A STUDY OF FACTORS THAT DETERMINE MICRO AND SMALL ENTERPRISES (MSEs) ADOPTION OF MOBILE MONEY FOR BUSINESS TRANSACTIONS: A CASE OF MSEs IN LUSAKA CENTRAL BUSINESS DISTRICT

BY

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DECLARATION

I, Tasila Alice Ngwira, do hereby declare that this work is my original work achieved through personal reading and research. This work has never been submitted to the University of Zambia or any other Universities. All sources of data used and literature on related works previously done by others used in this publication have been duly acknowledged in the production of this dissertation. If any omissions have been made, it is not by choice but by error.

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APPROVAL

This Dissertation by **Tasila Alice Ngwira** was approved as a fulfilment for the requirement for the award of the degree of Master of Business Administration in Finance by the University of Zambia.

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ABSTRACT

The Study aimed to understand the factors that influence the adoption of mobile money services for business transaction purposes by small and medium enterprises (MSEs) in Lusaka. The aim was divided into three specific objectives. These objectives were to assess the factors that determine the use of mobile money by MSEs for business transaction purposes; to examine the relationship between these factors and the use of mobile money by MSEs for business transaction purposes, and to ascertain the effect of the factors on the use of mobile money by MSEs for business transaction purposes. The study used cross-sectional primary data. The study employed a pragmatism research philosophy and mixed research approach. The data was collected using a survey questionnaire administered by the researcher to respondents sampled using purposive sampling techniques. The study had a sample size of 102 respondents. The empirical results showed that most businesses who use Airtel money started using it less than a year ago, consider the cost to be fair, save on the platform, are affected by insufficient space borrow on the platform and are also affected by the unavailability of agents. The regression results showed that savings and insufficient float have a statistically significant impact on the adoption of mobile money. Saving using mobile money increases the likelihood of using it to conduct business transactions and issues of insufficient float among agents constrain the probability of using it to conduct business transactions. From the findings, it was recommended that mobile money providers create a mobile money product tailored for micro and small businesses.

Keywords: Mobile Money, Airtel Mobile Money, MSEs, Logistic Model and Lusaka CBD

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DEDICATION

This dissertation is dedicated to my Children and my family who were present physically and emotionally in my daily endeavors and I give thanks to God all mighty who has made it possible for me to do this work.

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ABBREVIATIONS AND ACRONYMS

CBD	Central Business District
MSEs	Micro and Small Business Enterprises
ICT	Information, Communication and Technology
IDM	Innovation Diffusion Model
OECD	Organization for Economic Cooperation and Development
OLS	Ordinary Least Squares
TAM	Technology Acceptance Model
ZAMTEL	Zambia Telecommunication Company

CHAPTER 1

INTRODUCTION

1.1 Introduction

There has been a considerable increase in the use of mobile money services in Zambia. The increase in the adoption of mobile money has improved the level of financial inclusion in the country. The rapid spread of mobile money has been attributed to the low costs of delivering the product to the end-users as compared to other financial services, i.e. banking. The product has a higher penetration rate than other financial products among the low-income groups. In addition, it is relatively easier to use, available and accessible. However, there is still a need to assess the adoption of mobile money among Micro and Small Enterprises (MSEs). Mobile money offers an opportunity of including MSEs, which is an integrally large sector in the economy, in the financial market. This is an evaluation of the various factors that affect the adoption of mobile money services by MSEs in the Central Business District (CBD). The study focuses on Airtel mobile money.

Mobile money is a financial service that relies on the use of a mobile phone (GSMA, 2010). The International Monetary Fund defines mobile money as a pay-as-you-go digital medium of exchange and store of value that uses mobile money accounts, facilitated by a network of mobile money agents (Bazarbash, et al., 2020). This implies that mobile money allows users to transfer funds, deposit or withdraw funds, or pay bills using a mobile phone. Mobile money services are offered by mobile network providers and any other entity that partners with mobile network providers. They operate independently from banking networks and do not require bank accounts. Mobile money services have been adopted by several stakeholders, including individuals, governments and businesses.

The adoption of mobile money is dependent on several factors which differ among users. For businesses, the use of mobile money services is influenced by social, economic and demographic factors and attributional factors postulated by several theories, like the Technology Acceptance Model (TAM) and the Innovation Diffusion Model (IDM). This particular study focuses on the adoption of mobile money by MSEs. According to the World Bank, micro-enterprises employ 1 to 9 employees and medium enterprises employ 10 to 49 employees. In Zambia, a small enterprise has a total investment not exceeding ZMW 80,000 and an annual turnover of less than ZMW150,000 with less than eleven (11) employees. A medium enterprise has a total investment of between ZMW 80,000 and ZMW 200,000 and an annual turnover of between ZMW 100,000 and ZMW 150,000 between eleven (11) and fifty (50) employees.

Most MSEs have recently adopted mobile money services for business transaction purposes. They consider the service to be cheaper than other financial services. They use to save and occasionally borrow. Although, their usage is affected by float size and availability of agents. The usage of mobile money to save has had a positive effect on MSEs. Mobile money is safer than carrying large sums of cash for several traders after and before working hours. However, the float size restricts their usage of financial service.

1.2 Background to Study

Mobile money services have become increasingly prominent in recent years. The expansion of mobile telecommunication services and financial innovation are driving the growth of mobile money services (Lal & Sachdev, 2015). Besides, these services are relatively cheaper and have low transaction costs making them attractive to low-income households (Mitrega-Niestroj, et al., 2018). The rise of mobile money services in developing countries has bettered financial inclusion. The section of society at the base of the income pyramid that was previously unbanked now has access to formal financial services. A prerequisite for improved savings, improved access to financial services (credits), investment (capital accumulation) and economic development (Lal & Sachdev, 2015; Kawimbe, 2020). Mobile money is a vehicle for inclusion into the financial market for 70% of Sub-Saharan Africa's population outside the traditional banking system (Logan, 2017).

According to Donovan (2012), mobile money is the provision of financial services through a mobile phone. The services have rapidly expanded in developing and emerging markets where banks are reluctant to provide their services to large sections of society, they consider too risky or unprofitable because their resources cannot cover the fixed and operational costs (Thulani et al., 2014). Mobile money pools into the financial market, where firms in need of capital access and invest them (Donovan, 2012; OECD, 2015; Thakor, 2015). This, in relation to the Keynesian theory of macroeconomics, stimulates aggregate demand and grows the economy (Mankiw, 2007).

For mobile money to effectively contribute to the expansion of the economy, a well-developed and wider covering mobile telecommunication infrastructure is a prerequisite (de Bruijin, et al., 2017).

Besides, it has proved to be attractive to the underprivileged: affordable and easier to use. The rapid development of mobile telecommunication in developing and emerging economies made mobile money an alternative method of including excluded segments in the financial markets. It has also increased the resource pool of telecommunication companies (Mitrega-Niestroj, et al., 2018).

This study explored the factors that influence the adoption of mobile money services among MSMEs in the Lusaka CBD. The study further investigates the usefulness, ease of use, trust, costs, risks and social influence on the adoption of mobile money services. In addition, it tried to understand if the availability of mobile money agents and alternative financial services influences customers' decision to use Airtel Money and their views about mobile money.

1.3 Statement of the Problem

Financial innovation has been behind the recent financial products that are targeted at increased financial inclusion. Financial inclusion and improved financial service delivery are catalysts for economic development. Mobile money provides a platform to incorporate the most unbanked Zambian populous with 58.5% of adults using the service in 2020 an increase from 14.0% in 2015, making it the most used financial service in Zambia (FinAccess, 2021). Mobile money has contributed the most to the increased financial inclusion from 59.3% to 69.4% from 2015 to 2020 (FinAccess, 2021). The total valuation of mobile money transactions increased from K 2.067 billion in 2015 to K 105.815 billion in 2020.

From the time when mobile money service providers started to adopt the service in 2011, the number of mobile money users has increased to over 8.6 million in 2022 (Silimina, 2022). Since its introduction, the increase in mobile money has been unpreceded, with more than half of the adult population having a mobile money account. However, the adoption of mobile money for daily transactions has been slow. Most prefer to use mobile money has a money transfer platform. The adoption of mobile money services for the purchase of goods and payment of utilities, savings and credit purposes has been low. The service is only used by 11% for payment of bills and 9% for merchant transactions (Cooper, et al., 2019). The use of mobile money for transaction purposes has the potential to lower transaction costs, which encompass the time, costs of the transaction and those incurred to facilitate it. Thus mobile money companies and the government are faced with the uphill task of encouraging consumers and businesses to transact using mobile money.

Most previous (Kamande, et al., 2020; Masocha & Dzomonda, 2018; Sayid, 2018) studies have focused on factors that drive the growth of mobile money in individuals without looking at businesses. There have been limited studies that have looked at usage for transaction purposes by businesses and why its integration in commerce has been relatively slower than its growth. Understanding the factors that influence businesses' willingness to accept mobile money payments for their goods and services. This study focused on what guides MSEs' decisions on the use of mobile money services for business transaction purposes. It explores the factors that influence MSEs to subscribe to Airtel money and use it for business purposes.

1.4 Purpose of the Study

The purpose of the study is to understand the factors that influence the adoption of mobile money services by small and medium enterprises in Lusaka.

1.5 Research Objectives

1.5.1 General Objective

The objective of this study is to understand the factors that determine the usage of mobile money for business transactions purpose by MSEs operating in the Lusaka District using a mixed research approach.

1.5.2 Specific Objectives

To address the general objective, three specific objectives have been identified:

- To assess the factors that determine the use of mobile money by MSEs.
- To examine the relationship between factors and the use of mobile money by MSEs.
- To provide recommendations to optimize the use of mobile money by MSEs.

1.6 Research Questions

In line with the above objectives, the following research questions were answered:

- What factors guide MSEs' decision to use mobile money?

- What is the relationship between these factors and MSEs' decision to use mobile money for business purposes?
- What are some of the ways that could be used to optimize the use of mobile money by MSEs?

1.7 Significance of the Study

The study is significant in several ways. First, for the government, this study helps the necessary institutions understand the factors that influence the adoption of mobile money services among MSEs. This study informs policymakers on the measures and policies that can be implemented to increase the uptake of mobile money services among MSEs. This would feed into the government policy of increased creation and growth of MSEs as their productivity increases. By understanding the factors that promote the use of mobile money the tax authority could design a business-to-government transfer platform that enables MSEs effectively and efficiently meet their tax obligations by remitting them through mobile money services. This would improve tax compliance and increase the tax base. It would also know, which demographic of business owners to sensitize the most.

Secondly, for the academic, it contributes to the body of empirical evidence on the factors that influence the adoption of mobile money services among consumers. There are barely any studies on the adoption of mobile money by MSEs in Zambia. This study offers academics an opportunity to explore this area more by doing other research that builds on it and fills the gaps that it will expose.

Thirdly, for mobile communication operators, the study aids their identification of possible adjustments to the mobile services that increase the adoption of the service by its MSEs. MSEs are more likely to transact using larger amounts than individual persons. Thus, this study will help telecommunication understand ways they can develop mobile money services to cater to the needs of MSEs.

Finally, for the rest of the country, this study may allow for the provision of better services that are adapted to their needs. Increased understanding of the usage of mobile money by MSEs is likely to have a ripple effect that would increase usage, which would benefit the customers and the nation.

1.8 Scope of the Study

1.8.1 Limitation of the Study

The study is significant in several ways:

2 **To the government,** the study helps the necessary institutions understand the factors that influence the adoption of mobile money services. This study informs policymakers on the measures and policies that can be implemented to increase the uptake of mobile money services. This may inform efforts to increase financial inclusion among segments of the population that is not adequately covered by the formal financial system.

3 **To the academic,** it contributes to the body of empirical evidence on the factors that influence the adoption of mobile money services among consumers.

4 **To mobile communication operators**, the study aids their identification of possible adjustments to the mobile services that increase the adoption of the service by its customers.

5 To the rest of the country, this study may allow for the provision of better services that are adapted to their needs.

1.8.2 Delimitation of Study

The study was conducted in the Central Business District of Lusaka district in 2021. The Central Business District of Lusaka is the area between Lumumba Road and Cairo Road and incorporates businesses along the two roads. A map showing the actual area covering the Lusaka CBD is shown in Appendix 2. The study focused on business owners or managers who operate or work for the CBD. The sample for the study was composed solely of adults – those aged 16 years and above. This is because the working age in Zambia is 15 years to 65 years. Children were not covered because the financial inclusion agenda focuses on adults. Other potential users such as government and business entities were also excluded. In addition, the study only focused on the metropolitan area of Lusaka district. This is partly due to the lack of human and financial resources for a more expanded study. The study focused on Airtel Zambia customers. The network is one of the largest mobile money services providers, with over 2.1 million mobile money users (Airtel Africa plc, 2020).

1.9 Operational Definitions

Dependent Variable	Definition
Use Airtel Mobile Money	Refers to the use of Airtel Mobile Money by businesses for various operational purposes that include savings, borrowing, transactions with customers or suppliers
Independent Variables	**Definitions**
Age	Refers to the age of the person in charge of the business
Transaction costs	Refers to the charge or costs for transacting using Airtel money. This includes withdrawals, deposits and costs for money transfers.
Education	Refers to the level of education of the respondents
Accessibility	Refers to the availability of Airtel mobile money agents in a specified area.
Save	Refers to money set aside by the business for future use
Borrow	Refers to obtaining money from another person or institution at a cost
Gender	Refers to the gender identification of the respondent (male or female).

1.10 Ethical Considerations

Since this study collected primary data from consumers, several ethical issues are likely to arise. The first ethical issue is anonymity and confidentiality. The identity of the respondents has been protected. They were not shared with third parties. The data was reported in aggregate form to further protect the identity and information provided by respondents. The second ethical issue is informed consent. Verbal consent was obtained from the respondents to participate in the study. Respondents also had the right to withdraw from the study as they deem necessary.

1.11 Summary

The chapters started by introducing the topic, and the challenges affecting consumers in the adoption of mobile services. Then explored the development of mobile services in Zambia, and the financial gains the country stands to gain with increased financial inclusion. The problem in the sector was identified, low adoption of mobile money for transaction purposes. Five objectives were identified and the research questions were defined. The purpose of the study and its significance was put across. After the limitation, likely to be encountered, were addressed, the delimitation of the study was also discussed.

1.12 Structure of the Research Paper

The rest of this research report is organized as follows. The next chapter, two, reviews the relevant empirical and theoretical literature on the factors influencing the adoption of mobile money services. A conceptual framework is also developed. Chapter three presents the research methodology. In particular, issues relating to the research approach and design, population, sampling, data collection, data analysis and ethical considerations are explained. The fourth chapter is a presentation of the data analysis and the empirical findings of the study. The empirical results are discussed in chapter five, which provides nuance to the data analysis. The report is concluded in chapter five, the same chapter where the recommendations provided to policymakers and mobile telecommunication companies on expediting the adoption of mobile money.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews various literature on the topic of study. The chapter has two sections. The conceptual framework and the theoretical review. The first section is the conceptual framework, a visual depiction explanation of the interaction of the phenomenon that underpins the study. The second section is the theoretical review (or framework). The theoretical review highlights the guiding theories, principles or models that form the foundation of the study.

2.2 Historical Overview of Area of Study

In Zambia, mobile money emerged in 2003 with CelPay (IFC: World Bank, 2016). The company was mismanaged and went out of business by 2013 with several allegations of losing customers' money (Cooper et al., 2019). Since then, mobile money services have grown, with the sector being dominated by three mobile telecommunication companies (Airtel Zambia Limited, MTN Zambia and ZAMTEL). Airtel Zambia launched the service in 2011, MTN in 2012 and Zambia Telecommunications Company (ZAMTEL) Limited in 2017. The success of mobile money is dependent on the accessibility and affordability of the service, and the availability of telecommunication infrastructure and a mobile phone.

The twenty-first century witnessed a surge in the ownership and usage of mobile phones. Since ZICTA started capturing ICT statistics in Zambia in 2010, the mobile penetration in Zambia has more than doubled from 41.6 in 2010 to 106.8 in 2020. The number of mobile subscribers has increased over the years. The highest growth rate was 49.9% in 2011, an increase from 5.4 million to 8.2 million, followed by 28.9% the subsequent year. There was a decline in total subscribers in 2013 and 2014. From 2015 to 2020, there was an increase except in 2016 when it declined by 4%. Over the same period, from 2015 to 2020, the population of active mobile subscribers increased from 10.1 million to 19.1 million (ZICTA, 2021).

MTN Zambia is the largest mobile phone service provider with a clientele of 8.4 million, followed by Airtel Zambia Limited with 7.6 million and then ZAMTEL with 3.1 million (ZICTA, 2021). The overall number of mobile money users was 8.6 million in 2022 in Zambia (Silimina, 2022;

Cooper et al., 2019). Airtel money had 49% of subscribers, MTN money had 40%, and Zamtel had less than 11%. The dominance of Airtel Zambia, the second-largest mobile service provider, as opposed to MTN Zambia, the largest provider, signals unique strategies that have worked for them. The company had the largest branch network with 6,834 agents, followed by Zoona which had 730 active agents, and MTN with 365 agents nationwide in 2016 (IFC, 2016).

With only 36% of the population having bank accounts, there is a huge market for financial mobile money services in Zambia (IFC: World Bank, 2016). Increased mobile money usage will tap into the unreached income bracket of savers and borrowers (Kawimbe, 2020). For these groups, traditional financial services often tend to be out of reach for several reasons. Firstly, transaction fees tend to be expensive (Aaron, 2018). Secondly, the requirements for signing up for traditional banking services (such as opening a bank account) can be lengthy and bureaucratic (Aaron, 2018). Thirdly, banking facilities are inaccessible for several of them (Sakala & Phiri, 2019). The emergency of mobile money services has helped to mitigate some of the above constraints (Donovan, 2012)

To improve the sector, mobile service providers must cater the financial product to the needs of their customers (businesses, individuals and public institutions) (Patwardhan et al., 2018). Traditionally, financial services such as the transfer of money were generally the preserve of traditional brick-and-mortar commercial banks and other deposit-taking institutions. Now, mobile money service providers have made money transfers accessible and available through their agents. In addition, mobile companies allow individuals and companies to meet government obligations and purchase goods and services through person-to-government transfers, person-to-business transfers and other factors.

To open a mobile money account only a mobile phone is needed (Kamande et al., 2020). The service has become popular in countries that high levels of financial exclusion (GSMA, 2013). The GSMA (2013) found that in nine African countries (Cameroon, the Democratic Republic of Congo (DRC), Gabon, Kenya, Madagascar, Tanzania, Uganda, Zambia, and Zimbabwe) mobile money account ownership has exceeded the ownership of traditional bank and other depository accounts.

Mobile money services have improved financial inclusion in Zambia. The 2020 Financial Scope (FinScope) survey showed that mobile money services usage had increased to 58.5% from 14.5%. Formal financial inclusion had increased to 69.4% from 59.3% in 2015. Over the same period, the transaction value of mobile money increased from K 2.067 billion in 2015 to K 105.815 billion in 2020. However, the growth in mobile money was attributed to its use to transfer money. The service is rarely used for credit and savings purposes or to purchase goods and services, with only 11% and 9% preferring to use the service for bill payments and purchases, respectively (Cooper et al., 2019). There has been resistance by businesses to allow consumers to purchase goods using mobile money. This resistance has been attributed to an inadequate trust of mobile money agents with reports of loss of money in mobile money accounts. When compared to the rest of the continent this is quite low. For mobile money to succeed and to effectively lower cash transactions, which were discouraged during the Covid-19 pandemic, there is a need for increased acceptance of mobile money for payments for goods and services (Shaikh, et al., 2023; Kaur, et al., 2020; GSMA, 2021).

In SSA where there is a credit gap of USD 100 million, with USD 70 million – USD 90 million being in the SMEs (AfDB, 2013). The simplicity of mobile money provides a platform to narrow the financing disparity, by pooling resources from and to the majority of the less privileged individuals and businesses. The ratio of private sector credit to GDP in Sub-Saharan Africa was 24%, which was lower than average at 77% for all other developing countries (Demirguc-Kunt & Klapper, 2012). Nonetheless, World Bank statistics, from the World Development Indicators, (2021) show that increased mobile money service subscriptions had not translated into improved private sector credit to GDP in Zambia. The proportion of private borrowing to GDP declined on average annually by 5.13% from 2015 to 2019. In 2019, the ratio of private credit to GDP was 15.63%, which is below the SSA and world averages of 42.08% and 132.02%, respectively.

The country has the twenty-fourth largest mobile market (24th) in SSA. The information and communication sector contributed 2.2% to the GDP. The sector recorded positive growth in 2018, 2019 and 2020. In 2020, when the economy was in recession, the sector grew by 14.3% despite the sharp depreciation of the kwacha and the raise in the inflation rate (GSMA, 2018). The total output was ZMW 10.3 billion (MoNDP, 2017). The sector contributed ZMW 184 million in taxes to the economy, and the total tax contribution from the sector accounted for 4.8% of the government's total tax revenue. In addition, mobile-specific tax consumers are the largest contributors to after Value Added Tax (VAT) (GSMA, 2018).

Although Airtel Zambia is the second largest network in Zambia, it has the largest revenue. The company is also the largest contributor to taxes among the three mobile telecommunication companies in the country. The company grew by a larger proportion than the entire industry in 2020, its average growth rate was 20.3% compared to 14.3% for the entire industry (Airtel Zambia, 2021). Airtel money has also continued to grow, with its usage among customers estimated at 42.4% in the 2019-2020 annual report (Airtel Africa, 2020). The total revenue was ZMW 2.60 billion compared to ZMW 2.15 million in 2019. The company invested ZMW 694 million in network and infrastructure expansion during the same period (Airtel Zambia, 2021).

As the historical perspective, and the problem statement, of the study detailed, the adoption of mobile money for other purposes apart from person-to-person transfer has been slow. Mobile money offers a lot of opportunities for Micro and Small Enterprises. Mobile money lowers the risk of theft, which they are vulnerable to, if they hold cash, it eliminates the probability of transactions failing due to insufficient cash by consumers. Besides, it also offers Micro and Small Enterprises borrowing platforms when they have insufficient cash to transact. In addition, there are investment platforms allow on the platform that allows them to easily invest a portion of their profit at an interest.

2.3. Empirical Literature Review

In this section, related empirical studies that have examined the factors influencing the adoption of mobile money services are reviewed. These studies are drawn from selected empirical contexts such as Bangladesh, Kenya, Tanzania, and Zimbabwe. Since there are limited studies that have looked at the adoption of mobile money and several financial products (i.e. mobile banking) for business purposes by MSEs and other business, this section focus on mobile money among different economic units.

2.3.1 Factors that influence the adoption of mobile money services

One of the earliest studies on the phenomenon by Tobbin (2010) explored the factors that influence the use of mobile money services. The study was motivated by the rise in the ownership of mobile handsets amidst a significant fall in the price of mobile handsets. The study was supported by the

Technology Acceptance Model (TAM) and the Innovation Diffusion theories. The data were analyzed using Structural Equation Modelling (SEM). The results supported the predictions of both of these theories. In particular, perceived ease of use, usefulness, trust, and risk were key determinants of the adoption of mobile money services. In line with the Innovation Diffusion Theory, the study also found that relative advantage, compatibility, trialability and observability were all key determinants of the adoption of mobile money services.

Kathinji and Gekara (2014) examined the factors that influenced the adoption of mobile money services among higher educational institutions in Kenya. The study employed a descriptive research design. The study collected both primary and secondary data from senior management members of staff at selected institutions in Nairobi County. The primary data were collected using self-administered questionnaires while the secondary data were collected from strategic plans and other institutional publications. The data were analyzed using regression analysis. The study found that the quality of alternative banking services, financial reporting requirements, and awareness of mobile money transfer services were the main factors influencing the adoption of mobile money services. It was recommended that institutions of higher learning should embrace mobile money solutions to make their revenue collections and expenditures more efficient and convenient.

Similarly, Wamuyu (2014) explored the role of contextual social and economic factors in explaining the adoption of mobile money services in Kenya. The study employed a mixed methods research approach, combining the quantitative and qualitative research approaches. It focused on mobile money users who were administered a survey questionnaire. This was mainly used to collect quantitative data. Qualitative data were collected using two organized focus group discussions (FGDs). The study found that the uptake of mobile money services was largely influenced by pre-usage methods and the scope of services that were offered by various mobile money service providers. The higher the number of services, for example, mobile wallet, payments for bills, buying airtime and money transfer, the higher the likelihood that consumers will adopt mobile money services.

Omol et. al. (2017) also examined the factors influencing the adoption of mobile money services in Kenya. The study focused on the role played by demographics, acceptance, perceived usefulness, ease of use and risk among small- and medium-scale enterprises (SMEs) in the central business district of Kisumu city. The study employed a descriptive correlational research design to identify the strength of the relationship between the aforementioned factors and the adoption of mobile money services. A sample of 271 SMEs was selected using simple random and purposive sampling. The primary data collection instrument was a questionnaire. Descriptive analysis and multiple regression techniques were used to analyze the data. The study found that demographic factors, perceived benefits, perceived ease of use, and perceived risks were the main factors influencing the adoption of mobile money services. While the other factors propped up the adoption and use of mobile money services, perceived risk was negatively associated with the use of mobile money services.

Chogo and Sedoyeka (2014) explored the factors that influence the uptake of mobile money in Dar-es-Salaam, Tanzania. The study collected data using interviews and questionnaires administered to mobile money users. The study noted that mobile money usage was still low. However, its usage could be propped if users felt that it was beneficial to them and that it saved them valuable time. Other factors that encouraged the usage of mobile money were awareness of the service, availability of mobile money agents, ease of use, affordable transaction costs, and low fraud risks.

Another study on Tanzania by Lema et al. (2017) investigated the factors that influence the adoption of mobile money services among people who are not captured by the formal banking system in Tanzania, especially the poor. The study was motivated by the fact a large proportion of the poor still had no access to basic financial services. The study adopted a cross-sectional research design. The study was guided by the Technology Acceptance Model (TAM) which is based on six pillars: perceived usefulness, ease of use, trust, cost, risk and social influence of the technology. Data were collected from a sample of 250 respondents. Multiple regression analysis was used to analyse the data. The study found that three pillars – perceived usefulness, cost and social influence – were the main factors that influenced the adoption of mobile money services. This finding had important implications for pricing and marketing strategies adopted by mobile network operators (MNOs) to the uptake of mobile money services.

Maitai and Omwenga (2016) examined the drivers of the uptake of mobile money services in the Kenyan telecommunications industry. In particular, the study focused on the role played by consumer behaviour, resource availability, technology, and user attitudes. It was a case study of Safaricom Limited. The study employed a descriptive research design. It was based on a sample of 156 respondents drawn based on the stratified random sampling method, from a population of 262. Both secondary and primary data were collected. The latter was collected using a questionnaire. A total of 118 valid questionnaires were returned, representing a sample response rate of 75.6 per cent. The data were analyzed using descriptive and regression analysis. The study found that all four factors were significant in explaining the adoption of mobile money services. The results of the regression analysis reviewed that the four factors contributed as much as 76.4 per cent of the total variation in the adoption of mobile money services.

Masocha and Dzomonda (2018) explored the factors influencing the adoption of mobile money services among small- and medium-scale enterprises (SMEs) in rural Zimbabwe. The study employed a quantitative research approach with a descriptive research design. The study picked a sample of 160 SMEs collected using self-administered questionnaires administered to SME owners or managers. The data collection exercise was implemented between September and November 2017. Data analysis techniques included descriptive statistical analysis and structural equation modelling (SEM). The study found that the perceived benefits of mobile money services and the challenges of using traditional financial services significantly influenced the adoption of mobile money services.

Zeinab (2019) conducted a cross-country study focusing on investigating the factors that influence the uptake of mobile money services in Egypt, Kenya, Ghana, Tanzania, Uganda, Zimbabwe and Rwanda. The six countries were chosen because they were leaders in the adoption of mobile money services in Africa. The study identified country-specific, regulatory, and service provider factors that can influence the adoption of mobile money services. The extent of mobile money adoption was measured using two variables: the registered subscribers' ratio and the active subscribers' ratio. The data for the period 2013-2017 were used for the study and were collected from respective countries' central banks. The data were analyzed using pooled regression analysis. Estimated models were estimated using the ordinary least squares (OLS) technique. The study found that mobile money distribution network penetration and the number of service providers had a significant positive impact on mobile money adoption. However, mobile money fees, the level of education, nominal gross domestic product (GDP) and mobile money transaction limits were found to impede the adoption of mobile money services. Further, crime levels, banking penetration and regulation were found to have no significant impact on mobile money adoption.

A few studies have also been conducted in Asia. One of these studies was conducted by Potnis, Demissie and Rahman (2017). The study examined the factors that influenced the adoption of mobile money services among students, farmers and small- and medium-scale enterprises (SMEs) in Bangladesh. The study was based on a sample of 153 study participants. The study employed a quantitative research approach. Using regression analysis, the study found that trust was the main factor influencing the adoption of mobile services among students. However, among farmers and SMEs, the perceived benefits, efforts involved in utilizing the service and facilitating conditions, were the main drivers for the adoption of mobile money services. Therefore, there was a need for service providers to, among other things, document the usefulness of mobile money services.

2.3.2 Affordability of Mobile Money

The affordability of mobile money services is related to the transaction cost incurred during the use of the services. Transaction costs have been attributed to have a negative impact on the use of the service. In an ethnological analysis of the influence of mobile money services on financial inclusion in urban areas of Zambia, Kabala & Seshamani (2016) discovered that most consumers prefer mobile money to banking services because of its relative affordability. The people interviewed stated that mobile money accounts, unlike bank accounts, do have maintenance costs.

Kamande et al., (2020) in a study observed that most respondents said that the reason they do not use mobile money is that transaction costs are too high and/or frequent. The responses differed across income bands. Those in the lower income bracket complained more than those in the higher brackets. Besides, the slab-based pricing used in Rwanda, where transaction fees are charged according to fixed brackets of amounts, deterred consumers from using mobile money for transactions involving large amounts of money.

In a study in the Somalia capital, Mogadishu, Sayid (2018) examined the impact of mobile transaction costs on the financial performance of Small and Medium Enterprises. He adopted a quantitative approach, using a descriptive survey method, which was preferred because the study's intended purpose was to develop an outline of the influence of mobile money transfers on the financial performance of SMEs. The results established that mobile money transfers were used because they reduced transaction costs. Using mobile money transfers was cheaper than physically taking the money. Besides, the transaction cost of sending money using the service was lower than using bank transfers or other traditional money transfers. The largest provider of the service in the

Mogadishu market did not charge customers for using the service but charged USD 20 for reversing a transaction. It also enables consumers to save time and lowers the risks posed by handling cash.

Even though transaction costs are cited as one factor that inhibits the adoption of mobile money services. When assessing the use of mobile money among the Tea Saving and Credit Cooperatives in Rwanda, Kamande, et al. (2020) found that the removal of transaction costs during the COVID-19 pandemic stimulated the adoption of mobile money services. Unexpectedly, the growth in mobile money adoption continued even after transaction fees were re-introduced.

Micheni, et al. (2013) examined the influence of transaction costs and facilitating conditions on the adoption of mobile money services. The study used a quantitative approach with Statistical Package for Social Sciences version (SPSS 16) employed to conduct the data analysis. A survey was conducted to collect data. The study showed that, although facilitations conditions stimulate the adoption of mobile money services, transaction costs do not affect the adoption of mobile money. The reasons for this are that transaction costs for mobile money are relatively low compared to other financial services. This is evident in the high usage of the service by people on the base low portion of the income bracket.

2.3.3 Trust of Mobile Money Services

From the conceptual framework, it can be noted that the influence of borrowing and saving options on the mobile money platform is based on the trust that consumers have in the mobile money service. Trust influences consumers' decisions to use a financial product. Besides, trust in a financial provider influences the decision to use a bank or save with them. Potnis & Dawit (2017) examined the factors that influence the use of mobile money services among students, small business owners and farmers in Bangladesh. The study employed a quantitative approach that used regression analysis. They discovered that it influences consumers' decisions to use mobile money. Even Lwanga & Adong (2016) recognised in a study on Uganda that trust affected the use of mobile money services for saving purposes.

In a study to investigate the effects of mobile money on saving behaviour in Kenya. Skohqvist, (2019) adopted a quantitative research approach and used the logistic and 2SLS IV models to investigate the impact of mobile money adoption on the saving behaviour of individuals. The findings were that mobile money usage increases the likelihood of savings, the study found that mobile money users are 1.2 and 1.4 times more likely to save than non-users. Among the reasons why users were likely to save is because they found the service trustworthy.

Ohese (2018) examined the factors that affect the adoption of mobile money payment services among higher learning institutions of special education in Kenya. The study employed a descriptive research design. The sampling technique used is a stratified systematic sampling technique. Regarding trust, the study established that almost 38% of students do not trust mobile money payment services, with 63% of students expressing concern about financial risks. They expressed concern about the privacy and security of their information.

In a study on the use of mobile money services in Kitwe and Kalulushi, Kabala, et al., (2018) discovered that several people expressed concern about the safety of the service. They said that they expressed instances when their money went missing. The frequent changing of location by mobile money agents exacerbated this risk. Besides, the mobile money providers did not provide information on how they dealt with such cases.

2.3.4 Availability and Accessibility of Mobile Money Services

Accessibility is an important factor in determining the usage and inclusiveness of financial products. Mobile money is preferred by many consumers because it is relatively accessible. Accessibility and availability of the service are dependent on money factors connectivity, network and availability of mobile money agents. This section focus on the availability of mobile money agents and their limitation caused by “insufficient float”. Potnis & Dawit (2017) examined the factors that influence the use of mobile money services among students, small business owners and farmers in Bangladesh. The study employed a quantitative approach that used regression analysis. The results of the study revealed that the availability of the mobile money service was the reason why consumers had a mobile money account.

In the study by Kabala, et al., (2018) in Kalulushi and Kitwe, they found that among the reasons consumers used mobile money is that it is accessible. The interviewees did not undergo many formal processes to open an account or use the service. They would simply walk to kiosks (mobile money agents or booths) and transact. The agents were strategically located in residential areas. Additionally, mobile money was also used by certain employers to pay their employees because of their relative accessibility. Unlike a bank that may require them to travel and look presentable before starting the formal process of transacting or opening an account.

In Kenya, Lwanga & Adong (2016) empirically found that there is a negative relationship between the adoption of mobile money services and distance to the nearest agent or market. The study examined the effectiveness of mobile money services as a pathway to financial inclusion and individual savings in Uganda. The study used a mixed approach, a combination of qualitative and quantitative methodology.

Kamande, et al. (2020) in Rwanda found that the accessibility of mobile services was sometimes hindered by an inadequate "float" (the maximum amount of money that an agent can hold) or cash available for the consumer to withdraw. The situation was worse in localities that had one agent because the agent could not obtain a loan from another agent. Those agents who operated in areas where they were many would usually assist each other by giving each other loans or allowing them to transfer their money into others' accounts to create space and enable the transaction.

2.4 Theoretical Framework

The theoretical framework is a review of principle theories on a particular focus area of research. It is the blueprint of a study derived from existing theories that have been validated and tested over time (Grant & Osanloo, 2014). The framework is a theoretical design of the foundation upon which the study is built using previous models and theories. It should tackle every process of the study from the topic, problem, methodology, analysis of data and conclusion of the findings (Adom, et al., 2019). The theoretical framework is linked to the research problem; it should be the focal point of the study. In addition, it provides prior information about the possible research approach and designs for the study.

In this analysis, the guiding theories are the two prevalent theories used in analyzing the adoption of the latest financial products, innovations and technologies. The two theories explained in this review are the Technology Acceptance Model (TAM) and the Innovation Diffusion Model (IDM).

The TAM and IDM have been widely used to explain individual and business reactions to technological innovation. In finance, the two models have also been adopted as the theories that explain the individual reaction to financial innovations. Tobbin & Kuwornu (2011) used the TAM and IDM in their study on the adoption of mobile money transfer. This study will use a combination of the TAM and IDM as identified by several scholars these models complement each other. The TAM states that technology is adopted because of its perceived easiness to use and usefulness. The IDM consider information affects the adoption of technology. Njele & Phiri (2021) used the TAM in their study on factors that the adoption of mobile money services and its impact on financial inclusion. The TAM has become a mainstay in studies on financial innovations and financial inclusion. The model is considered to be sufficiently persuasive and robust to expose the factors that influence the acceptance of a financial product and financial inclusion. This study leans towards financial inclusion as it considers the characteristics of MSEs and mobile money that influence their adoption of mobile money.

2.4.1 Technology Acceptance Models

The Technology Acceptance Model (TAM) postulates that the adoption of information technology (IT) is influenced by its perceived usefulness and ease to use. Since its inception, TAM has been used several times to explain the adoption of various IT-based services. The success of the model has led to its adoption in various fields, to explain how society assimilates the services into their day-to-day lives. Several empirical studies have proved that ease to use and usefulness affect the use of an IT-based product (Liao, et al., 2018).

The TAM has also been widely used in analyzing the adoption of future consumer behaviour of financial products and services. The model was developed from the Theory of Reasoned Action (TRA). The model is built on the idea that the use of financial products is dependent on their usefulness and easiness to use (Tobbin & Kuwornu, 2011). Recent financial innovations have driven advancement in Information, Communication and Technology (ICT). The ICTs have simplified financial transactions, by making them effortless. The usefulness of a product is now measured in the efficiency of the transactions. Thus, the TAM theories postulate that the adoption of financial products is dependent on their usefulness and easiness to use (Micheni, et al., 2013). Consumers' views about the perception of usefulness and the ease of use of a financial service influence its adoption (Tobbin & Kuwornu, 2011). The theory is widely used because it allows researchers to understand what hinders consumers from using a particular financial product or service. However, the limitation of the TAM is that it does not allow for a holistic approach. It is limited to easiness and usefulness (Chuttur, 2009).

Perceived usefulness and easiness to use of the product are dependent on the demographic characteristics of the operator (age, gender and education), income, cost and available options, which indirectly affect the adoption of financial products and financial inclusion. Younger individuals, the educated and males (who are likely to be more educated and high-income earners) are more likely to better determine the usefulness of the financial product and become easily acquainted with its operation. Individuals are also likely to measure, the usefulness of a product against their income or cost. Products whose price do not affect their adoption are more likely to be useful as also product whose adoption cuts across income brackets. If options such as borrowing and saving affect the adoption of a product then they are likely to be useful and make access to financial markets easier for MSEs.

2.4.2 Innovation Diffusion Model

Another theory that has become popular in scholarly works is the theory of the Innovation Diffusion Model (IDM) or the Diffusion of Innovation Model. In the words of Rogers (1995), “an innovation is an idea, practice or object that is perceived as new by an individual or another unit of adoption”. Diffusion is the process by which an innovation is communicated through a particular network among individuals, households or institutions over time. For an innovation to be accepted there have to be channels of communication, time and a social system. The communication channel has five stages: knowledge, persuasion, decision, implementation and confirmation (Sahin, 2006). The degree of acceptance is dependent on the: Relative Advantage, Compatibility, Complexity, Trialability of the innovation and Observability (Tobbin & Kuwornu, 2011).

The relative advantage is the degree to which an innovation is perceived to be better than others, the compatibility is the easiness to which an innovation can incorporate into day-to-day living, and the complexity is entailed in how difficult the innovation is perceived to be. The trialability is how easily accessible the innovation is to customers and the ease they can use it. Observability is the degree to which an innovation is accessible and available to customers (Amos, 2016; Tobbin & Kuwornu, 2011). The IDM is different from Thayer’s communication model. The IDM has evolved to become suitable for studies on the adoption of financial services. The idea is to understand why different demographics may consider using mobile money for financial purposes as opposed to other different graphs.

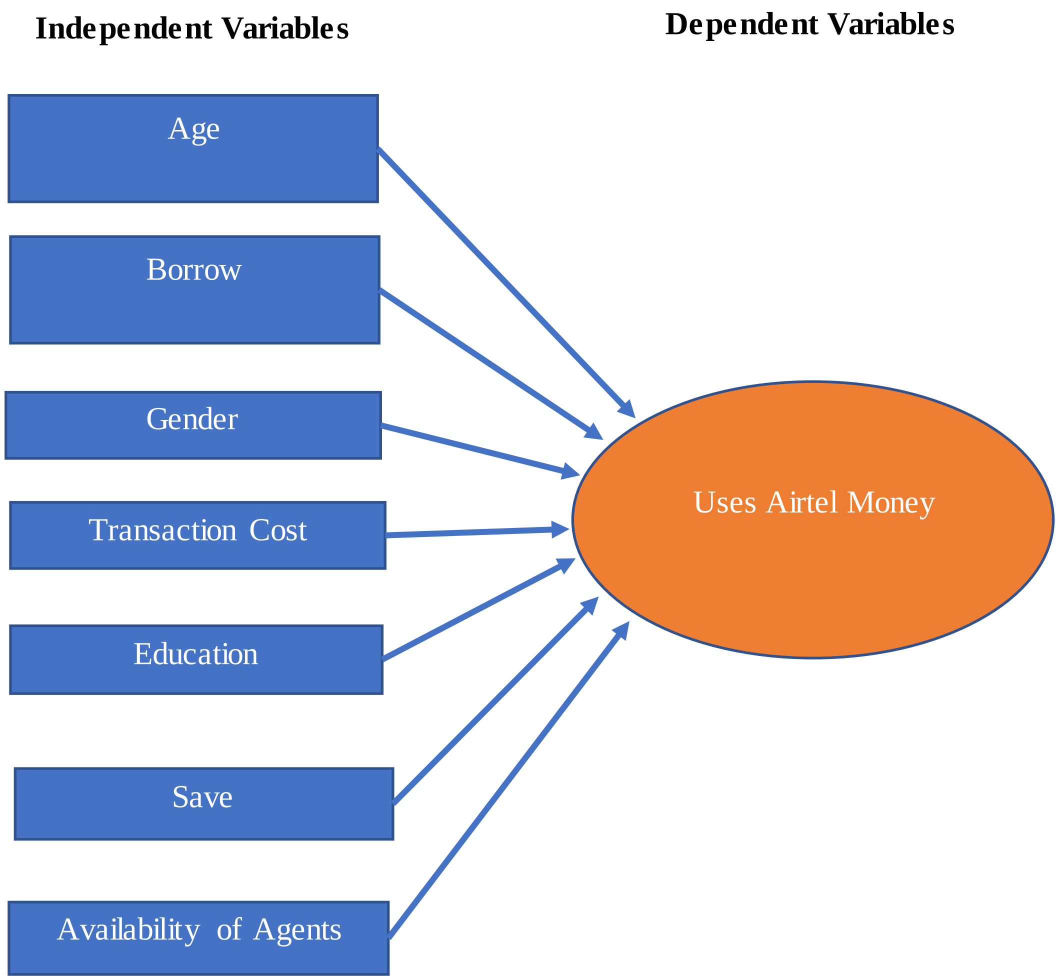
This study will use the technology acceptance model (TAM). The TAM was also employed by Sakala & Phiri (2019) in a study on the factors affecting the adoption and use of Mobile Banking services in Zambia. The model is highly suitable because it assumes the use of financial products is dependent on their usefulness, easiness to use, the principles that guide the product and its efficiency (Tobbin & Kuwornu, 2011). This study will consider whether the availability of various services on the platform affects its adoption. It will look at the usefulness of borrowing, savings, transaction costs and mobile money agents in the usage of mobile money by MSEs.

2.5 Conceptual Framework

The conceptual framework is a rudimental visual description of the analysis that underpins the study (Rocco & Plakhotnik, 2009). The conceptual framework in this study is a modification of the framework developed by Koloseni & Mandari (2017) and Tobbin & Kuwornu (2011) in their respective studies in Zimbabwe and Ghana. The framework has been adopted due to the similarities between the studies by Koloseni & Mandari (2017) and Tobbin & Kuwornu (2011) and this study being conducted in Zambia. Also, Ghana and Zimbabwe are quite similar to Zambia.

The conceptual framework of the study shows that the usage of Airtel Money services is influenced by the business owners' or managers' age, gender and education level. The decision to use Airtel Money for business services can also be influenced by the availability of various services on the platform such as borrowing and saving (at an interest). Besides the demographic and other intrinsic factors, transaction costs and the availability of mobile money age also influence the adoption of Airtel Money for business purposes. Transaction costs are a reflection of the opportunity costs of using Airtel Money as opposed to cash transactions and other e-payment methods. The availability of agents is an indication of the ability of mobile money users to move their money from electronic to cash and vice versa.

Figure 1: Conceptual framework of the study



2.5.1 Dependent Variable

2.5.1.1 Uses Mobile Money

Mobile money is a financial platform that has been widely accepted. When deciding to use mobile money many things are taken into consideration. Among these are the services available on the platform. Initially, mobile money started as a person-to-person financial transfer services platform, before expanding its provision to include person-to-bank, person-to-government, government-to-person and bank-to-person (Donovan, 2012). In addition, utility purchases, borrowing and investment were also included. The choice is also influenced by transaction costs, interest rates, trusts and accessibility of agents. Interest rates are a factor when deciding what mobile money platform to borrow from, and whether to borrow using mobile money or not (Suri, 2021).

2.5.2 Independent Variable

2.5.2.1 Transaction Costs

Transaction costs are defined in terms of transaction fees. Mobile money transaction fees influence the usage of the service for money transfers or payment of bills. High transaction costs can inhibit the use of mobile money. According to Bauer & Kore (2019), transaction fee pricing models can be divided into three categories. The first is slab-based pricing, where transactions within fixed brackets are charged the same fee. The second is percentage-based pricing, where transactions are charged a fixed percentage regardless of the amount. The third is the free, zero-charge, where transactions are zero-rated. The most expensive is usually slab-based pricing.

2.5.2.2 Borrow

Several mobile money service providers offer lending facilities at varying interest rates. For instance, Airtel money (Zambia) is the Na Sova loans facility. MTN is the kongola platform (Aron, 2021). These platforms offer subscribers loans. The availability of these service increases financial inclusion.

2.5.2.3 Save

In addition to the loans, most of the mobile money platforms have started offering innovative opportunities for competitors to save. The investment opportunities increase the financial pool by drawing resources from and to those financially excluded by traditional financial products (Ryder, 2014)

2.5.2.4 Availability of Agents

For a financial service to be inclusive, it needs to be accessible. The purpose of financial innovation is to provide accessible quality and affordable financial products. Mobile money services have been credited for being a platform that has met these needs. The platform is easily accessible to consumers (Maswejje & Lakuma, 2019). In most instances, the availability of agents to open accounts and facilitate transaction determines, which mobile money service consumers will use (Kabala, et al., 2018).

2.5.2.5 Age

This refers to the age of the respondents. Age has an impact on the responsiveness of individuals to financial innovations. Older people are usually conservative and less susceptible to change, while younger people are likely to be more liberal and very open to financial innovations. Thus, MSEs owned by younger individuals are more likely to adopt financial innovations than those owned by older people.

2.5.2.6 Education

Education also has an impact on the responsiveness of individuals to financial innovations. As the financial access surveys have shown, educated people are more financially included than those who are uneducated. The educated were more likely to have better financial statutes that provided them with a better position of being financially included. Hence, the probability of using mobile money is more likely to be greater in businesses owned by those who have high levels of educated.

2.5.2.7 Gender

Financial inclusion is plagued by gender disparity. Males are often more financially included than females. This is also likely to overlap with MSEs' adoption of mobile money. Male-owned MSEs are expected to have a higher likelihood of using mobile money than female-owned MSEs.

2.6 Critique of the Previous Studies

From the studies reviewed, it is evident that there have been divergent studies on mobile money adoption. The studies have looked at the adoption of mobile money by university studies to its use in the payment of social benefits to vulnerable in society. However, there are limited studies that considered exploring the adoption of mobile money for business purposes by MSEs. Most of the studies have solely focused on mobile money has a tool for money transfer as opposed to it a mechanism that can be used to increase commerce in the economy. Mobile money platforms have grown to increase various services, which include savings, borrowing, payment platforms and others. Nonetheless, barely any papers examined the impact of mobile money on people’s attitudes towards various financial services. Mobile money has taken financial services to vulnerable in society and hence there is a need to assess its effect on various services. Most of the studies fit in the broader categories of studies on financial inclusion. The studies have focused on understanding the factors that determine the adoption of mobile money, which has stimulated financial inclusion, as a way to improve financial inclusion. However, there is limited research on the link between mobile money and financial satisfaction, financial inclusion and financial capability.

2.7 Knowledge Gap

The literature review showed the theory that underpins the adoption of mobile money services by various sections of society. The conceptual framework visualized the adoption of mobile money in a modified context that suits the study. The theoretical framework explained two theories (TAM and IDM) that explain how financial innovation is assimilated. The empirical review looked at several other studies.

The literature review showed that most studies focus on understanding how people decide whether to use mobile money. There are barely any studies that explore MSEs' decisions on which mobile money service provider they will use. Improving the efficiency and effectiveness of MSEs is cardinal as it would stimulate economic growth. Besides, the review also showed that when financial acceptance theories are used in isolation, they cannot sufficiently explain the factors that drive the adoption of financial innovation. This study focuses on Airtel mobile money, the largest mobile money service provider in Zambia.

2.8 Summary

The literature review provided a significant understanding of what drives financial products' decisions to use mobile money. First, the conceptual framework gave a visual depiction of what guides individual decisions. Before using a mobile money provider, individuals consider the transaction costs, trustworthiness (risks) and interest. This guides their decision whether to use the service for money transfers, investments and savings, and payment of bills and utilities.

Secondly, the theoretical review detailed the Technology Acceptance Model (TAM) and the Innovation Diffusion Model (IDM). TAM assumes that the adoption of new financial products is influenced by their usefulness and ease of use. The IDM assumes that innovation or financial products are assimilated into everyday life based on systematic events.

Thirdly, the review of related empirical literature looked at the literature on the adoption of mobile money services. Before, narrowing it to a specified review of the relationship between transaction costs, interest rate, savings and investments, trust and accessibility and the usage of mobile money services. Finally, the research gaps were identified. From the literature reviewed, it was evident that no researcher has tried to understand the factors that drive MSEs' decisions to use mobile money for business purposes. Additionally, the use of the technology adoption theories in isolation does not fully explain the factors that influence financial innovation.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

In this chapter, the research methodology formulated for this study is presented. The research philosophy, design and methods are presented first. Thereafter, the study's total population and the sample population information are provided. Next, the data collection procedure and instruments are explained. The techniques that were used to analyze the data are explained. Lastly, potential ethical issues that are likely to arise during the study are highlighted. The proposed resolution of each of these issues is also highlighted.

3.2 Research Design

The research design is a coherent strategy of integrating different aspects of the study. The strategy shows the several methods, data collection techniques and instruments that can be employed as well as what the results shall entail. In other ways, a research design is a plan on how to conduct research. It forms the foundation of research and holds everything together. It gives the reader an idea of what the researcher aims to achieve based on the research topic and research objectives or questions (Akhtar, 2016; Creswell & Poth, 2020).

3.2.1 Research Philosophy

A research philosophy or research paradigm is a collection of assumptions that guide the entire research process (Saunders, et al., 2009). When conducting research, the choice of method, research tool and instrument is guided by theories. Research philosophy is the summation of all the assumptions made at every particular stage of gathering information for the research (Zukauskas, et al., 2018). Research philosophy is an assumption of the research, an explanation of the methods to be employed, data analysis techniques to be used and the presentation for the study.

This study uses a pragmatism research philosophy. The philosophy allows for the combination of two or more different philosophies. It combines a positivism and interpretivism paradigm. The qualitative method of the study uses interpretivism and constructivism philosophies. This study uses the interviewees' views in the explanations, reality was based on the respondents' perspectives. Then the positivist elements of the philosophy are used in the quantitative methods. This brings objectivity; the results of the empirical analysis determine the truth.

The pragmatic philosophy combines objective and subjective perceptions of reality. The knowledge is derived from researchers' experiences, values and beliefs as well as scientifically proven findings. The researchers that use pragmatism philosophies assign subjectivity to objectivity-proven actions. This is done by providing nuance to empirical findings. This kind of study usually involves the use of interviews, case studies and surveys. This study employed a pragmatism research paradigm. This is because it allows for the addition of theoretically supported nuance to the findings (Saunders, et al., 2009).

The pragmatism philosophy, unlike the three other (positivism, interpretivism and constructivism) research philosophies, allows the researcher to have more than one perception of reality. It allows for both subjectivity and objectivity, which is necessary because reality is not completely uniform and there may be a need to adapt particular studies to certain environments. The transferability of research is more practical in a pragmatism philosophy (Tran, 2007).

The philosophy allows for a broader understanding of the study elements than the confined other research paradigms. In this study, the objective side of the research methodologies enabled us to reach out to a wider target, this is because it requires a substantive number of respondents for nuance to be drawn. The subjectivity of the philosophy adds individual elements perceptive to the study (Zukauskas, et al., 2018). This is necessary to understand individual decisions and their view of mobile money services.

3.2.2 Research Methodology

Research methodology is the structure of research, it includes the design, the systemic decision that was made about data collection, analysis and the presentation of the finding. There are three widely accepted research methodologies: quantitative method, qualitative method and mixed (pragmatic) method (Williams, 2007).

This study employed a pragmatic or mixed research method, which combines quantitative and quantitative research approaches. The method draws on the advantages of using either qualitative or quantitative research. It enables researchers to use the objectivity of empirical studies backed with interpretivism provided by qualitative methods.

Quantitative research methods use quantified data that is observed using identifiable and measurable variables (Adedoyin, 2020). The variables are identified according to various social, economic, cultural and other phenomenal characteristics. The data analysis for quantitative research usually involves the investigation of causality or correlation among variables. The methods usually involve the use of scientific data collection techniques that can allow for the reproduction of the research design in other studies (Cropley, 2019).

The qualitative method is relied upon in interpretative and constructionist philosophies that look to explore human behaviour. The data collection methods usually involve observation and interaction with research entities. These engagements allow for unique information and varied perceptive as they are usually subjective. The data collection techniques range from interviews, participants and focus groups and case studies (Sutton & Austin, 2015; Schneider, et al., 2017).

3.2.3 Research Design

Since this study employed a mixed research method. Within the quantitative approach, the study uses a triangulation of an exploratory and explanatory research design. This is appropriate to identify the strength of the relationship between the identified independent variables and the adoption of mobile money services (Figure 1). The chosen research approach and design allow for the identification of the significant drivers of the uptake of mobile money services (Omol et. al., 2017).

Explanatory research goes beyond the what question to also answer why. Exploring the existence of relations among the independent and dependent variables. The research can be causal-comparative or correlational. This study uses a causal-comparative that also establishes the magnitude of the relationship between an independent and dependent variable as opposed to the correlation that only considers the degree of correlation among the variables (Salkind, 2010).

The qualitative method uses an informational and lifelike approach that attempts to understand human behaviour and relationships with social, economic and other phenomena (Palmer & Bolderston, 2006). The approach incorporates abstract theories to achieve the research objectives. The data is collected using various techniques that range from participation groups, in-depth interviews, and focus groups to observation of the study element. These techniques allow for interaction with various stakeholders. The research philosophies are often constructivism and interpretivism (Mohajan, 2018).

The data for the quantitative method was obtained using a survey. The survey involved the use of a structured questionnaire. The questionnaire was administered by the research team, which consisted of the researcher and two undergraduate students or graduands from the University of Zambia (UNZA). The qualitative method component of the study involved interviews with a selected number of respondents and Airtel money agents to understand what guides their decision. This provided nuance to the empirical findings. The qualitative method involved the use of a semi-structured questionnaire which was administered by the researcher and an undergraduate student from the University of Zambia. A semi-structured questionnaire has been chosen to allow for follow-up questions based on the respondent's answers.

3.3 Study Site

This study focused on businesses operating in the Central Business District of Lusaka. The primary area of target was micro and small enterprises (MSEs) operating between Cairo road and Lumumba road. To understand the full scale of the adoption of mobile money across the business operation, the business was randomly sampled. Therefore, the businesses sampled from the area included businesses that were willing to participate in the study.

3.4 Study Population

The population consists of all members under investigation. In this case, it consists of all MSMEs operating in Lusaka CBD. In the literature, there are no current estimates of MSMEs operating in the Lusaka CBD, the only available estimates are from 1995 which placed it at 7000. There is also no data disaggregated by district of Airtel Money users in Zambia. However, it is plausible to assume that there is relatively a large number of MSMEs and mobile money users operating in the study area.

3.5 Study Sample

A sample of MSMEs operating in Lusaka CBD was selected. The sample was drawn based on the 7000 estimated in 1995, which is still the last estimate. The general sample size formula by Yamane (1967) was used to calculate the sample size:

$$Sample\ Size = \frac{N}{1 + N(e^2)}$$

where N is the population size and e is the margin of error set at 10%. A large margin of error was chosen because of the largest diversity of the businesses operating in the CBD and several constraints posed by inadequate financial budgetary limitations, time and the COVID-19 pandemic.

$$Sample\ Size = \frac{7000}{1 + 7000(0.10^2)}$$

$$Sample\ Size = \frac{7000}{1 + 7000(0.10^2)}$$

$$Sample\ Size = 99$$

The respondents managed to collect 102 responses, which is slightly more than the sample size. This increased sample's reflection of the population and did not adversely impact the study.

3.6 Sampling Techniques

A sampling technique is a method used to obtain the desired sample from a population. This study used the non-probability purposive or judgmental sampling technique. The targeted elements in the study are Small and Medium Enterprises (SMEs) operating in the CBD of Lusaka. The purposive sampling technique is cheap in this case and allows for greater variation. Since the total number of businesses operating in the Lusaka CBD is purely an estimate, the arrangement of the business is both formal and informal and there is clear information on mobile money usage among the business. A purposive sampling technique solely targeting MSEs without distinguishing between street vendors and settled businesses.

3.7 Data Collection Instruments

A research instrument is used to collect, measure and analyze data. Research instruments vary according to the type of research being conducted. There are three generally accepted types of research instruments which include but are not restricted to interviews, questionnaires and observations (Kabir, 2016). There is generally an overlap among the instruments as they are likely to be used simultaneously.

3.7.1 Questionnaires

A research question is a list of formulated questions that are completed by a respondent. A questionnaire is a research tool used to collect primary data. It allows for the collection of data in a standardized manner (Roopa & Satya, 2012). Questionnaires are designed to suit particular research. They are often preferred in studies that have a large sample size, such as surveys. Questionnaires with already predetermined questions are known as structured questionnaires. These are preferred in larger research where views are generalized (e.g. surveys) (Roopa & Satya, 2012). Semi-structured questionnaires are used in studies with relatively small sample sizes. Questionnaires that do not follow a particular arranged pattern are known as unstructured questionnaires. These allow for the development of questions suited to particular respondents.

3.7.2 Interviews

An interview is an interaction between a person (interviewee) who wants to obtain information for a particular purpose and another person who provides the information. Several types of interviews differ according to the formalization of the questions, number of people engaged and depth. An interview with predetermined questions following a particular pattern is known as a structured interview. These interview questions are prepared before the interview and asked in a fixed order. The opposite of a structured interview is an unstructured interview. The interviewer does not follow any fixed order; questions are usually asked based on the responses of the interviewee. A combination of a structured and unstructured interview is known as a semi-structured interviewee. This interview draws from the advantages of using either a structured or unstructured interviewee.

The data collection instruments for this study are structured survey questionnaires.

3.8 Data Collection Procedure and Timelines

This research used structured survey questionnaires that had two components. The first part had questions for the quantitative analysis. The second part had the interview guide for the qualitative analysis. This component captured the subjective views of the respondents and generalized certain sections of the study. The questionnaires were administered in person to the respondents by the researcher and the research assistants. The entire data collection process took six weeks as the research allowed sufficient time for the process.

3.9 Data Analysis Instruments and Procedure

The data collected were first cleaned before analysis. The data was organized and cleaned using Microsoft Excel. Thereafter the data was uploaded to STATA. STATA was used to check the data for consistency and completeness. The data was also analyzed using STATA. Descriptive analysis was used to summarize the salient features of the sample, and the main findings regarding the potential drivers of adoption. Next, logistic regression analysis was used to determine the factors that significantly explain the adoption of mobile money services among consumers. The regression used a binary logistic model.

3.9.1 Descriptive Analysis

The descriptive analysis showed the statistical relationship among the variables of interest. STATA was used to analyze the descriptive statistics. The descriptive analysis included information on the descriptive statistics of age and the largest and smallest amount received by the MSEs. Also, there was information on the tabulation and cross-tabulation of the remaining.

3.9.2 Inferential Statistical Analysis

The inferential analysis started with a correlation matrix. The correlation matrix should be the degree of association among all the variables used in the study. This was followed by the regression model, the binary logistic model. The binary model used in the study was an adaption of the model used by Skohqvist (2019). The binary logistic model is a regression model with a categorical dependent variable and a mixed continuous and categorical variable. The logistic model was used to determine the causal and magnitude effect of selected independent variables on the dependent variables. The binary logistic model is different from the multivariate logistic model. The dependent variable of a binary logistic model is a binary dummy variable, while that of a multivariate logistic model has more than one independent variable.

The overall use of mobile money

$$
\begin{aligned}
Use\ Airtel\ Mobile\ Money\ (Airtel\ Subscribers) \\
&= \beta_1 Age + \beta_2 Gender + \beta_3 Education + \beta_4 Transaction\ costs \\
&+ \beta_5 Insufficient\_float + \beta_6 Availability\ of\ agents + \beta_7 Save + \beta_8 Borro \\
&+ \varepsilon_i
\end{aligned}
$$

The variables are defined as follows:

3.9.2.1 Variables

Dependent Variables

- ✓ Age

- ✓ Gender
- ✓ Availability of Agents
- ✓ Transaction Costs
- ✓ Savings
- ✓ Borrows
- ✓ Insufficient float

Independent Variables

- Uses mobile money

3.10 Reliability of Research Findings

The research results are reliable as the researcher did not influence the selection of the respondents nor alter their responses. The researcher adhered to standardized ethics when cleaning and analysing the data and reported the results as found. Therefore, since there was no deliberate attempt to manipulate the research process and the outcomes of the research, the research findings are reliable and relied on.

3.11 Validity of Research Findings

Since the researcher did not manipulate the research process by alternating the results or influencing the selection for personal interests, the results of the study are valid and can be used to influence the internal policy of the central government, the central bank, telecommunications, MSEs and other stakeholders. The research and research findings contain information and gaps that can lead to further research beyond the scope of this study.

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter is a presentation of the results of the data analysis. The first section of the chapter provides descriptive statistics of the variables for respondents who use mobile money for business purposes. The first subsection of section one starts with the continuous variables of the largest amount received via Airtel Mobile Money and the largest amount saved on Airtel Mobile Money. The second subsection of section one provides statistical information on categorical data (how long the respondent has had a mobile money account, transaction fees, savings, insufficient space, borrowing and availability of agents). The second section incorporates respondents who do not use mobile money to estimate the correlation coefficient between the usage of mobile money for business purposes and other factors.

4.2 Demographic Characteristics of the Respondents

The respondents interviewed in the survey had different social and demographic characteristics. The age, gender and education level of the respondents were captured during the survey.

4.2.1 Age of the respondents

Table 1 below shows the average age, standard deviation, and minimum and maximum values of the respondents.

Table 1: Age of the respondents

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	N	Mean	Median	sd	Min	max	Skewness
age	102	41.265	38	18.01	16	85	0.408

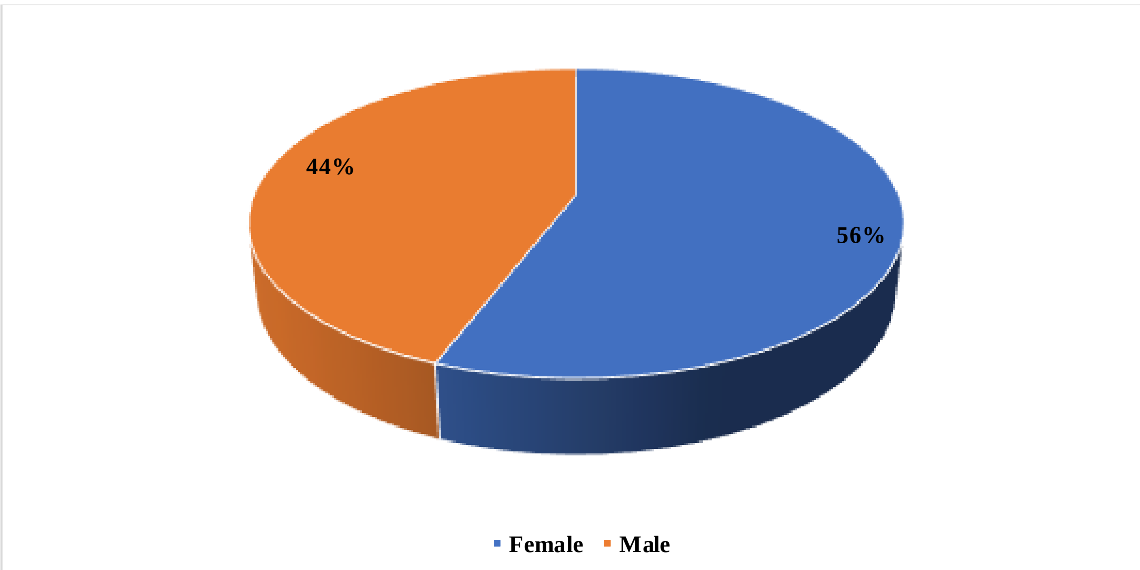
Source: Authors' Computations (2022)

Table 1 shows that the average age of the respondent was 41 years. The standard deviation is 18.01. The youngest respondent was 16 years and the oldest was 85 years. The skewness was 0.408. This meant that the data was positively skewed or right skewed. An indication that most of the data were clustered below the mean. This implied that most of the respondents were below the mean age. The median of the data is below the mean.

4.2.2 Gender of the Respondents

The respondents were asked to self-identify their gender. Their responses are summarised in the pie chart in Figure 1.

Figure 2: Gender representation of the respondents



Source: Authors' Computation (2020)

From Figure 1, it is evident that the majority of the respondents were Female. Fifty-Six (56) per cent of the respondents identified as female, while forty-four (44) per cent of the respondents self-identified as male. The goal of the survey was not to observe gender equality but obtain a representative sample. The sample obtained showed that there are more female traders than males.

4.2.3 Level of Education of the Respondents

Education is an important influencer in the adoption of mobile money. Although mobile money has been widely accepted by less educated people, education has been found to influence people's decisions to adopt the service.

Table 2: Education level of the respondents

Education	Frequency	Percent	Cumulative Percent

Primary	47	46.08	46.08
Junior Secondary	19	18.63	64.71
Senior Secondary	21	20.59	85.29
Tertiary	15	14.71	100

Source: Authors' Computations (2022)

Table 2 shows that most of the respondents had at most attained primary education. The number of respondents who had attained primary education was 47, which represented 46.08 percent of the respondents. This was followed by respondents with a senior secondary education who represented 20.59 percent of the respondents. Those who had junior secondary education constituted 18.63 percent of the respondents. A respondent with a tertiary education only made up 14.71 percent of the respondents. The education information showed that the data was right skewed and leaned mostly towards those with lower levels of education (primary and junior secondary).

4.2.3 Mobile Money Usage among Micro and Small Enterprises

The mobile money usage among micro and small businesses is shown the Figure 2 below.

Figure 3: Mobile Money usage among Micro and Small Enterprises

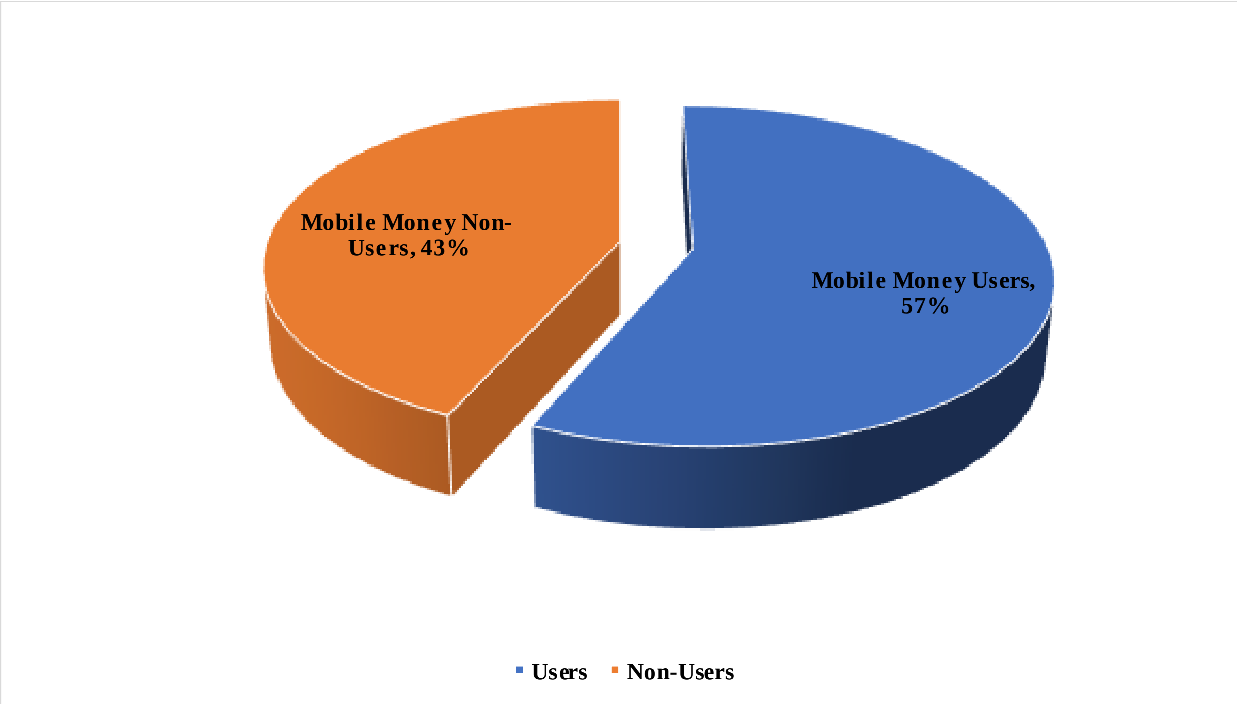


Figure 2 shows that 57 percent of businesses use mobile money and 43 percent do not. There was no distinction between those that have created an account for the businesses and those that use their account for business transactions. Micro businesses are usually tied to the proprietor and cannot be separated from the owner.

4.3 Descriptive Statistics for Respondents who use Mobile Money for Business Purposes

Descriptive statistics provide relevant statistical information that can be used to define a variable. In this study, the variables have been divided into continuous variables and categorical discrete variables.

4.3.1 Descriptive Statistics for Continuous Variables

There are two continuous variables in this study. The first continuous variable is the largest amount received (ZMW) and the second continuous variable is the largest amount saved.

Table 3: Descriptive Statistics of Continuous Variables (Largest amount received and saved)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	N	mean	Mode	sd	Min	max	Skewness
The largest amount received (ZMW)	58	624.9	400	731.9	15	3,400	2.2
Largest amount saved (ZMW)	58	2,335	1500	2,672	35	14,000	2.3

Source: Author's Computation (2022)

The mean largest amount received for business purposes by all the respondents in the past month was ZMW 624.90. Among the respondent, the largest amount received was ZMW 3,400 and the lowest largest amount received among the respondents was ZMW 15. The standard deviation from the mean was ZMW 731.9. The large standard deviation from the mean showed that there was great variation in the income received by the businesses using Airtel Mobile Money. An indication that Airtel money was being used for transactions involving both small and large amounts of money. The variable largest amount received was also strongly skewed to the right. This was an indication that the majority of the respondents' largest amount received was below the average largest amount received by all the respondents.

The amounts saved in Airtel Mobile Money accounts varied from ZMW 35, which was the lowest amount, to ZMW 14,000, the largest amount. The average amount saved by the respondents in Airtel Money Mobile was ZMW 2,335. However, like for the largest amount received using Airtel Mobile Money, the standard deviation for the largest amount saved in the Airtel Mobile Money account was larger than the mean. An indication of the great variation in the amounts saved in Airtel Mobile Money by the respondents. The largest amount saved was also strongly positively skewed or skewed to the right. The majority of the respondents' businesses saved below the average saving of all the respondents.

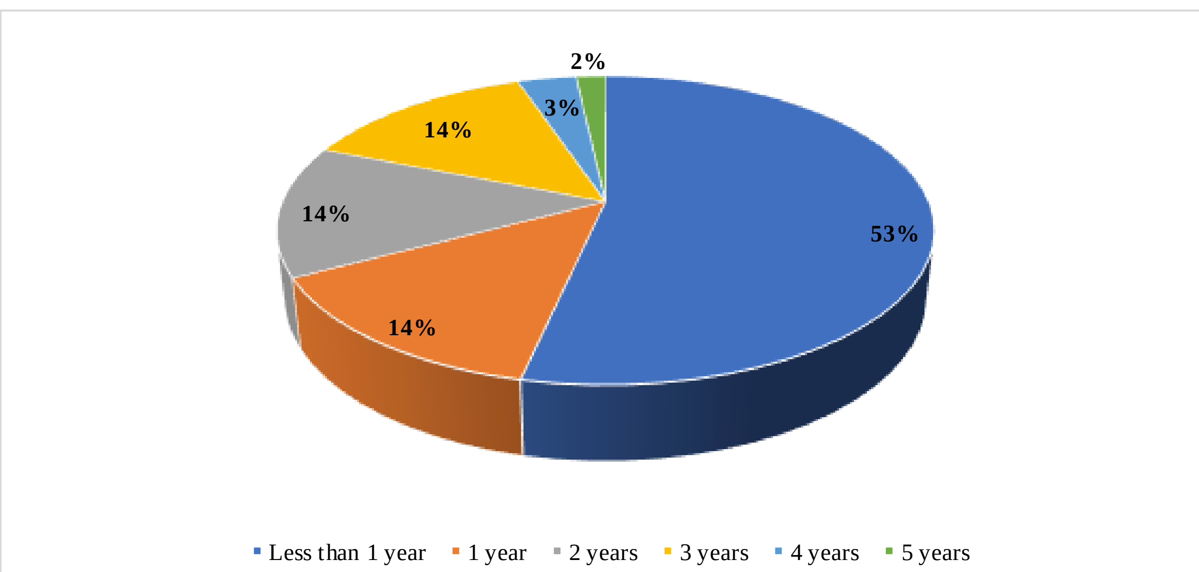
4.3.2 Descriptive Statistics of the Categorical Variables

For the categorical variables, the descriptive statistics show either the percent frequency or the frequency. The variables of interest for this particular subsection are how long the respondent has had a mobile money account, transaction fees, savings, insufficient space, borrowing and availability of agents.

4.3.2.1 Time of Usage

The use of Airtel Mobile Money for business purposes is believed to have been accelerated by the Covid-19 pandemic.

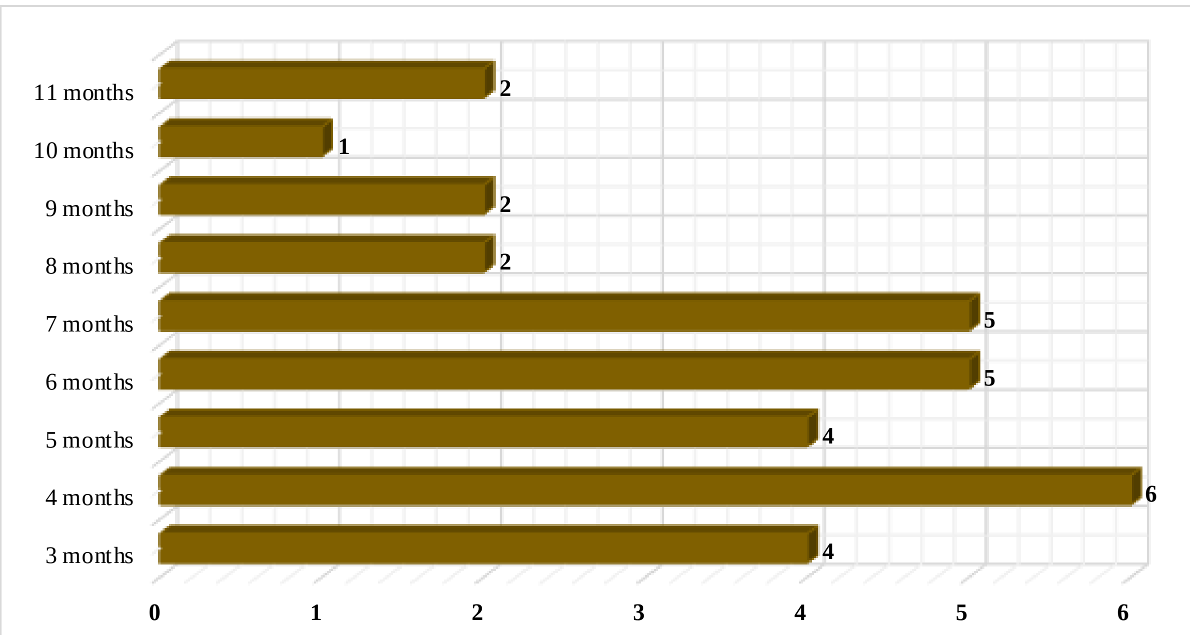
Figure 4: How long respondents' have been using Airtel Mobile Money for Business Purposes



Source: Authors' Computation (2022)

Figure 1 shows that the use of Airtel Mobile Money for business purposes has increased over the last three years. Among the respondents, only two (2) and three (3) percent started using Airtel Mobile Money for business purposes five (5) and four (4) years ago, respectively. Since the pandemic started, the number of businesses using Airtel Mobile Money for various reasons increased. Fourteen (14) percent of respondents indicated that they started using Airtel Mobile Money for business purposes three years ago. While the other two groups, each making up 14 percent of the respondents stated that they adopted Airtel Mobile Money one and two years ago. Those who started using Airtel Mobile Money less than a year ago made-up the majority of the respondents. They constituted fifty-three (53) percent of the respondents.

Figure 5: Respondents who started to use Airtel Mobile Money the last year



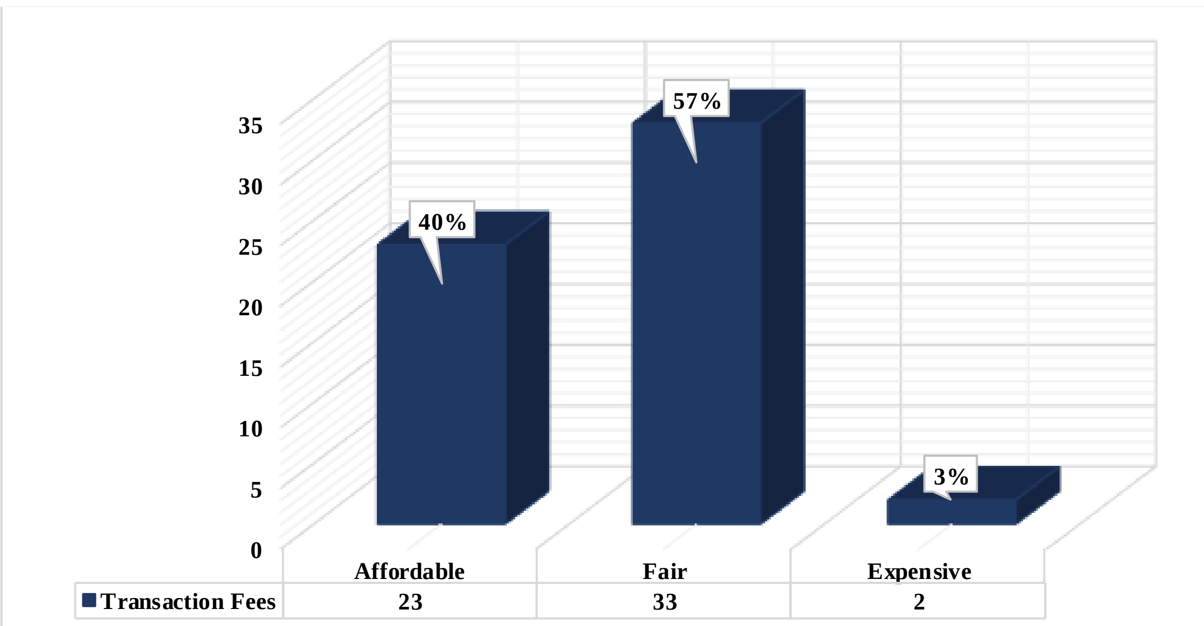
Source: Authors' Computation (2022)

Among those who had adopted Airtel Mobile Money for business purposes, the majority of them started to use the service not less than 7 months before the survey. Out of the 31 respondents who indicated that they have been using Airtel Mobile Money for business purposes for less than a year, twenty-four (24) started seven months before the survey. Although most of the respondents among the 24, which is six (6), adopted the mobile money service four (4) months ago.

4.3.2.2 Transaction Fees

The usage of financial services is also influenced by the perceived cost attached to the use of the product. When a product is perceived as expensive, certain income groups may exclude themselves from using it. Mobile money has received widespread acceptance among lower-income groups because of the perceived low user costs.

Figure 6: Respondents' view of Airtel Mobile Money Transaction Fees



Source: Authors' Computation (2022)

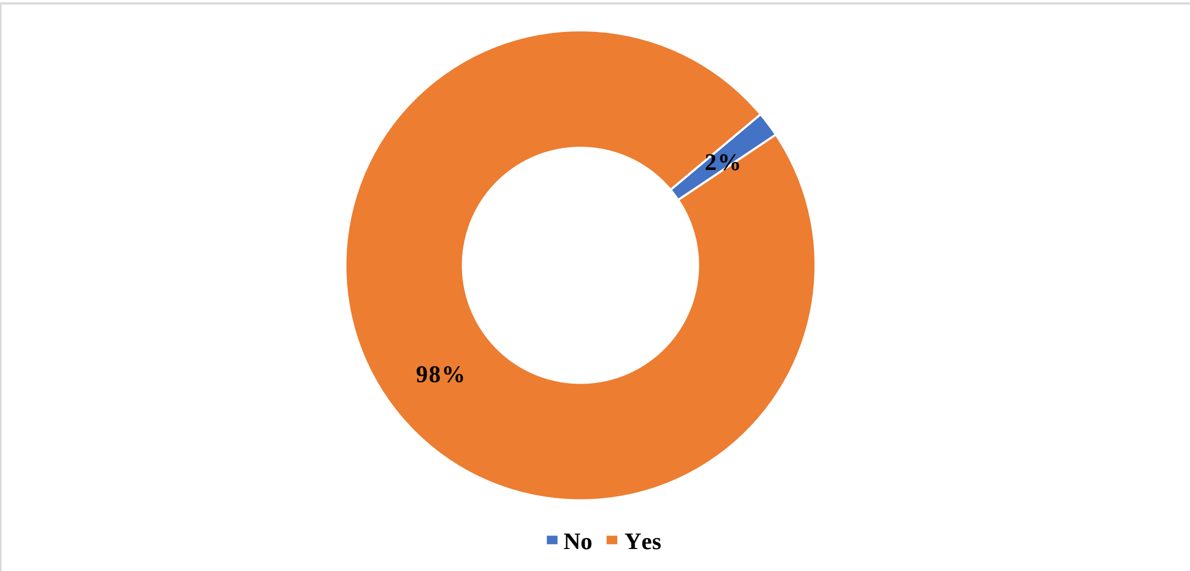
The majority of the respondent indicated that they regard the transaction fee attached to the use of Airtel Mobile Money as fair. Figure 3 shows that those who consider the transaction fair were thirty-three (33) or fifty-seven (57) percent of the total respondents. Twenty-three (23) or forty percent (23) suggested that the service was affordable, while only three (3) percent consider it to be expensive. The results show an opportunity for increased usage of the service among Micro and Small enterprises to increase the efficiency of business transactions among these groups.

4.3.2.3 Saving using Airtel Money

Saving was simply defined as keeping money in an Airtel Mobile Money Account for more than a month. This simplistic definition is from the classification of savings as future or postponed consumption. From the data collected it was observed that various businesses saved. In section 4.1.1, the total amount saved from ZMW 35 to ZMW 14,000. This showed that businesses have possibly varying levels of trust as indicated by differences in willingness to save.

Figure 4 shows that ninety-eight (98) percent of the respondents said that they keep money in their Airtel Mobile Money Accounts. Only two (2) percent indicated that they do not save any of their money using Airtel Mobile Money. This showed some level of trust in the product. However, as noted the trust levels vary according to the willingness to save using Airtel Mobile Money.

Figure 7: Respondents' saving using Airtel Mobile Money

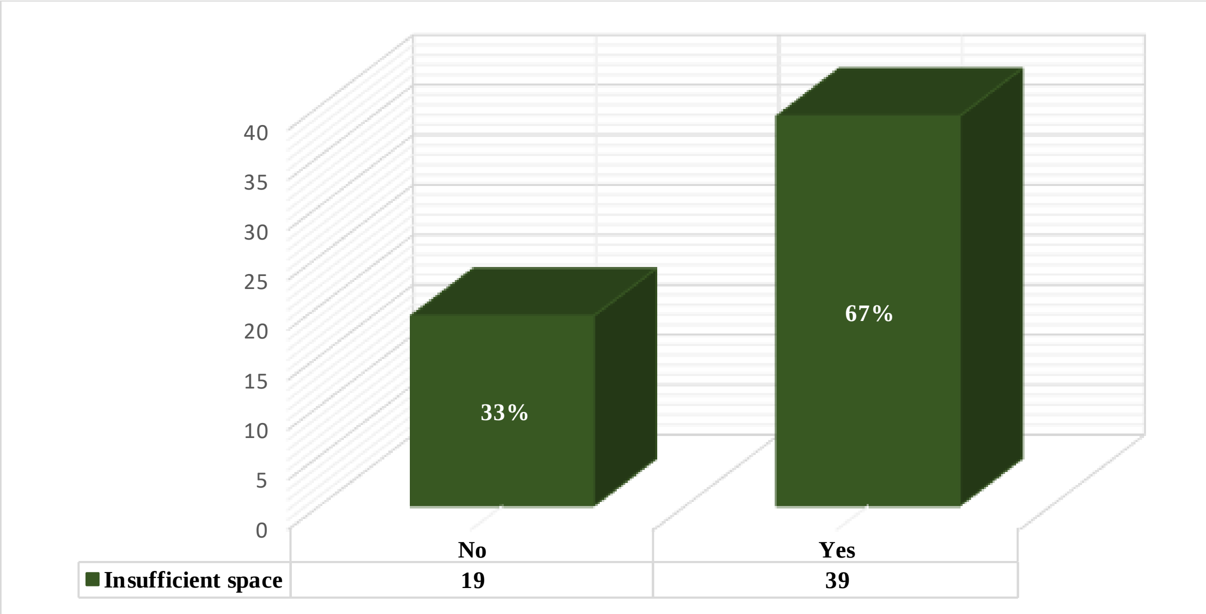


Source: Authors' Computation (2022)

4.3.2.4 Unable to use the service due to insufficient float

Insufficient space by either the owner or an agent can affect a person's ability to use Airtel Mobile Money.

Figure 8: Unable to use the service due to insufficient float



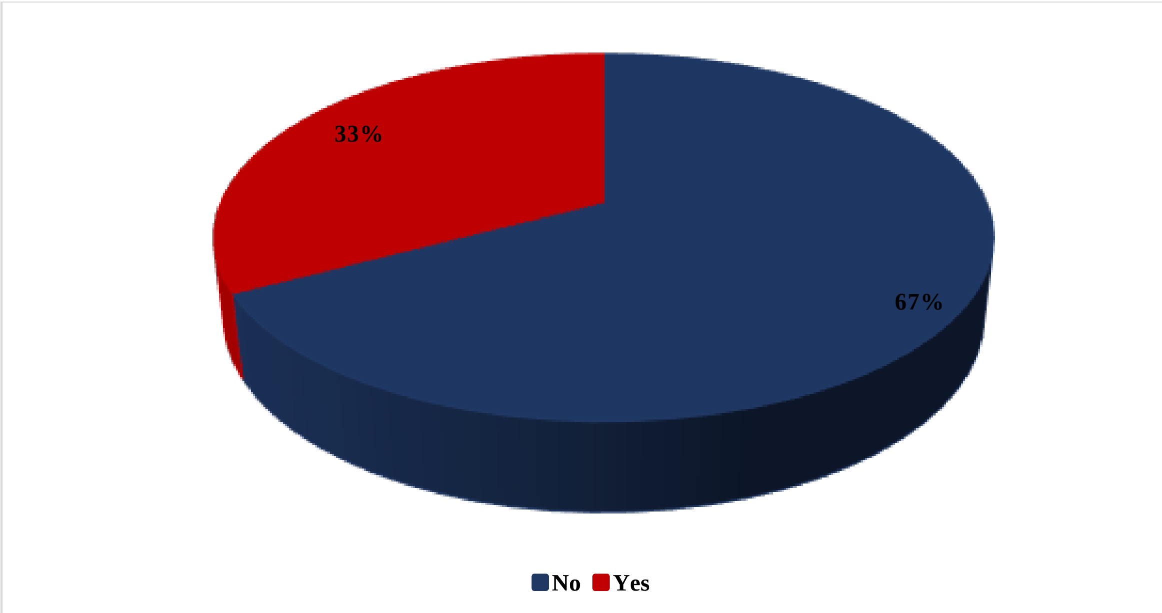
Source: Authors' Computations (2022)

Figure 5 shows that of the businesses surveyed, sixty-seven percent indicated that they have been inconvenienced before due to insufficient space or float. This could have been either insufficient space in their accounts or an Airtel Mobile Money agent's account. While a third of the respondents have never failed to use the financial product because of insufficient space.

4.3.2.5 Borrowing

Borrowing using mobile money looks to be uncommon among mobile money users. Although the service has been available for some time and allows businesses to access funds for various business needs, the majority of the MSMEs seem not to be taking up the platform to fund their day-to-day activities.

Figure 9: Borrowing using Airtel Mobile Money



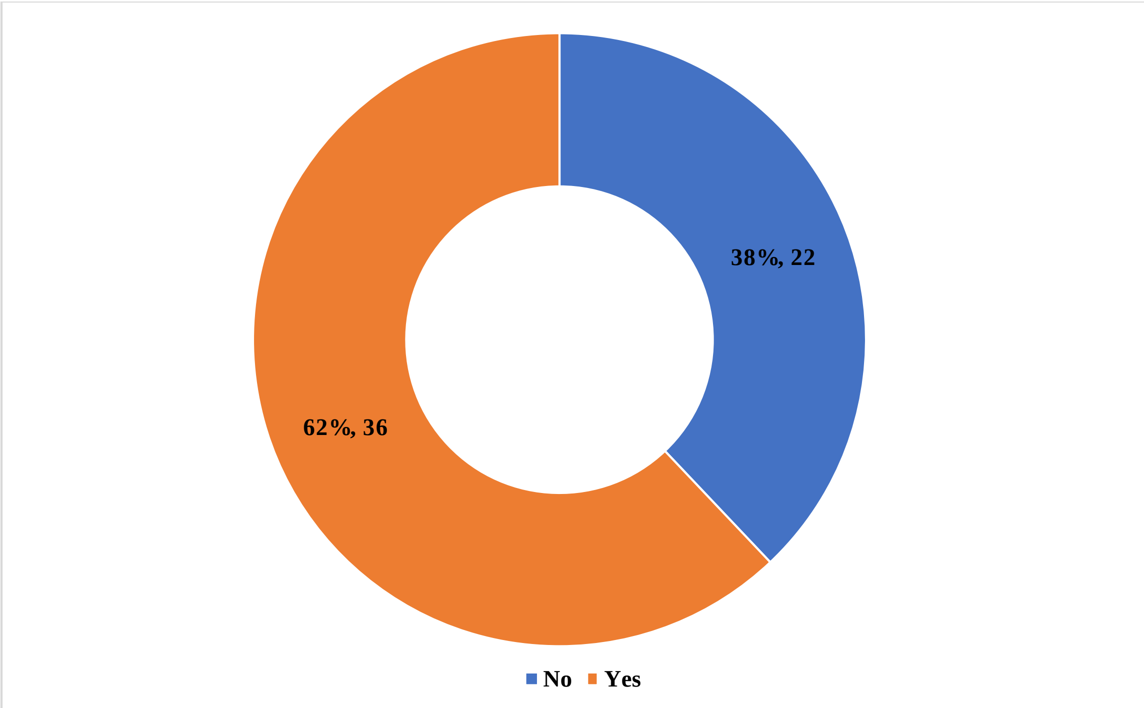
Source: Authors' computation (2022)

Figure 6 shows that sixty-seven (67) percent, the majority of the respondents, indicated that they do not borrow using Airtel Mobile Money. Those who borrow using mobile money only constituted thirty-three (33) percent of the respondents. This is an indication that there is still a need to increase awareness of the availability of the borrowing service and its benefits. Although, it has a moral hazard and adverse selection risks for telecommunication companies,

4.3.2.6 Availability of Agents

For mobile money users to deposit and withdraw money, they need to use the services of a mobile money agent. The availability of mobile money agents affects the usage of the product.

Figure 10: Availability of Mobile Money Agents



Source: Authors' Computation (2022)

Figure 7 shows that the availability of mobile money agents affects the usage of the service. Sixty-two (62) percent, thirty-six (36) of the fifty-eight (58) respondents, indicated that they are affected by the availability of mobile money agents. Whilst, thirty-eight percent, twenty-two of the fifty-eight (58) respondents, said that they are unaffected by the availability of mobile money agents.

4.4 Correlation Matrix

To check the relationship between the variables, a correlation matrix was computed. The results of the correlation matrix are shown in Table 2.

Table 4: Correlation Matrix

Variables	**Business Purpose**	**Saves**	**Insufficient Space**	**Borrows**	**Availability of agents**

Business Purpose	1.0000				
Saves	0.5721	1.0000			
Insufficient space	-0.3068	-0.2072	1.0000		
Borrows	0.2185	-0.0144	0.0871	1.0000	
Availability of agents	0.1207	0.2406	0.0903	0.1824	1.000

Source: Authors' Computations

From table 2 it is evident that there is a positive relationship between the use of mobile money for business purposes and the use of mobile money for savings. With savings as an indicator of trust, the results show that proprietors who trust mobile money services are most likely to use them for business purposes. The coefficient of correlation was 0.5721, which shows a moderate relationship between business purposes and savings. The coefficient of correlation for the relationship between business purpose and insufficient space was -0.3068. This showed that there is a weak negative relationship between insufficient space and the use of mobile money for business purposes. The unavailability of sufficient float by mobile money agents and mobile money users has a negative effect on the decision to use mobile money for business purposes.

Borrowing has a positive relationship with the usage of mobile money for business purposes. The coefficient of correlation between the two variables (borrowing and business purpose) was 0.2185. This showed a weak relationship. Borrowing has a positive effect on the use of mobile money for business purposes. The availability of agents also has a positive relationship with mobile money use for business purposes. The coefficient of correlation between the availability of agents and business purposes was 0.1207. The results showed that the availability of agents has a positive influence on the availability of agents.

The coefficient of correlation between insufficient space and saving was -0.2072. The negative coefficient of correlation showed that there is a weak negative relationship between insufficient space and saving. The coefficient of correlation between borrowing and savings was -0.0144, which was even weaker than that between insufficient space and saving. Borrowing seems to discourage people from saving on using the Airtel Mobile Money service. However, the availability of agents looks to have a positive effect on the use of mobile money for business purposes. The coefficient of correlation between business purposes and availability of agents was positive, 0.2406.

The coefficient of correlation between borrowing and insufficient space was 0.0871. An indication of a weak positive relationship between the two variables. The relationship between the availability of agents and insufficient was also weak with a correlation of coefficient of 0.0903. The availability of agents seems to have a positive effect on borrowing. The correlation of the coefficient between the availability of agents and borrowing was 0.1824.

4.5 Binary Logistic Regression Results

To ascertain the impact of various factors on the decision to use mobile, regression analysis was used. The Binary Logistic model was implied and the results of the model are shown below in table 5.

Table 5: Binary Logistic Regression Model Results

Variable	Coefficient	Standard Error	Test Statistic	P-Value
	(base outcome)			
Age	-0.007	0.0120	0.370	0.710
Gender				
_Male	-0.822	0.706	-1.170	0.244
Education				
_Junior Secondary	-1.165	0.968	-1.200	0.229
_Senior Secondary	-0.026	0.917	-0.030	0.977
_Tertiary	0.121	0.988	0.120	0.902
Transaction_Fees				
_Affordable	18.771	2459.583	0.01	0.994
_Fair	19.553	2459.583	0.01	0.994
_Expensive	16.278	2459.583	0.01	0.994
_Very_Expensive	1.972	4889.878	0.01	1.000
Insufficient Float	-1.412	0.733	-1.930	0.054
Saves	4.565	1.285	3.550	0.000
Borrows	-1.071	0.784	-1.370	0.172
Availability of Agents	0.467	0.787	0.590	0.553

Cons	-23.570	2459.584	-0.010	0.992

Source: Authors' Computation (2022)

The results of the binary logistic model showed that only two variables have a statistically significant impact on the decision to use mobile money for purposes. The variables age, gender, education, transaction fees, borrowing and availability of agents were statistically insignificant at 5% level of significance. The statistically significant variables are saves and insufficient float. The coefficient of the variable saves was 4.565 and was statistically significant at 5% level of significance. The results of the analysis showed that saving on mobile money increases the likelihood that the owner of a business will service mobile money for business purposes. The intuition is that having money in an Airtel Money account may compel the business owner to transact through the platform because of various reasons that may include lower transaction costs, unavailability of agents and efficiency.

Insufficient float or space also hinders people from adopting mobile money for personal business. The coefficient for the variable insufficient space was -1.412 and was statistically significant at 5% level of significance. This is an indication that insufficient float among agents may limit the usage of mobile money by small and micro-enterprises. Some respondents have encountered situations where they were supposed to send money but could not due to insufficient space among agents in their locality.

4.6 Qualitative Analysis

This section provides a detailed narration of the qualitative analysis. Following the ethical considerations of this study, the identity of the interviewees quoted is withheld and remains anonymous. In addition, it must be noted that the word, MSEs and traders, in the context of the study, mean the same and are interchanged

Most MSEs have only recently adopted mobile money. Figure 4 shows that the majority of the MSEs started using mobile money in less than 1 year. The respondents acknowledged that most of their clients are willing to use mobile money to transact. The interviewee AM, a fruit and vegetable trader, stated that some of their clients have asked to pay using mobile money. Even interviewee MM (selling mobile phone accessories) acknowledged that some clients ask to pay using mobile money when they do not have insufficient cash. Interviewee CL (another fruit and vegetable vendor) stipulated that some of the respondents prefer using mobile money at night because they do not feel safe removing cash and paying using cash. However, mobile vendors stated that paying using mobile money could be cumbersome when the client is in a moving vehicle.

Several traders stated that mobile money has been beneficial to them. Mobile money has provided them with a safer and easily accessible platform to keep their money. Traders do not have to move around with large sums of money. They can deposit the money into their mobile money account using mobile money agents, who are all over town, before leaving their trading places. Besides, traders also take advantage of mobile money to order merchandise from their suppliers (with delivery services such as bakeries) from their stores without following the suppliers. Like, interviewee YB a bread trader said, "mobile money has lowered his transaction costs, he does not have to engage a wheelbarrow driver or hire a tax to have his merchandise ferried from the bakery as they delivered to them early in the morning and they can pay using mobile money."

Traders have easier access to their deposits, and can easily transfer money for other non-business needs. Interviewee JM acknowledged that the availability of mobile money agents and booths makes withdrawing easier unlike with banks. Besides, Interviewee JM also stated that he can send money to his family members even from work, which they can, also easily withdraw. However, using mobile money is not entirely rosy. The service sometimes is unavailable due to several connectivity issues. Airtel delays reversing incorrect transactions, which makes the traders, incur several unwanted expenses such as borrowing at interest. Some trusts are uncomfortable keeping a large sum of money in their mobile money accounts. This is primarily due to mistrust because of reports of users losing their money. Several traders also stated that they have lost money while using mobile money. Also, agents sometimes run out of cash or deplete their float, which inconveniences the traders as they have to wait for the agents to find a solution. When agents have an insufficient float or cash, they work with other agents to create space for the transaction, which may require the customer to wait.

Among the MSEs interviewed, insufficient space is uncommon. Nonetheless, those traders who have had a problem with insufficient space use several methods to circumvent the challenge. Others use their mobile money accounts to create space in the primary mobile money account. Having encountered this challenge before, some MSEs avoid using mobile money for saving. Interviewee IN only uses mobile money for transaction purposes. After balancing the books, interviewee IN transfers all the money that is unrequired for the recapitalization of the business from the mobile money account into the bank account. This allows him to have a sufficient safe in his mobile money accounts.

Traders have benefited from the borrowing platform on Airtel Money. MSEs use the platform when they have insufficient funds to transact. Besides, since most MSEs use mobile money frequently, their borrowing limitation is very high, which enables them to have access to reasonable funds whenever in need. To improve the service, MSEs recommended that Airtel money increases the limitations for borrowing to enable them easily access funds to expand their business as opposed to only supplementing their liquidity needs. Also, in interviewee RN's words, mobile telecommunication companies should look at ways of creating a business mobile money account for them that allows them to have a sufficient float and also borrow at reasonable rates.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 Introduction

This chapter is a discussion of all the research findings. The research findings are discussed in relation to the objectives of the research. Firstly, the research sought to determine the factors that affect the decision of MSEs to use mobile money in Zambia. Secondly, to ascertain the direction of the relationship between these factors and the decision of the enterprises to use mobile. Finally, to examine the impact of these factors on the decision to use mobile money. The study relied on the descriptive, correlation and regression results of the empirical analysis.

The chapter starts with an assessment of the factors that determine the use of mobile money by MSEs in Zambia. The section relies on the results of the regression analysis and the descriptive analysis. Then there is an analysis of the direction of the relationship. Afterwards, the regression results are incorporated into the research to look at the extent of the effect of this relationship.

5.2 The Factors that determine the adoption of mobile money

The regression analysis showed that when a person who uses mobile money is deciding to adopt the service in their business transactions, they usually are influenced by two elements savings and insufficient float to transact. The variable saves, which represented savings, had a statistically significant coefficient at 5% level of significance. The significance of the coefficient was an indication that saving and using mobile money influences the decision of a person to adopt mobile money for business purposes. Whereas the variable insufficient float also had a statistically significant coefficient at 10% level of significance. This showed that consistently incurring situations where agents have insufficient floats affects a person’s willingness to use mobile money for business purposes.

The finding that people who save using mobile money are most likely to use it in their business is linked to the fact that people who trust mobile money are the most likely to save using the platform. As Skohqvist, (2019) discovered in Kenya, mobile money usage has a positive relationship with savings and among the reasons why users were likely to save is because they found the service trustworthy. Besides, Potnis and Dawit (2017) who conducted a similar study on small business owners and farmers in Bangladesh also discovered that trust influences consumers' decision to use mobile money. Even Lwanga and Adong (2016) recognised in a study on Uganda that trust affected the use of mobile money services for saving purposes. In addition, in the qualitative analysis, the respondents indicated that mobile money allows MSEs owners and managers to deposit their money before leaving the premises. They are able to keep their money in their accounts until they need it to transact.

The mobile money users who keep their money in their accounts develop a sense of security that allows them to extend the service to their business. This assurance is also evident in the descriptive statistics of the savings among businesses that use mobile money. Figure 5 shows that 98 percent of the business that uses mobile money also save on the platform. The usage of mobile money by businesses requires a guarantee of the security of their money that can be developed with prolonged use of the save for similar purposes by the proprietors of the enterprises. Nonetheless, reports of missing funds in accounts and connectivity issues dampens some businesses trust in the reliability of the service.

Whereas savings stimulates the usage of mobile money, the unavailability of float or debit space by mobile money agents has the possibility of constraining its growth. Mobile money agents are required to have sufficient (available amount of) space for a mobile money user to deposit money into their accounts or that of another person. When a customer does find that the agent does not have sufficient space they usually move to the nearest available agent. This trend continues until they find an agent with space. In Rwanda, Kamande et al. (2020) found that the accessibility of mobile services was sometimes hindered by an inadequate “float” (the maximum amount of money that an agent can hold) or cash available for the consumer to withdraw. The situation was worse in localities that had one agent because the agent could not obtain a loan from other agents. Those agents who operated in areas where they were many would usually assist each other by giving each other loans or allowing them to transfer their money into others’ accounts to create space and enable the transaction.

For businesses, the unavailability of the float can lead to transactional losses related to time and inefficiency. Businesses that are time conscious and deal in large amounts of money at a high velocity are likely to prefer another service. The survey resulted that 65 percent of respondents regard insufficient float or space as an inconvenience to the use of mobile money services. Mobile money users are likely to be discouraged from using the service due to the accessibility problem of insufficient space in mobile money accounts.

The other variables (age, gender, education, transaction fees, borrows and availability of agents) were found to have statistically insignificant coefficients. The descriptive statistics showed that there has been accelerated incorporation of mobile money services in recent years. This increase was caused by the Covid-19 pandemic which disrupted the old status quo and businesses had to revert to operating in a safe environment. The majority (66 percent) of the respondents in the survey adopted the use of mobile money less than 1 year ago.

Owners of small businesses consider mobile money fees to be fair. About 57 percent of the respondents thought that mobile money costs were fair. The low cost of mobile money has contributed to it being widely accepted by low-income earners. Despite mobile money being affordable, the availability of agents is critical for the continuous growth of the platform in the short term. Among those surveyed, 62 percent of the respondents whose businesses were using mobile money indicated that the unavailability of agents discourages them from using the service for business purposes.

5.3 The relationship between the factors that influence mobile money and mobile money

The direction of the relationship simply shows whether the effect of the factors on mobile money is positive or negative. From the regression results, the two statistically significant variables save and insufficient float was found to have a positive and negative effect on the adoption of mobile money by micro and small enterprises. The positive coefficient for savings entailed that savings increased the likelihood of a mobile money user adopting the service for business purposes. The negative coefficient for insufficient float implied that consistently finding that agents have insufficient float discouraged individuals with mobile money accounts from incorporating them into their businesses.

As discussed in the previous section, various studies also found several results (Skohqvist, 2019; Potnis & Dawit, 2017; Lwanga & Adong, 2016; Kamande, et al., 2020). Extending beyond this to the statistically insignificant variables, age and gender had negative coefficients. The finding that age has a negative effect showed that as proprietors become older they are likely to be more conservative and less susceptible to change. Thus, as business owners age, they will be less likely to incorporate innovations in their businesses. This is evident in the results that have shown that relatively older business owners are most unlikely to use mobile money in their businesses than young business owners. Then the results on gender showed that females were more likely to adopt mobile money purposes than their male counterparts.

Tertiary levels of education had a positive coefficient, whereas non-tertiary levels of education had a negative coefficient. This showed that people with tertiary education were the most likely to use mobile money in their business. This could be the fact that they probably had a better understanding of the platform than those with non-formal education. Perceived high transaction costs have has expected to have a positive relationship with mobile money. Perceived high transaction costs were among the technical factors that were included in the correlation matrix. Perceived high transactional costs increased the likelihood of businesses adopting mobile money. Despite the relationship between mobile money and transactional costs, the coefficient was statistically insignificant.

In a study on mobile banking, Kabala & Seshamani (2016) discovered that most consumers prefer mobile money to banking services because of its relative affordability. Whilst, Kamande et al., (2020) in a study on mobile in Rwanda, observed that most high transactional costs discouraged people from using mobile money. Micheni, et al. (2013) showed that, although facilitations conditions stimulate the adoption of mobile money services, transaction costs do not affect the adoption of mobile money. The results of our study, are a combination of the three studies by Kabala and Seshamani (2016), Kamande et al (2020) and Micheni et al (2013).

Borrowing had a negative effect on the use of mobile money for business purposes. This showed that an increase in borrowing using mobile money is likely to lower the chance of using it for business purposes. Intuitively, as people borrow, they have to repay in time with interest or face a penalty of increased interest repayment if they delay. This means the relocation of business money from transactions to the repayment of the debt accrued. The availability of agents also had a positive statistically insignificant effect on the adoption of mobile money for the business. This showed that an increased number of agents has the potential to increase the adoption of mobile money.

5.4 The Impact of the Factors on the adoption of Mobile Money

The focus is on the exact extent of the impact of the factors on the adoption of mobile money. The section shall only be restricted to the two variables with a statistically significant impact on the adoption of mobile money: savings and insufficient space. In terms of magnitude, savings were found to have a bigger impact on the decision to adopt mobile money than insufficient float. The impact of saving was positive. The impact of saving showed that trust, which was identified as an important component in business reaction to innovation, was a critical factor in the decision of businesses on whether to use mobile money. The findings have shown that trust is the most important element factored in by most businesses. The magnitude of increased trust between mobile money providers and their users outweighs the effect of other factors on the decision to adopt mobile money by enterprises.

The negative impact of insufficient space on mobile money adoption by micro and small enterprises was consistent with what was theorized. The magnitude of the impact was less than that of the savings. Small floats inhibited mobile money operators from using the platform to transact using bigger amounts while larger floats stimulates their use. The business may be required to make orders that involve large amounts of money and the unavailability of floats among agents may limit them from doing so.

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1 Conclusion

The purpose of this study was to investigate the factors that determine the adoption of mobile money among micro and small enterprises. The objectives of the study were identified as to determine the factors that influence the adoption of mobile money, the relationship between the factors and the adoption of mobile money and the exact impact of the factors on the adoption of mobile money.

To attain the objectives of the study, a pragmatic research approach was used. The data used both an explanatory research design and primary data. The primary data was collected using survey questionnaires from a study sample of 102 micro and small businesses operating in various types of businesses. The sample was collected using purposive or judgmental sampling due to the resistance to take part in the survey by other potential participants and the Covid-19 pandemic at the time of the study. The respondents were found in the Central Business District of Lusaka. The choice of small business was due to the wide acceptance of mobile money by low-income earners due to its affordability and easiness to use.

The empirical results of the Binary Logistic Model showed that savings and size of float among Airtel Money agents are the main determinants of the adoption of mobile money. The variable saves, representing savings, had a positive coefficient. An indication that saving, which is mostly used as a proxy for trust, positively influences the decision to use mobile money by businesses. Insufficient float, the variable, representing float size, had a negative coefficient. This was an indication that insufficient space among Airtel money agents to transact usually hinders the business from using the service. The other variables were found to be statistically insignificant at 1%, 5% and 10% levels of significance. However, they exhibited various signs. Age and Gender had negative coefficients. An increase in age lowered the likelihood to use mobile money for business purposes. Transaction costs had a positive coefficient. Junior secondary and senior secondary education had a positive coefficient. Borrowing had a negative coefficient and availability of agents had a positive coefficient.

6.2 Recommendation

From the findings, recommendations will be given to three stakeholders, mobile money providers, the government and academicians.

Mobile money providers should create a product (which is part of the mobile money products) specifically designed for micro and small businesses. The product can have the features of both the agents' and customers' accounts. The corporate or business accounts should have a larger maximum limit than a customer's accounts and allow them the extra features of being able to deposit and withdraw money like Airtel agents. The creation of a corporate account could help eliminate the inhibiting factor of limited float among agents. To bolster trust among agents, mobile money providers could create a specific custom care unit for Airtel money and increase sensitization on the usage of the service, and the safety of their money saved in the accounts. Trust has been identified as the most important driver and increasing trust would increase the growth of mobile money.

To academicians, there is a need to further investigate what constitutes trust beyond savings. This requires separate investigations from this that specifically look at the element. Besides, several gaps have been created by this study that can be explored. There is a need for sector-specific studies that look at the needs of specific sectors and industries that constitutes MSMEs and also for clustered studies. The needs of rural enterprises are likely to be different from the urban enterprises covered in the study. There is also a need for studies that interrogate the findings in this paper. These findings are an opportunity for further investigation of mobile money and other financial innovations.

To government officials, increased financial efficiency has economic benefits for the country. The government should consider mobile money as an important catalyst in the attainment of its developmental goals and support its growth by encouraging businesses to use it. This could be done by sensitization and engagement with mobile providers. The providers should be discouraged from making the service expensive for the citizens and be encouraged to promote its growth. Incentives should be provided to the providers and the business. Payments for government services and tax returns and levies by small enterprises should be made available on the various platforms to encourage their usage.

6.3 Limitations of the Study

Several limitations were encountered in the course of the study:

- Resistance by some of the MSEs Owners and managers to take part in the study. Some of the potential respondents were not open to taking part in the survey. Even after showing them forms from the University and proper explanations by the research teams, the potential respondents were unwavering due to the failure of providing information to strangers. To overcome this, the research team had to create a rapport with several traders, who would assist in overcoming this resistance between members of the research team and traders.
- The COVID-19 pandemic necessitated changes in the interview process and procedure. This entailed extra expenses. The research team had to acquire facemasks, for themselves and the interviewees who did not have facemasks. In addition, members of the research team had to use less congested modes of transportation (taxis) to avoid the contraction of COVID-19, which would have paralyzed the project for several days. Some traders asked for refreshments as compensation for their time. The research team had to create a supplementary budget to support any miscellaneous expenses that were not the initial budget but arose in the course of the study.

6.4 Suggestions for Future Studies

Other researchers interested in looking at mobile money should consider disaggregating or disentangling some of the factors considered in this study. For instance, trust should be broken down into various components not a single proxy. Trust incorporates several factors beyond savings, which is just a single outcome of the level of trust in the service. There is a need to look at the studies on demographic, social groups or income clusters specific to improve the delivery of service and increase financial inclusion among the different groups. A gendered study among youth-owned, female-owned or rural-based enterprises would help companies provide the service to vulnerable groups.

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APPENDICES

Appendix 1: Survey Questionnaire

Part: Quantitative Analysis Questions

1. Does your business have an Airtel Mobile Money Account?

   Yes ☐ No ☐

2. When did you open the Airtel Mobile Money Account for the business?

   …………………………………………….

3. Does your business transact with clients using Airtel Mobile Money Accounts?

   Yes ☐ No ☐

4. How would you rate Airtel Mobile Money transaction fees?

   Very Expensive ☐ Expensive ☐ Fair ☐ Affordable ☐ Cheap ☐

5. What is the largest amount you received from a client using Airtel Mobile Money this month?

   …………………………………………….

6. Does your business keep money in its Airtel Mobile Money Account?

   Yes ☐ No ☐

7. What is the largest amount you have kept in your Airtel Mobile Money account the last three months?..

8. Have you ever turned client because of insufficient space in your Airtel Mobile Money account?

   Yes ☐ No ☐

9. Have your ever borrowed money using Airtel Mobile Money for business purposes?

   Yes ☐ No ☐

10. Does the availability of Airtel Mobile Money agents affect your ability to use Airtel Mobile Money for transaction purpose?

Yes ☐ No ☐

Part 2: Quantitative Analysis Questions

Semi-structured interview questionnaire for the interviews with selected respondents that will follow the survey.

1. When did your business start to use Airtel mobile money?
2. In your opinion, are clients willing to purchase goods and services using Airtel mobile money?
3. How has Airtel mobile money benefited your business?
4. What are some of the challenges you encounter in using Airtel mobile money?
5. Have you ever found yourself with insufficient space in your account to transact? If yes, how did you handle this situation?
6. In your opinion, is it safe to keep large sums of money in a mobile money account and why?
7. What is your view on borrowing using Airtel mobile money?
8. What could Airtel Zambia do to enhance the usage of Airtel Mobile Money by businesses?

Appendix 2: Map of Lusaka Central Business District

The Lusaka Central Business District is the area between Cairo Road and Lumumba Road