BINDURA UNIVERSITY OF SCIENCE EDUCATION

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IMPACT OF MOBILE BANKING ON FINANCIAL INCLUSION ZIMBABWE: A CASE OF DEMA IN SEKE DISTRICT.

BY

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A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE BACHELORS OF COMMERCE (HONOURS) DEGREE IN BANKING AND FINANCE OF BINDURA UNIVERSITY OF SCIENCE EDUCATION, FACULTY OF COMMERCE

DECLARATION

This research project is my original work and has not been submitted for a degree in any other university

Sign: ………………   Date: …………………….

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This research project has been submitted for examinations as the university supervisor.

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DEDICATION

This research report is dedicated to my lovely parents Mr F and Mrs L Matema, my girlfriend Nyasha Swero and my siblings Tanaka, Tinovimbanashe and Ruvarashe Matema, for always believing in me.

I greatly appreciate all the support provided.

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ABSTRACT

The purpose of the study was to investigate the impact of mobile banking on financial inclusion in Dema area in Seke District. The research objectives were to: determine the barriers to financial inclusion in Dema area of Seke District in Zimbabwe, examine the impact of mobile banking on financial inclusion in Dema area of Seke District in Zimbabwe, develop a suitable framework for financial inclusion through mobile banking in Dema area of Seke District in Zimbabwe. Towards the realisation of the research objectives both a descriptive and regression analysis was undertaken. Data was collected through the use of questionnaires that were distributed to a sample size of 45 residents and only 40 questionnaires. The findings were mobile products, agencies and services were strong predictors of financial inclusion in Seke rural area. The results of the findings were that costs of mobile banking is not significant barrier to financial inclusion. The results also find that costs per transaction are very low compared to bank charges and saves on time and transport money. This result was supported by Mtetwa (2014) who found out that cost per transaction is not significant barrier in using mobile banking. The study also find that mobile banking allows them to easily acquire foodstuffs and pay bills in the comfort of their homes positively. The findings were also supported by Mulili (2020) who found out that many respondents in Kenya find mobile banking convenient and easy to use. The three factors explained the increased impact of financial inclusion through mobile banking and from the results mobile banking agencies were strong predictors of financial inclusion followed by mobile banking services and finally mobile banking products. However the study found out that barriers to financial inclusion were in form of poor network coverage, lack of accessibility to credit facilities as well as lack of security against third parties. The Reserve Bank of Zimbabwe and mobile network providers was identified to have a role to play in facilitate equal distribution of mobile banking platforms, products as well as services so as to attain a positive aggregated national financial inclusion rather than focusing on urban areas mostly. More so strict assessment of National Financial Inclusion Strategy (NFIS) as it address challenges to financial inclusion at national level which helps in achieving the golden goal of financial inclusion. Statistical data from all mobile banking bodies should be gathered, analysed quarterly and corrective measures should be put in place.

Lastly a locational based study on urban areas of Zimbabwe should also be undertaken to triangulate the gap that is needed to be covered between rural and urban areas so that financial inclusion strategies will be smoothly implemented.

LIST OF ABBREVIATION AND ACRONYMS

ATM   - Automated Teller Machine

BUSE   - Bindura University of Science Education

GDP   - Gross Domestic Produce

ICT   - Information Communication Technology

MNO   - Mobile Network Operator

NFIS   - National Financial Inclusion Strategy

SACCOS   - Savings Credit Cooperative Societies

SMEs   - Small Medium Enterprises

SPSS   - Statistical Package for Social Science

POS   - Point of Sale

RBZ   - Reserve Bank of Zimbabwe

ROSCA   - Rotating Savings and Credit Association

UN   - United Nations

USD   - United States Dollar

USSD   - Unstructured Supplementary Services Delivery

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CHAPTER 1

1.1 Introduction

Mobile banking has grown to be a huge key economic driver for development and economic growth in Zimbabwe within the last decade. Mobile cell phones had impacted the living of the citizens of Zimbabwe which provides opportunities and allow the unbanked population to access financial services. "While innovations in micro finance have taken a centre stage in an attempt to expand financial services, attention now turns to opportunities to reform formal banking system to open up savings, loan and insurance products to the financially excluded" (Msweli & Mawela, 2020).

The importance of mobile banking in this stance is the delivery of financial services to the previously unbanked areas hence attaining financial inclusion. According to Ismail and Masinge (2011), "despite the obvious benefits of mobile banking ,the question still remain about whether the low income earners will adopt the relatively new technology at a scale sufficient to make it offering."

Thus this study seeks to point out the impact of mobile banking services on financial inclusion as well as pointing out strategies which can be adopted in order to attain a positive impact on financial inclusion.

1.2 Background of the study

Access to financial services has always been a challenge for the vulnerable which encompasses the poor and the unemployed throughout Zimbabwe. Agral (2010) quoted Koffi Annan (former UN Secretary general) who said, "the stack reality is that most poor people in the world still lacks sustainable access to financial services whether it is credit, saving or insurance. The greatest challenge before us is to address the constraints that exclude people from full participation from financial participation. Together we can must stand and build an inclusive financial sector that help people to improve their lives". This saying outcasts there is a need to innovate and create a financial environment that encompass the rich and the poor. Financial inclusion involves a situation where the financial services are provided to those who are unbanked which includes the poor.

Lenka and Barik (2018) postulates that the growth in mobile and electronic financial services such as electronic banking, mobile banking and money transfer holds the potential to improve access to financial services for citizens thus supporting inclusion. In an effort to improve the financial environment where the unbanked will be involved in the financial ecosystem, the financial authorities (Central Bank and the Ministry of finance) calls for a drive from financial institutions, individual stake holders and banks to come up with innovative products that encompasses the unbanked into the financial ecosystem. Hanning and Jensen (2008), says financial services to the unbanked had become an area of major interest to practitioners,

policy makers and academics who are increasing making it an objective.

In Zimbabwe, the Reserve Bank had spear headed the National Financial Inclusion Strategy 1 (2016-2020) and NFIS 2 (2021-2025) in order to facilitate a development of an evidence based financial inclusion strategy (Financial Inclusion bulletin 2021).In an attempt to spearhead financial inclusion institutions and mobile network operators (MNOs) comes out with some innovative products aimed on providing the unbanked the access to financial services. Econet Wireless launched Ecocash on 30 September 2011 and Ecosave later in 2013 which targets mostly the informal sector and the rural populace which was largely unbanked. NetOne has its One Wallet product which it runs on its platform except only on FBC bank clients only.

Mkuru provides financial services to the unbanked through its international remittances and domestics transfers which started in 2009 also join the war to curb financial inclusion which allows funds transfer intra Africa as well. Simbisa also introduced its product called Inn bucks which partners with a registered deposit-taking micro finance institution, Ndoro Microfinance Banking Limited. Innbucks

1.3 Problem Statement

Over the past decade, the cash crunch in Zimbabwe caused a lot of pain to both rural and urban residents. Through the de-dollarization of the Zimbabwean economy in June 2019 rural residents have been haunted more which results in an impediment to change and adoption of mobile banking. The majority of the Zimbabwean population resides in remote areas nearly (60%) and only

Few (10%) of rural residence have access to banking facilities. The majority of rural residents remains unbanked and some of the factors had been attributed to inaccessibility, inconvenience and financial illiteracy which resulted in lack of confidence, long queues of customers withdrawing cash and reduced deposits in banks. This results in residents sticking to traditional brick and mortar way of banking and moving around with huge sums of hard cash. This had resulted in high rates of robberies, theft and fraud through Ecocash spam messages. This alarms a need to implement mobile banking as a panacea to the challenges faced by rural residents. This research aims to determine the impact of mobile banking on financial inclusion.

1.4 Research Objectives

The main objectives of the research are:

1. To determine the barriers to financial inclusion in Dema area of Seke District in Zimbabwe.
2. To examine the impact of mobile banking on financial inclusion in Dema area of Seke District in Zimbabwe
3. To develop a suitable framework for financial inclusion through mobile banking in Dema area of Seke District in Zimbabwe.

1.5 Research Question

The research will aim to answer the following questions:

1. What are the barriers to financial inclusion?
2. What is the impact of mobile banking on financial inclusion?
3. What ways can be adopted to attain positive relationship between financial inclusion and mobile banking?

1.6 Importance of the Study

To Bindura University of Science Education

The research will give an insight on which variables to be altered so as to achieve the financial inclusion as it become a major objective on global scale as well as on national grounds. The research will give a first-hand experience in researching in the financial markets as well as giving the avenue to apply the acquired knowledge obtained during the learning period.

To Policy-makers.

The research will be of huge importance also to the policy makers as mobile banking has the potential to embrace the financially excluded given they had cell phones. It is anticipated that the research will give policy makers a way to embrace the financially excluded into the financial system. The study will also be of benefit to the government as it helps in attaining one of the Reserve Bank's objective of attaining financial inclusion.

To the Central Bank

The research will be of huge importance also to the Reserve Bank of Zimbabwe as it outlines the grey areas to be addressed so as to achieve the goal of the NFIS 2022. The research will also spearheads financial inclusion through implementation of mobile banking strategies thus improving financial inclusion.

1.7 Limitations of Study

One of the problems encountered by the researcher is availability of very few studies on mobile banking in rural areas as it is emerging concept in Zimbabwe in both practice and theory. To deal with this limitation the researcher come up with a new research typology. Insufficient financial resources for data collection from respondents over many days. Unavailability of many published books and journals on financial inclusion in Zimbabwe. To overcome the limitations, the researcher used the BUSE e- resources with have connections to many subscribed journals and article repositories so as to have access to published books. Lastly the researcher faced the problem of illiteracy as the majority of the population where not aware of what mobile banking and financial inclusion is. Due to this it takes time to fetch information from respondents.

1.8 Chapter Summary

This chapter outlines important issues in the research and what the makes the researcher to undertake the study. Issues outlined in the background of the study, problem statement, research objectives, research questions, importance of the study and limitations of the study.

CHAPTER 2

LITARATURE REVIEW

2.1 Introduction

This chapter reviews relevant and related theories to this study. Firstly it starts with conceptual digesting of key terms, proceeding to the presentation of theoretical frame work of the thesis. Effort had also been put in this chapter to have an overview on the benefits of financial inclusion, the impact of mobile banking on financial inclusion and the strategies that can be adopted to attain positive impact of mobile banking on financial inclusion.

2.2. Mobile Banking

Biljon and Renaud (2016) indicate that the increase in mobile phone adoption has improved internet access for various countries.Shaikh and Karjaluoto (2016) postulates that mobile banking incorporates financial and non-financial transactions conducted on a mobile device. Mobile banking can be perceived as the response of financial institutions to customer needs due to adoption and use of technology (Albashrawi & Motiwalla, 2017). Mobile banking offers both the customers and service providers (banks, pension funds and MNOs) a variety of benefits including portability, accessibility, inexpensive service, readily available service, convenience, high level of security and enhanced revenues (Karjaluoto et al.,2021). Asongu & Odhiambo (2019) postulates that developments in mobile banking are of great significance in the current digital era and ensures financial inclusion in developing countries.

2.2.1 Mobile Banking Case.

As a consequence of the relatively high mobile phone density and the consumer demand that is driven by the need for secure cash transactions and the simplification of banking, mobile money has become rapidly popular (Laukkanen & Pasanen 2008; Poushter & Oates 2015). The following section discusses the literature on various cases of mobile banking in developing countries mostly as it is of importance in this regions.

Ecocash

The mobile banking product called Ecocash is an innovative mobile payment solution that enables customers to complete financial transactions directly from their mobile phones (Ecocash 2016). With 70% unbanked in Zimbabwe in 2011 and a population that had lost trust in the banks, Zimbabwe's environmental preconditions for an independent banking service where high (Mangudya 2016). This leads to a mobile-phone based money

transfer, financing and micro-financing service launched in 2011 by Econet Wireless. Ecocash recorded 2.3 million Zimbabweans who registered for Ecocash mobile money accounts out numbering all banks in Zimbabwe combined (Koech, 2012). Over 1 million accounts are still active and pushes over $USD 200million of volume of cash monthly which constitutes nearly 22% of the total GDP. Ecocash solves the problems of loss of confidence in the banking sector and bringing in the change solution and replacing cash in the formal environments which drags the informal sector into the banking industry. In addition to the national success, Ecocash allows users to send money to Zimbabwe from 57 countries worldwide (Ecocash 2016).

M-Pesa

M-Pesa is a Kenyan based mobile money product which was induced in 2007 by Safaricom a mobile operator. M-Pesa is a SMS based money transfer system which allows individuals to transfer, deposit and withdraw funds using their cell phones (Vaughn, 2007). The platform had over 1.1 million registered users and US$ 81million in transfers in the first eight months of inception (Safaricom, 2007). The figures grow to 14 million and later to 7 billion by September contributing to a staggering 25% of Kenyan GDP being channelled through (Safaricom, 2007 and Vaughn 2007). Mainly for the unbanked, M-Pesa facilitates the exchange of money without physical visits to a banking institution. As most of Kenya's population are farmers who resides in country side and subject to long distance to reach bank, moving with cash possess high risk of theft. These facts might be underpinned by the research of Jack and Suri (2011) who explored the economics of M-Pesa in Kenya. According to their study, safety and ease of operation were the two main factors for adopting M-Pesa. Furthermore, they determined that the main reason for the non-use of M-Pesa was the simple fact of not owning a mobile phone (Jack & Suri 2011).

South Africa

One year later after the successful implementation M-Pesa was introduced in South Africa in 2008 through Vodafone and Ned bank. Pre M-Pesa era in South Africa the unbanked population and economically active was estimated to be 13 million compared to the post era where it dropped to 10 million .M-Pesa enables customers to make payments for water bills, electricity, obtain cash from ATM, buy airline tickets, pay taxis and take out small loans (Bengelstorff 2015, Jack and Suri 2011).More precisely, banks in South Africa provide reliable and easy access to banking services for all bank customers. And this includes the lower-income customers, reducing the number of unbanked to a minimum (Abbott 2015). Adverse preconditions such as poor distribution and poor marketing resulted in only 1 million users of M-Pesa in South Africa by the end of March 2015, which was labelled as a failure by the two main investors, Vodacom and Ned bank (Bengelstorff 2015). As a result, Vodacom South Africa made the decision to discontinue the M-Pesa product with effect from 30 June 2016 and new customers were not able to register, and the facility of person-to-person payments to unregistered customers was terminated on 9 May 2016 (Tshabalala 2015).

2.3 Factors influencing adoption of mobile banking services.

Adoption is the acceptance and continued use of a particular product, service or idea (Safeena, 2011). Therefore, adoption or rejection of an innovation starts when the customer learn about the product or service. Factors which influence the adoption of mobile banking includes perceived usefulness, ease of use, perceived risk and personal innovativeness.

Perceived Usefulness (PU)

Perceived usefulness is the degree to which a person believes that using a particular system would enhance his or her job performance (Owusu et al, 2020). Customers continue to queue on banks ATMs for small services such as balance enquiry and profile updates which can be accessed through mobile banking applications. (Owusu et al, 2020)

In fact, information system adoption research suggests that a system that does not help people perform their jobs is not likely to be received favourably (Sharma, 2018).Perceived usefulness is recognized as having strong positive effect on the intention of adopters to use the innovation.

Perceived Ease of Use

Perceived ease of use is the degree to which a person believes that using a particular system would be free of effort (Ntseme et al 2016) .Owusu (2020), postulates that the ease of functionality and operability influences the speed of adoption of financial inclusion. This posits that complexity in the use of mobile banking products results in slow integration of the unbanked into the financial ecosystem. Pankomera and van Greunen (2018), also adds that accessibility of information pertaining introduction and use of financial technology increases adoption and ease of use and this was also supported by Shanker and Jebarajakirthy (2020),who postulates that mobile banking is an emerging technology which requires huge efforts to be introduced to the unbanked world.

Personal Innovativeness (PI)

Personal innovativeness is the innate willingness of an individual to try out and embrace new technologies and their related services for accomplishing specific goals (Eze & Nwankwo 2018). Personal innovativeness represents a confluence of technology-related beliefs which jointly contribute to determining an individual's pre-disposition to adopt mobile devices and related services. Therefore, given the same level of beliefs and perceptions about an innovation, individuals with higher personal innovativeness are more likely to develop positive attitudes towards adopting it than less innovative individuals (Lema 2017).

Perceived Risk (PR)

Perceived risk is the uncertainty about the outcome of the use of the innovation (Lema 2017). Srivastava and Vishnani (2021), postulates that service quality and security are essential to the adoption of mobile banking. The quality of a service is influenced the duration taken to complete a transaction as well as the frequency of system breakdowns. Perceived low cost risks and low risk to privacy will also influence the adoption of

technology positively (Eze & Nwankwo, 2018; Lema, 2017). Low costs of risks involves the ability to use the system within the comfort of customers' homes at a low cost. Naruetharadol et al (2021), conducted a research in Thailand and find out that security and convenience played a major role in adoption of mobile banking as customers were more likely to use mobile banking where security was assured.

2.4 Financial inclusion

Financial inclusion is the calculated provision of different types of financial services which assist in bringing those who are not privileged into access of financial services which are formal(UN,2006). Financial transaction involves the increase in of individuals accessing financial services. Lema (2017) goes on to say that, financial inclusion is the reaching of the financial marginalised so as to provide them with reliable, suitable and cheap financial services such as savings, credits and accounts. The Centre for Financial inclusion defines financial inclusion as a state in which people using them have access to a full suite of quality, convenient, cheap and with dignity for the clients (Gardeva and Rhyne 2011). With huge money transfers, previously marginalised people are open in investing in education, savings, starting SMEs, aiming poverty reduction and economic processing (Beck et al., 2007; Bruhn & Love, 2014). Financial inclusion involves bundling all people together either the poor or the rich to eat in the same basket and enjoy financial services together

2.5 Theoretical Review

This section goes through the theories that were used by the researcher to create the framework for this thesis. Two theories where looked into when building the theoretical framework includes the finance growth theory and financial innovation. The section below provides well detailed information about each theory mentioned.

2.5.1 Financial-growth Theory

The theory chains financial development and advocacy which says that money related development is an essential condition for economic growth forces of demand and supply. Some theories sees lack of funding as the root problem that results cause wage variations and slow development. In this stance access to safe, easy and convenient money is seen as an important element in accelerating development and reducing variations in financial profitability and hunger that ensure equal opportunities to vulnerable communities to become more active and involved in the economy and increase positively and defending against economic shocks (Serrao et al.,2012).

However, the theory reacts to positives movements in the real economy. Conflicts in which national economies, such as digital banking channels plays important, but not essential role in improving monetary integration among these theoretical framework (Stolbov 2013).

2.5.2 Financial Innovation Theory

As alluded by Elhajjar & Ouaida (2020), the theory of creative innovation argues that motivation behind increasing a company's profitability is that main driver of digital banking system strategy. It scales several shortcomings that may include how the internal management and the leadership style involved uses digital banking system to enhance company profits by increasing the number of transactions there by increasing the inclusiveness in financial interaction.

2.6 Benefits of Financial Inclusion

Financial inclusions channels liquidity from the unbanked into the formal financial system (Muñoz-Leiva et al 2021). Increase in liquidity allows banks to lend more which increases investment capital to the borrowing parties on the other hand creating a source of income to through interest to the lending parties. Loaba (2021) postulates that mobile banking possess benefits which includes costs reduction, accessibility, convenience and security.

Elhajjar & Ouaida (2020), goes on to say that access to financial services improves the economic chances on personal level and standard of living. Financial inclusion allows the poor to save and raise capital from the financial ecosystem through selling securities or raising capital through loans as well as hedging against unfavourable market shocks. In addition to that advice on investment opportunities is provided to the poor is provided by the financial industry investment bankers and brokers which allows the unbanked to compete on fair grounds thus eliminating informational asymmetry (Muñoz-Leiva et al 2021).

Financial inclusion will also benefit the financial the government as it had become one of the major objective of the Reserve Bank of Zimbabwe. Financial inclusion allows smooth implementation of financial fiscal and monetary policies which have a positive impact towards economic growth and development. Financial inclusion also allows the government to distribute grants and pension funds directly to beneficiaries which reduces corruption and inefficiency. (Mupfiga & Padare 2017).

2.7 Barriers to Financial Inclusion.

This section brings out the barriers to financial inclusion that are related to mobile banking. The barriers outlined includes high product and service cost, lack of convenience of products and services, lack of confidence in mobile banking and high transaction cost.

Wakaba & Wepukhulu (2019) alludes that transaction cost is the extent at which a certain product is perceived to be expensive given the quality of the service provided. The adoption of mobile banking depends on the costs of service provision giving a negative relationship, where transaction cost are high the uptake of mobile banking services is relatively low. Naruetharadol et al (2021), goes on to say that there is a negative relationship between transactional costs and consumer adaptation if a customer bears the cost of a transaction. This alludes that the higher the transaction cost the lower the uptake of mobile services and the lower the transaction costs the higher the uptake of mobile banking services. Eze & Nwankwo (2018) goes

on to state that poor people behave rationally when it comes to choosing a mobile money transfer basing on the cost of effecting the transfer.

The transaction cost are composed of money transfer technology cost, registration fees, tax fee and transaction fees. Owusu (2020) says, the financial excluded tends to prefer the informal market where they access financial services at an unreasonable rate as well as limited credit options. However there had also been positive influence of transaction costs on mobile banking as there had been provision of high quality services and access to other transacting platforms for example in Zimbabwe banks works in hand with mobile network operators to provide mobile platforms for transacting which provides mobility in payments at reasonable costs.

Moreover, lack of convenience in service provision had also hindered financial inclusion. Owusu (2020) alludes that convenience and security determines the adoption of mobile financial services. In Zimbabwe mobile network fluctuations, security issues, installation and maintenance of software are major challenges faced in some cases which result in slow customer attendances and long queues in banks. These levels of inconsistency forces some individual with urgent payments to withdrawal from the mobile banking platforms choosing to use hard currency.

Muzurura (2019) alludes that customer trust (confidence) is the best tool for success of mobile banking. Owusu (2020) defines trust as how far a person can depend on an object for a desired result. Inconsistency in service provision by mobile banking service providers had forced a large number in of participants to withdrawal from mobile money services in Zimbabwe as evidenced in the reduced use of One Money and Telecash as a result of lack of consumer confidence due to inconsistencies in service provision.

2.8 Impact of mobile banking on financial inclusion

Mobile banking affects financial inclusion in different areas which includes access to financial services, credit facilities, savings and customer protection. Researches on the impact of mobile banking services on consumer savings had earned positive effects and linear results of mobile banking on customer savings. This was supported by Muzurura & Chigora (2019) who said that low income households use different platforms to manage their savings Naruetharadol et al (2021) argues that mobile money has the potential to change financial inclusion through provision of traditional financial inclusion models which were based on credit provision and savings instrument.

This is also supported by the Ecosave which allows Ecocash users to save their funds at zero interest as well as giving out small loans through the Kashagi platform thus attaining financial inclusion.

2.9. Strategies to adopt positive financial inclusion

Strategies that can be implemented to attain positive impact on financial inclusion includes financial innovation, financial consumer protection, micro financing and financial literacy. These strategies are

discussed in detail in the following section.

2.9.1 Financial Innovation

Financial innovations are defined as any integration of financial instruments which encompasses new entities, restructuring of common equipment and interconnection of cultural entities (Muzurura & Chigora 2019)Financial innovation takes form of process innovations, institutional innovations and product innovations. Financial innovation increases financial inclusion through leveraging of advancements in information technology to spearhead easy access to financial services and development of financial products that suits various consumers.

According to the NFIS (2020) financial innovation also encompasses system or institutional innovations which relates to changes in infrastructure, changes in regulatory frame work and establishment of new financial intermediaries. Process innovations levers on mobile technology to introduce new delivery mechanisms such as POS and ATM networks, mobile phone based system, retail agent banking, to formalise informal financial system and to reduce access barriers to marginalised communities (NFIS, 2020). Branch less banking combined with the use of e-money service, impost and schools as financial institutions have a potential to extend financial inclusion to the financial exclude.

More so product innovation facilitates effective responses to market demands and encompasses designing of appropriate product that suits the patterns and cash flows of low-income earners (NFIS 2020). The strategy also involves redesigning current products so as to enhance uptake by low income earners as well as the under-served financial groups (Naruetharadol et al 2021)

2.9.2 Micro Financing

Micro-finances are mainly designated for targeting and assisting low income earners and bottom of the pyramid enterprises (SMEs). Micro-finances are of huge importance in Zimbabwe as the majority of the population falls under the low income bracket. Within the micro-finance sector, Savings and Credit Cooperative Societies (SACCO)plays a role in poverty reduction and building inclusive financial systems through provision of financial services to the poor (NFIS,2020). SACCOs accepts and mobiles lower denominations deposits which are below and not accepted by formal banks. This allows mobilisation of funds from the informal sector and spear heads lending which circulates money in the informal sector thus attaining financial inclusion. Furthermore, Rotating Savings and Credit Association (ROSCA) also called Rounds or Mukando in Shona also spearhead financial inclusion as they provide convenient ways of saving and credit provision. (NFIS 2020).

2.9.3 Financial literacy

Financial literacy is defined as a combination of care, information, intelligence and practices necessary to settle in financially viable option and ultimately to achieve financial success (Siano 2020) Financial literacy programmes will enable consumers of financial products and services to acquire knowledge, skill, attitude

and behaviour that promotes awareness of financial opportunities thereby facilitating informed decisions to be made in line with consumer circumstances (NFIS, 2020).

2.9.4 Consumer protection

Consumer protection tries to achieve the goals which includes mediation, product transparency and fair and ethical treatment of consumers. Consumer protection promotes product pricing, minimise exploitation by service providers and promotes consumer confidence thereby fostering a sound financial sector (NFSI, 2020).

2.9 Empirical literature

2.9.1 Innocent (2020), Effects of digital banking on financial inclusion among commercial banks in Tanzania.

The previous research which focused on how e-banking affect mobile banking in various ways includes one by Innocent (2020) who studied how digital banking impacts financial inclusion in Tanzania.

The researcher emphasised on finding the effects of digital banking on financial inclusion among banks in Tanzania. The researcher used a qualitative methodology in finding the results. The primary objective of the study was to find the effects of mobile banking on financial inclusion with special focus on internet banking and agency banking. The researcher used surveys questions and interviews to collect data from 120 respondents who were customers to financial service providers namely NMB, CRDB and NBC. The researcher used the regression analysis to find the relationship between the independent variables (internet banking and agency banking) against the dependent variable (financial inclusion). Innocent (2020), postulates that internet banking does not significantly influence financial inclusion whereas agency banking influence financial inclusion significantly.

Although the study was permitted by the degree associates the study does not give much detail on mobile banking impacts as it was broad on focusing on objectives which includes agency banking and internet banking it does not posits how far does mobile banking impacts on financial inclusion.

2.9.2 Akter, Anwar, Mustafa and Ali, (2021), revisiting the impact of mobile banking on financial inclusion in developing countries.

The study aimed on finding the effects of mobile banking in 17 developing countries where the study aimed on extracting data from use, access and penetration as variables. The researchers used the Sarma model of the Index of Financial Inclusion as a research methodology where two separate indexes, bank branches and ATMs where used to know the availability of financial services.

They concluded that mobile banking positively impacts the selected countries, though the changes are symmetric. However the research was limited to only 17 countries of African and it did not provide a detailed analysis on specific group such as the rural residents and urban residents.

2.9.3 Blaise & Kosgei, (2021), the effects of mobile banking in Burundi.

The study aimed on finding effects of mobile banking on financial inclusion in Burundi. The research objectives of the study emerges around the establishing of mobile money distribution, mobile money transactions and the value of mobile money transaction of financial inclusion in Burundi. Target population was only 14 institutions which of which only three where sampled due to their data availability. The researchers used descriptive research design and secondary data to come up with the data. The study concluded that from the objectives revealed that mobile money distribution was not statistically significant hence not important determinant of financial inclusion in Burundi whereas the second objective of mobile transaction was statistically significant hence it is of great importance in determining financial inclusion However the research was broad to cover the whole country of and it does not take into account the causes and effects of mobile banking on social groups and the thesis was only limited to Burundi only.

2.9.4 Wakaba and Wepukhulu, (2019), the effects of mobile money services on financial inclusion in Kenya.

The study exhumes the effects of key mobile money services in Kenya on determining financial inclusion. The study was conducted using a census research design and the target population was comprised of Africom, Equity, Telkom and Airtel which results in use of secondary data. Data analysis was used through descriptive analysis, regression and correlation. The study found out that mobile money deposit banking, mobile money savings banking and mobile money agency banking and mobile bill payment positively and significantly influence financial inclusion.

2.9.5 Kabala, Mapoma, Nalutongwe, Muyani and Lungu, (2021), an ethnological analysis of the influence of mobile banking on financial inclusion in urban Zambia.

The research used urban Kalulushi and Kitwe as case studies to deduce its findings. The research used the ethnological method was used to determine the extent to which mobile banking had encouraged the unbanked to participate in financial inclusion. The research postulates that mobile banking have a positive impact on financial inclusion. The research find out that it is easier to bank with mobile money kiosk than traditional banks and the mobile money service conveniently locates where the unbanked population is located.

2.10 Conceptual Framework

The conceptual frame work gives an overview of the model used and the relationship between independent and dependent variables of the study. The model in question has three independent variables which are the financial products (Ecocash, Zipit , Inn bucks and Mkuru), mobile agencies and mobile innovations and lastly financial inclusion which is the dependant variable.

INDEPENDENT VARIABLES   **DEPENDENT VARIABLE**

2.11 Research Gap

Notable that several researches looked financial inclusion and mobile banking from different views. Innocent (2020) took a qualitative analysis to find the effects of digital banking in attaining financial inclusion in Tanzania, which he concludes that internet banking does not significantly influence financial inclusion whereas agency banking influence financial inclusion significantly.

. Blaise and Kosgei,(2021) examined the effects of mobile banking in Burundi in which a conclusion was that mobile money distribution was not statistically significant hence not important determinant of financial inclusion in Burundi whereas the second objective of mobile transaction was statistically significant hence it is of great importance in determining financial inclusion. Lungu et al (2021) goes on with a research on ethnological analysis of the influence of mobile banking on financial inclusion in urban Zambia. They concludes that it is easier to bank with mobile money kiosk than traditional banks and the mobile money service conveniently locates where the unbanked population is located.

However the researcher covered the ground on how mobile banking affects financial inclusion in Seke rural areas taking into account barriers to financial inclusion and strategies which can be adopted to mitigate the challenges. This covers the research gap pertaining financial inclusion as the piece had been left out.

2.12 Chapter Summary

This chapter reviewed the literature behind and around the study area. The literature reviews how barriers to mobile banking and mobile banking strategies and products impacts financial inclusion in Seke rural area. Concepts relating and linking to the study where explored in order to gain an insight into the study. The chapter also reflects the empirical evidence from other researchers relating to the objectives of the research. The following chapter outlines the research methodology that will be used to find data for the research.

CHAPTER THREE

RESEARCH AND METHODOLOGY

3.0 Introduction

Research methodology is an approach and a set of supporting methods and guidelines used as a framework for conducting research. This chapter provides the framework used by the researcher so as to meet the objectives of the study. In line to that the chapter is divided into parts which covers research design applied, target population, sample techniques, sample size, data collection methods, validity of data, reliability of the study and final data analysis.

3.1 Research Design

Blaise & Kosgei (2021) postulates that research design is the strategy and structure analysis that is perceived in order to get answers to the research questions. Descriptive research is the investigation I which quantified data will be collected and analysed in order to describe the specific criteria in its trends, current events and linkages between different factors at the same time. Descriptive research design was is chosen because it enables the researcher to generalise the findings to a larger sample size. The study applied a casual-comparative approach which is designed to determine causes for an existing condition in groups or individuals; in this case financial inclusion in Seke in relation to mobile banking.

3.2 Target Population

Population refers to a set of elements, services, events and groups of households that are being investigated (Ngechu 2004). Gravetter and Forzano (2013) goes on to say that a population is a group of people or elements having a common observable characteristic. A population gives yardsticks on the characteristics on which the research tries to describe and the target population is a group of people who have the expertise, knowledge and information on what the researcher is trying to figure out. Pertaining to this study the target population is the SMEs, rural residents, vendors and transport operators in the informal sector of Dema Growth Point in Seke District.

3.4 Sampling

A systematic random sampling technique was used to select a sample of 45 local rural residents from the target population. The researcher used the systematic random sampling because it provides equal chances of selection of the sample units from the target population , a head start point is chosen at random and thereafter at a regular interval of 5.

3.5 Data Collection Methods

The researcher used primary data collection methods which where the survey questionnaires to collect data. Questionnaires is a data collection method were by the researcher gathers information or data from through a written document containing questions relating to the subject matter. Kumar (2012) defines a questionnaire as a set of questions prepared to ask a number of questions and collect answers from respondents. The researcher opted for the use of close end questionnaires as they are reliable and fast to use. Closed end questionnaires does not allow the respondents to give trivial information not relating to the research question. The first part of the questionnaire tries to have a touch on the demographic characteristics of the sample size followed by the second part which was for the first research question, the third part of the questionnaire was for the second research question and lastly the fourth part was for the third research question. The questionnaires used the likert-scale to determine the level of agreement from strongly disagree (SD)=1 Disagree (D)= 2, Neutral (N) = 3, Agree (A)=4 and Strongly Agree (SA)= 5.

3.6 Data Analysis

The researcher used the qualitative and quantitative analysis techniques to analyse data the collected data. The questionnaires from the respondents where edited, classified, coded and tabulated to analyse quantitative data using the Statistical Package for Social Science (SPSS) version 21.0. Tables and charts were used for easy understanding. The data was examined and checked for completeness and then summarised before coding and tabulating.

Inferential statistics was used to find the relationship between mobile baking and financial inclusion. The inferential statistics seeks to establish a dependency effect relating independent variables to the variable dependent. The variables of mobile banking agencies, services and products were quantified from likert questions, correlation analysis was used to find the strength of the relationship between mobile banking and financial inclusion.

A linear regression model of financial inclusion vies mobile banking was applied to examine the relationship. The model treats financial inclusion as dependent variable while independent variables were mobile banking products, mobile banking and mobile banking agencies. The responses on debt collection strategies will be computed using indices based on the responses obtained from the likert scaled questions.

The relationship equation was represented in the linear equation below;

$Y = a + b_1x_1 + b_2x_2 + b_3x_3 + e$

Where Y= Financial Inclusion

a= Constant term

b= Beta Coefficient

X1= Mobile banking agencies

X2= Mobile banking products

X3= Mobile banking services

e= error term

3.7 Validity and Reliability Analysis.

Validity is the measure of the extent to which research tools are meant to measure the result (Bethlehem & Silva 2012). To attain validity the researcher used a combination of a range of questions including open end and closed and questions. There are three types of validity test which includes content, criterion validity and construct validity. This study used content validity because it measures the degree to which sample items represents the content the test it supposed to measure. Pilot study was conducted to test the validity and reliability of the questionnaire for the data collected. The results were that the researcher was able to detect questions that needs to be edited and compile a final questionnaire for data collection.

Reliability refers to the degree of consistency of variables that measures the constructs of a study. Reliability refers to consistency of variables that measure the constructs (Innocent 2020). Bethlehem& Silva (2013) defines reliability as the degree to which a measurement is free from random and unstable error. To ensure reliability, a statistical tool known as Cronbach's alpha needs was employed. Cronbach's alpha is a statistical tool that tells the researcher that the constructs are internally consistent or not. If the variables are consistent or reliable, the Cronbach's alpha needs to be 0.7 and above.

3.8 Data Presentation and Analysis

The research findings were captured in quantitative and qualitative form since these forms are easier to use to work with. The findings of the questionnaires were converted to percentages based on the categories of the question. The data was presented in form of graphs, pie charts and tables through the use of SPSS 20 and Microsoft 16. The forms used to represent data allows comparisons between different groups of respondents ad simplification of analysing data gathered.

The qualitative data gathered from interviews was presented as descriptive analysis and acts as the basis for discussion of the obtained findings as compared to previous research findings.

3.9 Chapter Summary

This chapter is the vital point of the study since it is concerned with how the entire research was carried out and how the gathered data was obtained. Therefore it consisted of such important facets of the research which includes research design, target population, sample size, sample technique, data collection methods, validity analysis, reliability analysis, data presentation and analysis and chapter summary. The next chapter

of the research looks on data analysis and presentation of the research

CHAPTER FOUR
DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

This chapter provides data presentation and data analysis of the findings of the research. The chapter starts with the analysis of the response rate and presenting the demographic information followed by the second part which analyse data using the SPSS 20 in order to respond to the research question. Section 4.2 represents the outcomes of the discussion pertaining the barriers to financial inclusion, followed by Section 4.3 represents the outcomes of the discussion on assessing the impact of mobile banking on financial inclusion, followed by Section 4.4 which shows the outcomes of the strategies proposed to attain positive enhancement of financial inclusion. Lastly the chapter finishes with Section 4.5 which concludes the chapter.

4.2 Analysis of response rate

Response rate is obtained by dividing the distributed questionnaires against retained questionnaires. Response rate which is 60% or more is sufficient to draw a conclusive analysis (Hart, Breman and Sym 2010). High response rate entails low rate of bias from the conclusion can be obtained. The table below shows the response rate from the distributed questionnaires.

Table4.1 represents the breakdown of the respondents from all social groups.

| Population	Questionnaires distributed	Questionnaires returned	Response rate
SMEs	15	14	93%
Vendors	10	10	100%
Transporters	10	8	80%
Rural residents	10	8	80%
TOTAL	45	40	88%

Source:(Study 2022)

The huge response rate was a result of massive follow ups which gives the researcher the confidence to proceed with the analysis.

4.3 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

4.3.1 AGE.

*FIG 4.1* **Percentage distribution of respondents by age**
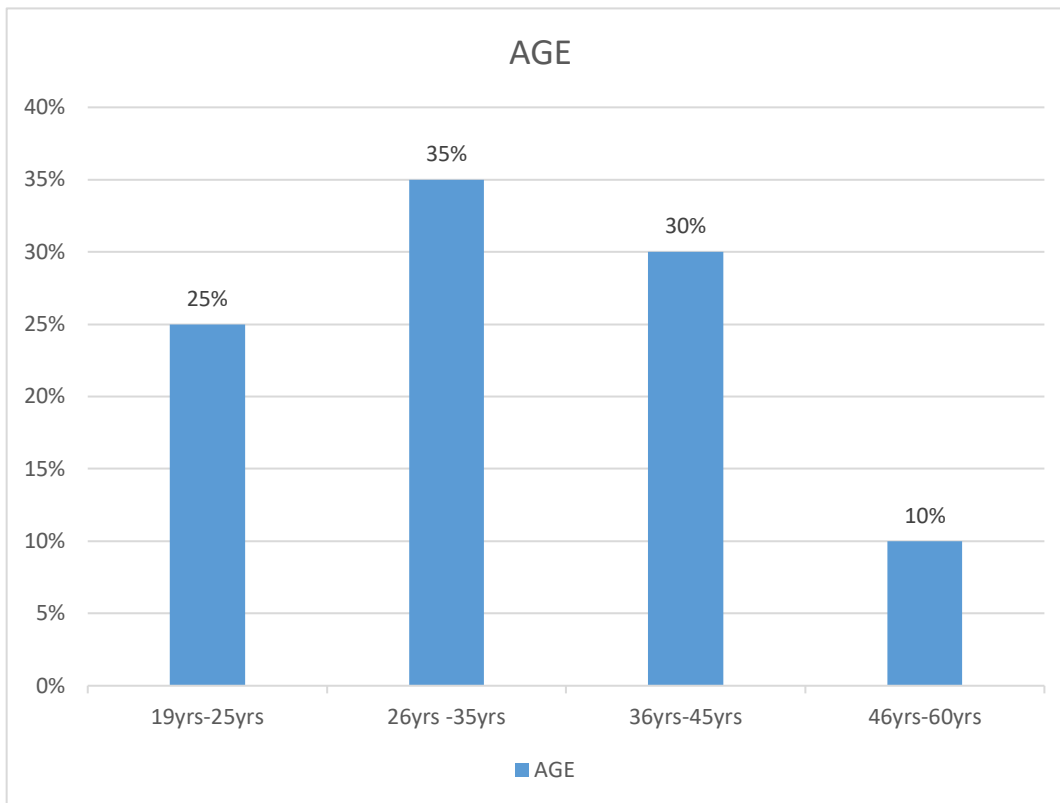
Source: Study (2022)

The respondents were required to fill their age groups in which they belong. The findings later concluded that 25% (10) of the sample size where of the age between 19yrs and 25yrs, 35% (14) of the respondents were between 26-35 years, 30% (12) of the respondents where aged 36yrs - 45yrs ad lastly 10% (4) of the respondents where aged 46yrs to 60yrs.

4.3.2 Level of education of respondents

4.2. Percentage distribution of respondent by level of education.
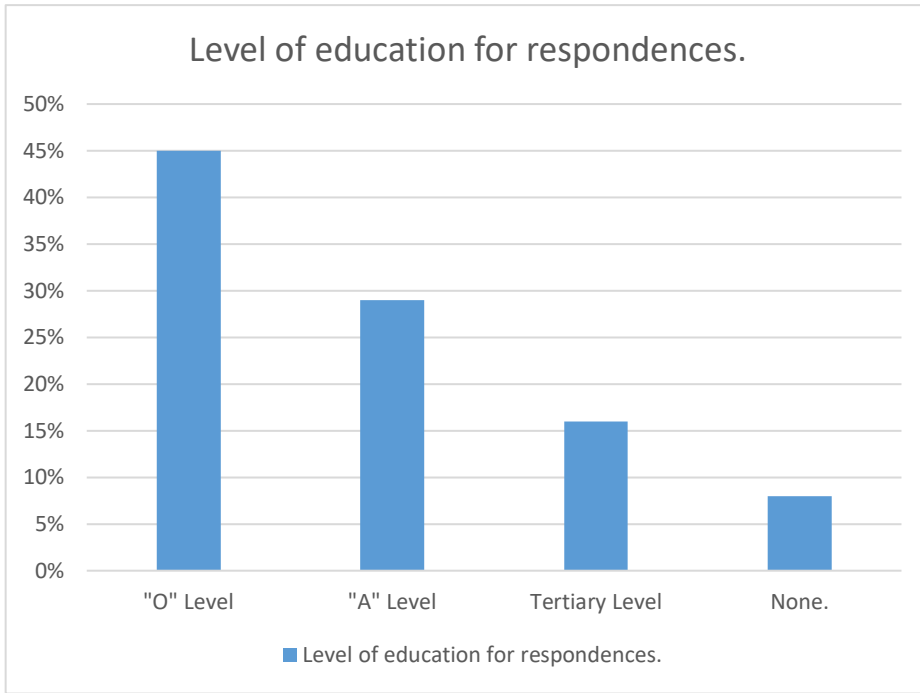
Source: Study (2022)

Participants were asked to fill in the highest level of education obtained. Majority of the respondents obtained "O" level with 39% of the sample size followed by 33% who attained "A" level, those who managed to obtain the tertiary level constitute 21 % and lastly 7% of the sample size where fairly not educated.

4.3.4 Mobile Banking Platforms Used
Figure 4.3
Percentage Distribution of Respondents by Mobile Banking Platform
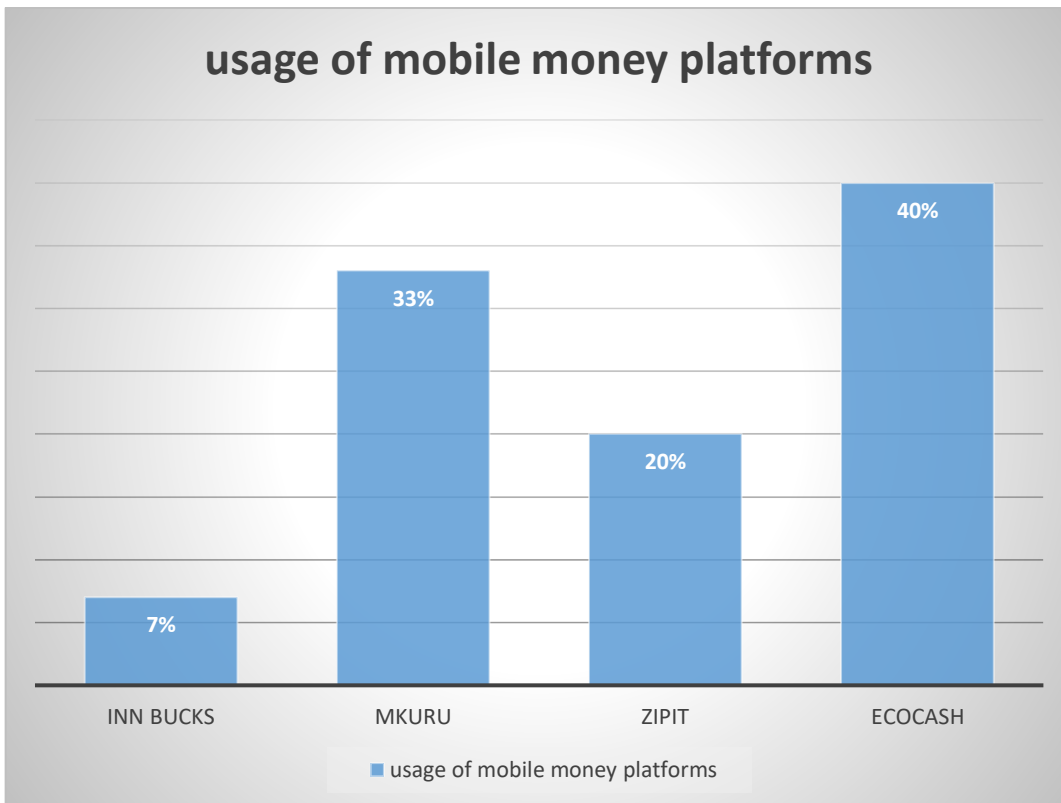
Source: Study (2022)

The survey respondents were asked to outline the mobile money channel they frequently use. Ecocash was the most used channel with 40% followed by the use of Mkuru with 33%, ZIPIT was the third with 20% and lastly Innbucks with 7%.

Low usage of Innbucks could be due to the unavailability of Innbucks mobile agencies and collection centres within reach as customers moves more than 10km to Chitungwiza for cash deposits and withdrawals.

4.4. Usage of Mobile Banking Channels

FIG 4.4
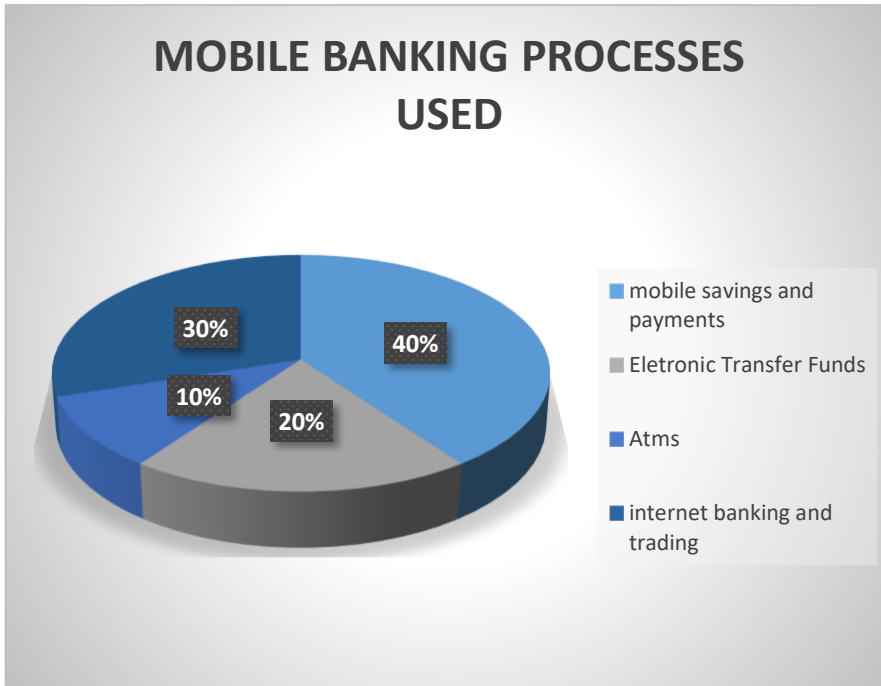
Source: Study (2022)

The most used mobile banking channel was the use of mobile savings and payments through Ecocash, Zipit and Innbucks which constitutes 40% of the overall sample size. Electronic Transfer Funds constitute 20% of the overall sample size with major contribution from Mkuru, Ecocash and Zipit respectively. ATMs constitute only 10% that could be due to lack of mobile infrastructure around the area and lack of financial of knowledge. Lastly internet banking and trading constituted 30%   which could have included ZSE exchange traders and participants.

4.5 Mobile banking and Financial Inclusion.

Table 4.2 Reliability Statistics

Reliability Statistics	
Cronbach's Alpha	N of Items
.816	17

The Cronbach's Alpha value was used for testing the reliability of the questionnaire and the value of 81% was obtained on table 4.2 above. From the results the researcher obtained a conclusion that the instruments where reliable hence it was used. Taber (2018) postulates that the Cronbach's Alpha values are acceptable as they are all greater than 0.7. This means that the items within the variables are indeed interrelated and there is a relationship between the items. To obtain the above figures Cronbach's alpha averred that the minimum

tolerable coefficient is 0.6. However Innocent (2020) was of the view that Cronbach's Alpha value of 0.70 and 0.80 is considered reasonable.

4.6 Barriers to mobile banking

The respondents were requested to indicate barriers of mobile banking to financial inclusion in a five scale likert scale. The scale ranged from 'strongly disagree (1)' to 'strongly agree' (5). The scores of strongly disagree have taken to represent a variable which had a mean score of 0 to 2.8 on the continuous Likert-Scale; (0<S.D<2.8). The scores of 'moderate' have been taken to represent a variable with a mean score of 2.9 to 3.4 o continuous likert-scale; (2.9<M.E<3.5) and the score of both agree and disagree and strongly agree have taken to represent a variable which had a mean score of 3.6 to 5.0 on a continuous Likert scale; 3.6<SA<5.0). A standard deviation of deviation of >0.8 implies a significant difference on the impact of the variable among respondents. The results are presented in the table below.

Table 4.3 Barriers, Impact of mobile banking and strategies to financial inclusion

Descriptive Statistics on Barriers, Impact of mobile banking and strategies to financial inclusion

Barriers to mobile banking	Mean	Std. Deviation
learning to use mobile banking is easy for me	2.6429	1.295
I think mobile banking is costly	1.5000	1.317
I think mobile banking is secure and safe	3.8532	1.210
I think mobile banking is not easy and convenient	3.65	1.252
Impact of mobile banking		
I think mobile banking increases access to banking	3.43	1.551
I think mobile banking reduces my banking costs	3.78	1.250
I think mobile banking spearheads financial inclusion	3.43	1.375
I think mobile banking had increased my savings	2.98	1.165
Strategies to financial inclusion		
I think micro financing improves financial inclusion	3.23	1.751

I think consumer protection improves financial inclusion	3.38	1.230
I think financial literacy increases financial inclusion	3.73	1.175
I think financial innovation increase financial inclusion	4.98	1.265

The findings were that mobile banking is safe and secure way to do business with a mean of 3.8532 (>3; Agree) and SD=1.210.The result indicate that security concerns is a significant barrier in using mobile banking. The respondents pointed that with mobile banking there are huge risks associated of losing their monies with evidence mostly on Ecocash spam messages and they also pointed on high level of uncertainty on security. The study results were also supported by Sharma and Singh (2012) who found out that issues related to mobile banking as a significant barrier in adoption and usage of mobile banking services by customers. The findings also show that mobile banking is easy to use and convenient with a mean of 1.65 and SD 1.252. The respondents pointed that mobile banking allows them to easily acquire foodstuffs and pay bills in the comfort of their homes positively. The findings were also supported by Mulili (2020) who found out that many respondents in Kenya find mobile banking convenient and easy to use. The findings were also that mobile banking is not costly with a mean of 1.5000 (and SD of 1.317. The results of the findings were that costs of mobile banking is not significant barrier to financial inclusion. It may be said that costs per transaction are very low compared to bank charges and saves o time ad transport money. This result was supported by Mtetwa (2014) who found out that cost per transaction is not significant barrier in using mobile banking because it is cheap to operate mobile banking as banks charges are more as compared to mobile banking

The findings were that fair size of the sample where fairly agreeable to mobile increases access to banking with a mean of 3.43 and a standard deviation of 1.551. The findings also found out that majority of the population were strongly agreeable to mobile reduces banking costs with a mean of 3.78 and a SD of 1.551. These results supports the research of Musango (2018) who found out that mobile banking charges are far much cheaper than using bank charges. A fair size of the sample size were agreeable to mobile banking spearheads financial inclusion with a mean value of 3.43 and a SD of 1.250, however a small size of the sample size fairly disagreed to mobile banking increasing savings with a mean value of 2.98 and SD of 1.165. The finds of the study were that mobile banking have a positive impact on financial inclusion and although an increase in savings was not significant to financial inclusion. The results of the findings were similar to (Duncombe & Boateng (2017) who suggest that mobile banking leads to impulse buying which unnecessary purchase of airtime bundles which degrades the mobile accounts balances for consumers

The findings of the research were that the majority of respondents were heavily agreeable to financial

innovation as a way to increase financial inclusion with a mean value of 4.98 and SD of 1.265, financial literacy was strongly agreeable with a mean value of 3.73 and SD of 1.175. This result supports the main objective of NFIS which drives for financial innovation as a strategy for financial inclusion (NFIS, 2020), consumer protection was strongly agreed as way to enhance positive financial inclusion with a mean value of 3.38 and SD of 1.230 and lastly micro financing was fairly supported as way to improve financial inclusion with a mean of 3.23 and SD of 1.751.

4.7 Qualitative Analysis

For quantitative analysis the study used two methods. At first, correlation is used to measure the degree of association between different variables under consideration. As multiple variables are influencing the impact, the study identified the crucial factors associated with financial inclusion. Pearson and Spearman correlations are calculated for all variables used in the study starting with the Pearson's correlation results. Secondly, a regression analysis is contacted on the data to establish the regression analysis between the variables under consideration.

4.7 Correlation Analysis for Impact of Mobile Banking on Financial Inclusion

Table 4.4 Correlation Analysis for impact of mobile banking on financial inclusion.

<table>
<tr><td colspan="4" align="center">Correlations</td></tr>
<tr><td></td><td></td><td>Does mobile banking channels increase uptake of financial inclusion.</td><td>Sig</td></tr>
<tr><td rowspan="4">Pearson Correlation</td><td>Does mobile banking channels increase uptake of financial inclusion.</td><td>1.000</td><td></td></tr>
<tr><td>mobile_ banking _agencies</td><td>.826</td><td>.000</td></tr>
<tr><td>mobile_ banking_ products</td><td>.661</td><td>.000</td></tr>
<tr><td>mobile_ banking_ services</td><td>.685</td><td>.000</td></tr>
</table>

Source: Study (2022)

A correlation between mobile banking agencies, mobile banking products and mobile services was conducted. As shown in the table above the correlation between mobile banking and financial inclusion was strong and statistically significant. A statistically significant correlation between mobile banking agencies and financial inclusion exists (r=.826, p=0.000). The study found a correlation between mobile banking products and financial inclusion to be strong and statistically significant (r=.661, p= 0.000). The study established that there was a strong and statistical correlation between mobile banking services and financial inclusion (r=685, p= 0.000). Thus from the findings mobile banking agencies, products and services all have significant impact on financial inclusion. The results demonstrated each of the factors is considered important

by the respondents and mobile banking agencies appears to be the strong influencer of financial inclusion in Seke rural area.

4.5 Regression Analysis

Table 4.5: Results of General Least Square

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.976	.385		7.723	.000
	X1	.183	.163	.142	1.314	.032
	X2	.213	.094	237	2.255	.027
	X3	.398	.289	.116	1.107	.041

Source; Study (2022)

From the established table above the multiple linear regression equation becomes:

FI = 4.976+ 0.183X1+0.213X2+0.398X3

FI= Financial Inclusion

 β = Constant term

X1 = Mobile banking agencies

X2= Mobile banking products

X3= Mobile banking services

The results of this regression indicate that coefficient of mobile banking agencies is positive and significant at α =5%. This implies that mobile banking agencies enhances a positive impact to financial inclusion. This suggests the point that financial institutions and government bodies as well as RBZ should consider increasing more financial agencies to increase financial inclusion. Mobile banking products turns to have a positive coefficient and also significant at 95% confidence level. This was supported by Mwatsika (2016), Tadesse (2018) and Sharon and Claude (2017) who found that ATM banking has a positive impact on financial inclusion and customer satisfaction. The results also depicts that coefficient of mobile banking services is positive and significant at 5% significant level. The finds of the research were supported by Wepukhulu (2019) wh0 postulates that mobile banking services such as electronic bill payment and electronic transfers had a positive impact on financial inclusion, the model had the y-intercept constant at 4.976 and was insignificant at 5% confidence level. This means that without mobile banking agencies, mobile products and mobile services only 4.839 will be achieved through the constant is highly significant at the 5% confidence level.

Table 4.6Model Summary for financial inclusion with the predictor variables

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.898a	.789	.013	.487

a. Predictors: (Constant), X1, X2, X3

Source: Study (2020)

 The model summary statistics indicates that 78% of the variance in the financial inclusion is attributed by variations in mobile banking. This means that 78% of the impacts on financial inclusion will be explained by changes in independent variables and control variables in the model. This result is obtained from the R-square statistic in the summary output. More so, it was observed that the entire model as a whole was statistically significant. The remaining 22% of changes in financial inclusion will be explained by other factors not in the model.

Table 4.7: Analysis of Variance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.830	3	.277	5.166	.036[b]
	Residual	8.545	36	.237		
	Total	9.375	39			

a. Dependent Variable: Does mobile banking channels increase uptake of financial inclusion.
b. Predictors: (Constant), mobile_ banking_ services, mobile_ banking_ products, mobile_ banking_ agencies

Furthermore an analysis of goodness of fit was conducted where the overall model was assessed as shown in Table 4.9. The F statistic value was 5.166 at 3 df that implies that mobile baking can cause a variance I financial inclusion. P-value is 0.05 which implies that overall the regression model statistically significantly predicts financial inclusion. This means that the model is good for the data.

Chapter summary

The chapter provides the findings of the study that are sought to determine the impact of mobile banking on financial inclusion in rural areas of Seke. From the findings mobile products, agencies and services were strong predictors of financial inclusion in Seke rural area. The three factors explained the increased impact of financial inclusion through mobile banking and from the results mobile banking agencies were strong predictors of financial inclusion followed by mobile banking services and finally mobile banking products.

CHAPTER FIVE
RESULTS DISCUSSION

5.0 Introduction

In chapter four, an analysis of factors of mobile banking impact on financial inclusion was conducted in rural areas of Seke. The results illustrated that mobile banking services, mobile banking products and mobile banking agencies were of importance in fostering financial inclusion. Thus chapter five discussed the obtained results in relation to reviewed literature and theoretical fframework.

5.2 Summary

The research investigated the impact of mobile banking on financial inclusion in rural area of Seke. The research objective were to :find the barriers of mobile banking to financial inclusion, find the impact of mobile banking on financial inclusion and find the strategies to attain positive impact of mobile banking on financial inclusion. Mtetwa (2014) found out that mobile banking services had a statistically significant impact on financial inclusion with a huge emphasis on that barriers to financial inclusion manifested in form of poor access to loans and credit facilities. Chitokwindo (2014) also postulates that mobile banking impacts financial inclusion as it resulted in financial deepening which provides greater financial intermediation of the economy as a whole. NFIS (2022) postulates that to enhance positive changes in financial inclusion, the National Financial Inclusion Strategy II involves financial innovation, financial consumer protection and financial capability, devolution and micro financing.

The positivism philosophy was assumed and a casual research design was followed with a target population of 45 rural respondents. Questionnaires were used for data collection from the respondents and secondary data was drawn from books articles and journals. Forty five questionnaires were distributed and 40 were returned which gives a response rate of 88%. Descriptive statistics, correlation and regression analysis were used to analyse the responses of the rural residents. The findings of the study are: barriers to financial includes that financial uneasy to use for rural residents due to lack of coverage and education, security risk of mobile banking was also high due to cybercrimes as well as fake sum messages, however mobile banking costs, convenience and were find out not to be barriers as they have a positive impact on financial inclusion. Further the findings of the study shows that mobile banking services had a positive impact on financial inclusion. Mobile banking improved accessibility to credit facilities, convenience as well as enhancing financial deepening as it allows residents to execute financial services in comfort of their homes. However mobile banking services did not resulted in improvements in savings as it resulted in impulse buying and mobile banking had result in losses due to scum messages and account hacking.

More so strategies which need to be adopted to enhance a positive impact of mobile banking on financial inclusion were quite varied. Respondents agreed that improving security of mobile banking units, improving accessibility as well as telecommunication networks were the strategies suggested by the respondents to impact financial inclusion.

5.3 Conclusion

To sum up, mobile banking services had a statistical significance on impacting financial inclusion. Barriers to financial inclusion where defined in form of poor network coverage, lack of accessibility to credit facilities as well as lack of security against third parties. The study relates to the need for awareness for safety and accessibility of mobile banking in rural areas. In addition to this network issues and awareness had also haunted the success of mobile banking to enhance positive change of financial inclusion.

5.4 Recommendations

The following recommendations are derived from the results of the study.

Recommendations (1) with regards to barriers to financial inclusion, banks and network providers are ought to make use of robust ICT systems to improve security. The technological innovations plays a tarns-formative role in reaching the unbanked market. There is a need to move from brick and mortar model of banking model especially when targeting outreach rural communities

(2) Mobile banking service providers should also improve the quality of service provided to increase customer utility. Banks and mobile service providers should increase the quality of network provided by telecommunications since USSD codes and mobile app depends on network.

(3) Use of call centres agents and know-your-customer (KYC) services so as to quickly dissolve challenges faced by customers when doing mobile transactions.

Recommendation (2) with regards to the impact of mobile banking on financial, education awareness should be created through stake holder coordination to address financial literacy deficiencies. Financial literacy programmes allows acquisition of financial knowledge, skills, attitude and behaviour thereby facilitating making of informed decisions in line with customer experiences.

(2) The reserve bank should facilitate equal distribution of mobile banking platforms, products as well as services so as to attain a positive aggregated national financial inclusion rather than focusing on urban areas mostly.

Recommendation (3) regarding strategies to financial inclusion, there should be impediments to the development of financial sector as they had faced a lot of challenges which includes inadequate funding, high rates of default, credit information asymmetry, slow product innovation and skewness of lending to consumption. (2) Strict assessment of National Financial Inclusion Strategy (NFIS) as it address challenges to financial inclusion at national level which helps in achieving the golden goal of financial inclusion. Statistical data from all mobile banking bodies should be gathered, analysed quarterly and corrective

measures should be put in place.

5.5 Suggestions for Further Studies

It is recommended that a study to be undertaken uncover the impact of other factors that influence mobile banking should be conducted for a comparison to be made on how far mobile banking influence financial inclusion. A

REFERENCES

Albashrawi, M., & Motiwalla, L. (2017). Understanding Mobile Banking Usage: An Integrative Perspective. *In Proceedings of the 2017 ACM.*

Akter, U., Anwar, S. R., Mustafa, R., & Ali, Z. (2021). Revisiting the impact of mobile banking on financial inclusion among the developing countries. *International Journal of Financial Research.*

Asare, M. and Sakoe, J. (2015) The Effects of Electronic Banking on Financial Services in Ghana. *Research Journal of Finance and Accounting.*

Bansal, S. (2014) Perspectives of Technology in Achieving Financial Inclusion in Rural India. *Procedia Economics and Finance.*

Bethlehem, H.& Silva,E.(2013). The Modern Researcher, rev. Ed.*, New York: Harcourt, Brace and World, Inc.*

Elhajjar, S. & Ouaida, F. (2020). An analysis of factors affecting mobile banking adoption. International Journal of Bank Marketing, 38 (2), 352-367.

Ezeh, P. & Nwankwo, N. (2018). Factors that influence the acceptance of mobile money in Nigeria. *Journal of Research in Marketing.*

Kabala, E., Mapoma, R., Nalutongwe, C., Muyani, D., & Lungu, J. (2021). An ethnological analysis of the influence of mobile money on financial inclusion*: The case of urban Zambia. Zambia Social Science Journal*

Karjaluoto, H., Glavee-Geo, R., Ramdhony, D., Shaikh, A. A., & Hurpaul, A. (2021). Consumption values and mobile banking services*: Understanding the urban-rural dichotomy in a developing economy. Journal of Bank Marketing*.

Kumar, N. (2012), C.R. 2004. *Research Methodology: Methods and Techniques. New Age International.*

Lema, A. (2017). Factors influencing the adoption of mobile financial services in the unbanked population. *Journal of Humanities and Social Science.*

Lenka, S. K., & Barik, R. (2018). A discourse analysis of financial inclusion: post-liberalization mapping in rural and urban India. *Journal of Financial Economic Policy*.

Shaikh, A. A., & Karjaluoto, H. (2016). On some misconceptions concerning digital banking and alternative delivery channels. *International Journal of E- Business Research.*

Sharma, L., & Mathuria, M. (2018). Mobile Banking Transaction Using Fingerprint Authentication. *In 2018 2nd International Conference on Inventive Systems and Control*

Siyal, A. et al. (2019). Predicting Mobile Banking Acceptance and Loyalty in Chinese Bank Customers. *SAGE Open, 1–21*

Naruetharadol,P., et al (2021). Factors Affecting the Intention to Use Mobile Banking Services. *Sage Open.*

Srivastava,S., Vishnani.,S. Determinants of mobile bank users in North India. *Journal of Financial Services.*

Sharma, P. P., Khan, S. A., & Thoudam, P. (2019). Role of attitude and entrepreneurship education towards entrepreneurial orientation among business students of Bhutan. *International Journal of Recent Technology and Engineering.*

Ntseme, O. J., Nametsagang, A., & Chukwuere, J. E. (2016). Risks and Benefits from Using Mobile Banking in an Emerging Country. *Risk Governance & Control: Financial Markets & Institutions.*

Mwatsika,C.,2016. Impact of ATM Banking Perfomance on Customer Satisfaction with the Baking in Malawi. *International Journal of Bussiness and Economic Research*.

Msweli, N. T., & Mawela, T. (2020). Enablers and Barriers for Mobile Commerce and Banking Services Among the Elderly in Developing Countries: A Systematic Review. In *Conference on e-Business, e-Services and e-Society* (pp. 319–330). Springer, Cham. https://doi.org/10.1007/978-3-030-45002-1_27

Mtetwa,F. (2014). The impact of mobile banking on financial inclusion.

Mupfiga, P., & Padare, T. (2017). The Rise of Mobile Technology on the Financial Sector in Zimbabwe. *Journal of Systems Intergration*, 3, 19–26.

Muzurura, J., & Chigora, F. (2019). Consumers' Behavioural Intention to Adopt Mobile Banking in Rural Sub-Saharan Africa Using an Extension of Technology Acceptance Model: Lessons from Zimbabwe. *International Journal of Business, Economics and Management*, 6(6), 316–334. https://doi.org/10.18488/journal.62.2019.66.316.334

.Muñoz-Leiva, F. et al. (2021). Determinants of intention to use the mobile banking apps: An extension of the classic TAM model. *Spanish Journal of Marketing, 21(1), 25-38*

Siano, A. et al. (2020). Mobile banking: An innovative solution for increasing financial inclusion in Sub-Saharan African countries: Evidence from Nigeria. *Sustainability*, doi:10.3390/su122310130

Owusu, G. M. Y., Bekoe, R. A., Addo-yobo, A. A., & Otieku, J. (2020). Mobile Banking Adoption among the Ghanaian Youth. *Journal of African Business, in press*. https://doi.org/10.1080/15228916.2020.1753003

Pankomera, R., & van Greunen, D. (2018). Challenges, Benefits, and Adoption Dynamics of Mobile Banking at the Base of the Pyramid (BOP) in Africa: A Systematic Review. *The African Journal of Information and Communication,* https://doi.org/10.23962/10539/26113

Wakaba, V., & Wepukhulu, J. M. (2019). Effect of mobile money services on Kenya's financial inclusion. *International Journal of Finance and Accounting.*

Shankar, A., & Jebarajakirthy, C. (2020). How do electronic word of mouth practices contribute to mobile banking adoption? *Journal of Retailing and Consumer Services*.

Sharma,P.,& Singh, P.,(2012). User's perception about mobile banking. Review of business & Technology Research Department, Bank of Uganda.

APPENDIX I

QUESTIONNAIRE

Section 1 Background characteristics of respondents

Tick where applicable

1. Gender

Male…………………………[ ]

Female……………………….[ ]

2. Age

18 years to 25 years…………………..[ ]

25years to 35 years……………………[ ]

35 years to 45 years……………………[ ]

45 years +………………………………[ ]

3. Level of Education

None	
Secondary	
Advanced	
Graduate	
Post graduate	

4. Which electronic banking channel do you often use?

	Never	Sometimes	Often	Most of the times	Always
	1	2	3	4	5
Mobile payments and savings.					
Internet banking					
Electronic transfer funds					
ATMs					
Telephone					

banking					

5. How often do you use the following mobile banking agencies?

	Never	Sometimes	Often	Most of the times	Always
	1	**2**	**3**	**4**	**5**
Mukuru					
Ecocash					
Innbucks					
ZIPIT					

6. Does mobile banking channels increase uptake of financial inclusion.

Yes [ ]   No [ ]

Section 2: Barriers to Financial Inclusion

For each of the following questions in the schedule below, indicate the degree of agreement by ticking any of the following 1 for "Strongly Disagree", 2 for "Disagree", 3 for "Neutral",4 for "Agree" and 5 for Strongly Agree.

	SD	D	N	A	SA
	1	2	3	4	5
Learning to use mobile banking is easy for me.					
Using mobile banking is tiresome as it requires access codes continuously to do further transactions.					
I think mobile banking is costly compared to other banking channels					
I think mobile banking is secure banking channel					
I think mobile banking is easy and convenient to use					

Section 3 : Impact of mobile banking.

	SD	D	N	A	SA
	1	**2**	**3**	**4**	**5**
I think mobile banking had increased access to banking platforms and networks.					
I think mobile banking reduces my banking costs.					
I think mobile banking platforms like Ecocash had spearhead financial inclusion.					
I think mobile banking had increased my savings.					
I think mobile banking provides best way of paying bills and insurance cover.					

Section 4: Strategies which can be adopted to enhance a positive impact on financial inclusion.

	SD	D	N	A	SA
	1	**2**	**3**	**4**	**5**
I think micro financing improves financial inclusion					
I think consumer protection improves financial inclusion					
I think financial literacy increases financial inclusion					
I think financial innovation increase financial inclusion					