear whether this growth has translated into meaningful financial inclusion, such as improved savings behavior, enhanced access to credit, or participation in the formal economy.

Existing studies have explored patterns of mobile money usage, but there is limited research examining how effectively mobile money services contribute to comprehensive financial inclusion in the Zambian context (Mwansa & Tembo, 2020). The absence of an in-depth assessment of mobile money's effectiveness limits policymakers' ability to design interventions that enhance digital financial systems. Therefore, there is a need to investigate how mobile money services influence access, usage, affordability, and quality of financial services in Zambia.

Justification

Mobile money has been identified as a key driver of financial inclusion in Zambia, aligning with national development goals and global recommendations by the World Bank and IMF on digital financial transformation (World Bank, 2021). Understanding the effectiveness of mobile money is crucial for several reasons:

- It helps determine whether mobile money is bridging the financial inclusion gap.
- It provides insights for policymakers, telecom operators, and financial institutions to improve digital financial services.
- It supports efforts to reduce poverty and enhance economic participation among underserved groups.
- It assists in identifying barriers preventing individuals from fully benefiting from mobile money.

The findings will contribute to the improvement of Zambia's financial inclusion agenda by guiding strategic decisions that strengthen digital financial ecosystems and enhance accessibility for marginalized communities.

Research Question

How effective are mobile money services in enhancing financial inclusion Livingstone district Zambia?

Sub-Research Questions

1. How accessible are mobile money services to various demographic groups in Livingstone district Zambia?
2. What factors influence the usage of mobile money services among consumers?

Research Objective

To assess the effectiveness of mobile money services in enhancing financial inclusion in Livingstone district Zambia.

Specific Objectives

- To determine the accessibility of mobile money services across different demographic groups.
- To examine usage patterns and consumer behavior associated with mobile money services.

Conceptual Framework

The conceptual framework illustrates how Mobile Money Services influence Financial Inclusion among users. Mobile money services provide digital platforms that enhance accessibility, affordability, security, and convenience in financial transactions. These attributes serve as independent variables that contribute to the improvement of financial inclusion.

Financial inclusion, the dependent variable, is observed through increased access to financial accounts, usage of digital payment systems, the ability to save or access credit, and reductions in barriers that previously excluded individuals from formal financial systems.

The framework suggests that enhancing mobile money services directly improves financial inclusion by empowering individuals to participate in the financial ecosystem.

Definition of Terms

Mobile Money is a financial service that allows users to perform monetary transactions through mobile phones without needing a bank account (GSMA, 2021).

Financial Inclusion is the availability and equitable access to financial services such as payments, credit, insurance, and savings to all individuals, especially underserved populations (World Bank, 2020).

Digital financial services are the technology-enabled financial services provided through mobile networks or online platforms (IMF, 2021).

Mobile money agent an authorized individual or business that performs mobile money transactions on behalf of a mobile network operator (GSMA, 2022).

2. LITERATURE REVIEW

Mobile money services have significantly reshaped the financial sector in Zambia, providing alternative financial solutions to the unbanked and under banked populations. Financial inclusion is widely regarded as a fundamental component for accelerating economic growth, alleviating poverty, and promoting inclusive development. According to Demirguc-Kunt et al. (2018), the expansion of digital financial platforms such as mobile money has created new opportunities for broadening access to financial services, especially for low-income households. This section reviews existing literature on the relationship between mobile money services and financial inclusion, highlighting the extent to which these services influence financial accessibility, usage, and quality.

Mobile Money Services

Mobile money services refer to technology-enabled financial platforms that allow individuals to store, send, and receive money using mobile phones. As highlighted by the GSMA (2020), mobile money has gained global momentum due to its ability to overcome geographical, infrastructural, and economic barriers associated with traditional banking. In Zambia, the mobile money environment has experienced rapid growth, fostered by the rise in mobile phone penetration and strategic investments from major service providers such as Airtel Money, MTN Mobile Money, and Zamtel Money. Bank of Zambia (2022) reports indicate that over 8 million Zambians are registered mobile money users, showcasing a notable shift toward digital financial solutions. These services have expanded beyond simple money transfers to include savings, bill payments, merchant payments, and access to digital credit, thereby increasing their impact on financial inclusion.

Financial Inclusion

Financial inclusion involves ensuring that individuals and businesses have access to useful and affordable financial products and services such as savings, credit, insurance, and efficient payment systems (World Bank, 2020). Despite improvements in the financial sector, Zambia continues to face challenges in achieving full financial inclusion. According to FSDZ (2020), only 59% of adults in the country have access to formal financial services, with rural populations disproportionately excluded. Barriers such as high transaction costs, limited bank branch networks, low income levels, and inadequate financial literacy contribute to the persistent exclusion. Digital financial services, particularly mobile money, have emerged as a practical means of bridging this gap by offering flexible, low-cost, and accessible financial alternatives.

Impact of mobile money on financial inclusion

Several studies emphasize the positive influence of mobile money on financial inclusion. Jack and Suri (2014) note that mobile money systems significantly enhance individuals' ability to access financial services, especially in rural and underserved areas with limited banking infrastructure. Mobile money reduces transaction costs, increases convenience, and shortens the time needed to perform financial activities (Mbiti & Weil, 2016). Suri and Jack (2016) further highlight that mobile money has been particularly beneficial for women and marginalized households by enabling them to save securely, access remittances, and participate in economic activities that were previously inaccessible. Through these mechanisms, mobile money facilitates increased financial participation and resilience.

Challenges and limitations

Despite the transformative potential of mobile money services, several challenges hinder their optimal utilization. Limited network coverage continues to affect rural areas, reducing the reliability of mobile money platforms (GSMA, 2020). Financial literacy levels remain low among the Zambian population, making it difficult for users to fully exploit the financial benefits of mobile money services (FSDZ, 2020). Concerns over cyber security risks, fraud, and inconsistent regulatory frameworks further create skepticism and reduce trust among users (Bank of Zambia, 2022). These challenges highlight the need for improved digital infrastructure, robust financial education programs, and strengthened regulatory measures.

Theoretical framework

The Technology Acceptance Model (TAM), developed by Davis (1989), explains how users come to accept and use technology. It posits that perceived usefulness and perceived ease of use determine an individual's willingness to adopt technological innovations such as mobile money. This framework is essential in understanding user behavior patterns in the adoption of mobile financial platforms.

The Diffusion of Innovations Theory (DIT), formulated by Rogers (2003), provides another theoretical basis by explaining how innovations spread within a population. According to DIT, factors such as relative advantage, observability, compatibility, and complexity shape the rate at which new technologies like mobile money gain acceptance. In the Zambian context, these theories help explain the variability in mobile money adoption and usage across different demographic groups.

Empirical evidence

Empirical research highlights mixed findings on the impact of mobile money services on financial inclusion. Duflo et al. (2011) demonstrated that digital financial tools can enhance savings and economic decision-making, but noted that their impact varies depending on user characteristics and contextual factors. Suri and Jack (2016) found strong evidence that mobile money contributes to long-term financial stability, particularly by reducing vulnerability to income shocks. Conversely, Mbiti and Weil (2016) reported that while mobile money increased the frequency of financial transactions, its effect on broader financial inclusion indicators such as access to credit and long-term savings was limited. These inconsistencies suggest the need for more context-specific research.

Gap analysis

A review of the existing literature reveals several gaps. First, there is limited research focusing specifically on Zambia, as most studies are centered on East African countries such as Kenya and Tanzania. This creates a contextual gap, given that financial ecosystems vary significantly across African countries. Second, the available studies present mixed findings regarding the extent to which mobile money influences financial inclusion. Some research identifies significant positive impacts, while others report minimal or no measurable effects. This inconsistency underscores the need for more empirical studies in Zambia's unique financial environment.

Third, although several challenges affecting mobile money adoption have been recognized, there is insufficient exploration of how these challenges directly impact financial inclusion outcomes in Zambia. Finally, marginalized groups such as rural communities, women, and low-income earners remain underrepresented in existing studies, limiting understanding of how mobile money services can best support these populations. Addressing these gaps is essential for informing policy and guiding digital financial strategies

3. METHODOLOGY

This chapter outlines the research methodology that was used to investigate the "Effectiveness of Mobile Money Services on Financial Inclusion." The study adopted a mixed-methods research design, integrating both quantitative and qualitative approaches to provide a comprehensive understanding of how mobile money services influence financial inclusion. Mixed-methods research well-suited for studies that explore complex social phenomena because it allows triangulation, validation, and deeper insight into patterns and experiences (Creswell & Plano-Clark, 2018). This chapter discusses the research design,

study site, target population, sampling methods, sample size, data collection tools, data collection procedures, variables, data analysis, and ethical considerations.

Research design

A mixed-methods approach was employed, combining quantitative and qualitative data. According to Creswell and Plano-Clark (2018), mixed-methods research enhances the robustness of findings by integrating statistical trends with detailed narratives. The quantitative component measured the extent of financial inclusion resulting from mobile money usage, while the qualitative component captured user experiences, perceptions, and challenges.

The quantitative design used a descriptive cross-sectional survey to assess access, usage, affordability, and reliability of mobile money services. The qualitative aspect adopted a phenomenological approach to explore the lived experiences of mobile money users, including challenges and perceived benefits, consistent with Bailey, Hennink, and Hutter (2011). This combination enables the study to explain both the magnitude and nature of the relationship between mobile money services and financial inclusion.

3.2 Study site

The study was conducted in Livingston district, Zambia. Livingstone represents a diverse and rapidly growing urban center with high mobile money penetration and varied socio-economic groups. The district has widespread mobile money usage through major operators such as MTN Mobile Money, Airtel Money, and Zamtel Money (Bank of Zambia, 2023). The site is appropriate because it features both banked and unbanked populations, enabling the study to measure variations in financial inclusion and mobile money adoption.

Study population

The study population consisted of adults aged 18 years and above who use or have access to mobile money services within Livingstone District. This includes: Mobile money users (consumers), mobile money agents, non-users (for comparative insights) and key informants such as representatives from financial institutions and mobile money operators

Inclusion Criteria:

- Individuals aged 18 years and above
- Residents of Livingstone district
- Individuals who use or have access to mobile money services
- Agents operating mobile money booths
- Participants able and willing to provide informed consent

Exclusion Criteria:

- Individuals below 18 years
- Individuals unwilling to participate- Visitors or non-residents of Lusaka District
- Persons unable to provide informed consent due to cognitive limitations

Study variables

Table 1: Description of Variables

Type Of Variable	Description
Independent Variable	Mobile Money Services (Accessibility, Affordability, Service Reliability, Agent Proximity, Transaction Costs)
Dependent Variable	Financial Inclusion (Access To Savings, Access To Credit, Payment Services, Financial Literacy, Frequency Of Usage)
Confounding Variables	Age, Gender, Income Level, Employment Status, Education,

Sample size

The study adopted a mixed sampling strategy 200 respondents were selected, following similar mobile money studies conducted in Sub-Saharan Africa (GSMA, 2022; Suri & Jack, 2016). This sample size improves generalizability and is appropriate for cross-sectional surveys. A sample of 20 participants, including mobile money users and agents, were selected based on data saturation (Creswell & Poth, 2018). Saturation guided the final number of interviews.

Sampling method

A combination of probability and non-probability sampling was used. Simple random sampling was applied to select mobile money users across Livingstone to ensure representativeness. Purposive sampling was employed to identify participants with rich experiences regarding mobile money usage. This method allows selection of participants who can provide detailed insights (Palinkas et al., 2015).

Data collection tool

The data collection tool for this study was a survey questionnaire designed to gather information on the effectiveness of mobile money services on financial inclusion in Livingstone district, Zambia. The questionnaire was divided into several sections, including demographic data, mobile money usage and experience, financial inclusion indicators, and challenges and barriers to using mobile money services. The demographic data section will collect information on respondents' age, gender, education level, and income level, which will help to identify patterns and trends in mobile money usage and financial inclusion. The mobile money usage and experience section will gather data on respondents' frequency of use, types of transactions, and perceived benefits and challenges of using mobile money services. The financial inclusion indicators section assessed respondents' access to financial services, savings, credit, and insurance, which helped to evaluate the impact of mobile money services on financial inclusion. To ensure the questionnaire is effective and relevant, a pilot study was conducted with a small sample of participants to test the tool and make any necessary adjustments.

Data collection process

The data collection process involved several steps to ensure that the data collected is accurate, reliable, and representative of the population. Firstly, ethical approval will be obtained from the DMI St. Eugene University Ethics Committee to ensure that the study meets the required ethical standards. Secondly, permission was sought from relevant authorities in Livingstone district, including the District Education Board Secretary and the Mobile Money Service Providers, to conduct the study. Thirdly, a survey was conducted with mobile money users and non-users in Livingstone district, using a combination of online and offline surveys to reach a wider audience. The survey was administered by trained research assistants who will provide clear instructions and guidance to respondents. To ensure data quality, the research assistants will be trained to verify respondents' understanding of the questions and to ensure that all questions are answered accurately.

Data management and analysis

The data collected was stored securely and anonymously to ensure confidentiality and integrity. The data was analyzed using statistical software, such as SPSS or R, to identify

patterns and trends in mobile money usage and financial inclusion. Descriptive statistics will be used to summarize the data, while inferential statistics were used to test hypotheses and identify relationships between variables. The analysis focused on identifying the effectiveness of mobile money services on financial inclusion, including the benefits and challenges of using mobile money services, and the factors that influence mobile money usage and financial inclusion. To ensure the accuracy and reliability of the results, data cleaning and validation procedures conducted regularly.

Ethical Considerations

The study ensured that all ethical considerations are taken into account to protect the rights and dignity of respondents. Informed consent obtained from all respondents and assured of confidentiality and anonymity. Respondents informed of their right to withdraw from the study at any time, and they were provided with contact information in case they have any questions or concerns. The study ensured that respondents are not coerced or pressured into participating, and that they are not disadvantaged in any way if they choose not to participate. The study provides support and referrals for respondents who may need financial assistance or counseling. The findings of the study is disseminated widely to inform policymakers and stakeholders, and to contribute to the development of financial inclusion policies and programs in Zambia.

4. CONCLUSION

Mobile money services have significantly contributed to financial inclusion in Livingston District by providing accessible and convenient financial services. Despite challenges such as network issues and high transaction costs, mobile money remains a vital tool for unbanked and underserved populations. Strengthening infrastructure, improving affordability, and expanding agent networks will enhance the overall effectiveness of mobile money platforms and further promote financial inclusion.

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