AN EVALUATION ON THE EFFECTIVENESS OF MOBILE BANKING IN ENABLING RURAL FINANCIAL INCLUSION. A CASE STUDY OF MT DARWIN.

BY

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A DISSERTATION SUBMITTED TO BINDURA UNIVERSITY OF SCIENCE EDUCATION IN PARTIAL FULFILMENT OF THE REQUIREMENTS OF THE BACHELOR OF BUSINESS STUDIES HONOURS DEGREE IN BANKING AND FINANCE OF BINDURA UNIVERSITY OF SCIENCE EDUCATION
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ABSTRACT

The purpose of the study was to evaluate the effectiveness of mobile banking in enabling rural financial inclusion in Mt Darwin. The objective of the study was to determine the levels of acceptance of mobile banking as a financial service by rural dwellers to determine the effectiveness of mobile banking in facilitating financial inclusion in rural area, to determine relationship between mobile banking and financial inclusion to rural communities and identifying strategies that can be used to improve effectiveness of mobile banking in enhancing rural financial inclusion. The researcher used descriptive research design were both quantitative and qualitative data were employed so as to get in-depth understanding of the above-mentioned research topic. The findings indicated that rural dwellers are accepting mobile banking however some of the respondents indicated that they are not using mobile banking, the reason being no confidence with banks, stringent requirements and expensive to maintain. Most of the respondents indicated that there is a positive relationship between mobile banking and financial inclusion through the mobile financial services they are making use of. Strategies for improving the effectiveness of mobile banking to enhance rural financial inclusion where identified. In this increase awareness through financial literacy and adverts, issuing agriculture rural finance and infrastructure sharing and promotion of interoperability among other strategies. The study concluded that that mobile banking is playing a crucial role as it is offering convenience and a solution to cash crisis to rural population. If all the necessary infrastructure, education, awareness programs and advising are put in place mobile banking will be an effectively tool to reach the unbanked population. It has been recommended that banks and MNOs should continue to collaborate and promoting mobile banking which is hoped to continue improve the ratio of financial services access to rural dwellers.
Firstly I would like to give great appreciation to the one above all, God Almighty for helping me to go through this academic journey. As a matter of fact, my dissertation was a result of combined effort from both individuals and institution. I might fail to mention them all since they are too many, but their assistance was much appreciated.

I would like to extend my appreciation to my supervisor Mr Murekachiro for the support and encouragement throughout this project. My gratitude also goes to the respondents chosen to participate in the study.

Furthermore I extend my heartfelt gratitude to my classmates, family and friends who greatly inspired and helped me during the study. God bless you all.
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<table>
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<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>AFI</td>
<td>alliance for financial inclusion</td>
</tr>
<tr>
<td>ATM</td>
<td>Automated tailor machine</td>
</tr>
<tr>
<td>RBZ</td>
<td>Reserve bank of Zimbabwe</td>
</tr>
<tr>
<td>UNCDF</td>
<td>United nation capital development fund</td>
</tr>
<tr>
<td>POS</td>
<td>point of sale</td>
</tr>
<tr>
<td>USSD</td>
<td>Unstructured Supplementary Service Data</td>
</tr>
<tr>
<td>MFI</td>
<td>Microfinance institution</td>
</tr>
<tr>
<td>FICs</td>
<td>financial inclusion Centre</td>
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<tr>
<td>G20</td>
<td>Generation 20</td>
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<tr>
<td>TAM</td>
<td>Technology acceptance model</td>
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<tr>
<td>EDI</td>
<td>Electronic data interchange</td>
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<td>SMS</td>
<td>Short messages service</td>
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CHAPTER ONE

INTRODUCTION

1.0 Introduction
For the past years, most parts of Zimbabwean rural communities were financially excluded due to limited access to banks and lack of mobile banking facilities such as banking application and internet connectivity. Lack of formerly salaried employed workers among other reasons. The involvement of reserve bank of Zimbabwe (RBZ) in network line alliance for financial inclusion (AFI) has enable those who were financially excluded to be part of financial inclusion. It has included financial institutions, through introducing strategies and measures to corporate the banks so as to attain a complete financial inclusion. This chapter looks at the background, problem statements, research objectives, questions, scope of the study and significant of the study and limitations of the research

1.1 Background of the study
Financial inclusion has been a matter of great importance in the third world counties since early 2000s. After thorough research findings indicated that financial exclusion has a direct correlation to poverty. Financial inclusion is now a common objective for many central banks among the developing nations as it addresses the constraints of financial exclusion (Mago, 2013). Ways of overcoming financial exclusion have been cited through which the introduction of financial inclusion facilities were an easy way (Kempson and Dominy, 2003). Recent innovations in telecommunication have enable the launch of new access methods for banking services through various e-channels such as ATMs, credit/debit cards, internet banking, mobile banking, telebanking among others (Mago, 2013). Mobile banking enables customers to interact with a bank via mobile phones.

European banks were the first to offer mobile banking facilities around 1999, which allowed their customers to perform financial transactions such as payment of goods and services at a point of sale (POS). With time passing by, the adoption of mobile banking increased dramatically, with countries like Brazil and India being the leaders in adopting to this evolvement (V.M., 2010). Mobile banking became widespread and
most commonly in Iran with its local banks offering mobile banking services. Countries like Mexico and Canada were also early adopters of mobile banking services (Chitungo, 2013).

(Lai, 2006), states that in 2009, only 5% of Indian villagers were banked, meaning 95% were unbanked despite being covered by bank branches. This scenario left the majority of the Indian population excluded from financial services as the greater percentage of poor rural dwellers did not have bank accounts.

As studies were conducted in India, they indicated that in March 2010, the number of Automated teller machines (ATMs) in rural areas of India were 8, 7% of the total ATMs in the country. Due to that situation, the Reserve bank of India had to adopt measures for financial inclusion. The RBI signed a contract with Nokia to provide mobile banking services and this marked the beginning of mobile banking in India (Lai, 2006)

As mobile banking later progressed to Africa, Kenya was the first country to offer mobile banking services in 2007 before it began to spread all over Africa (Mas et al, 2010). Mobile banking researcher in Kenya indicated that only 18-19% of the adult population had access to financial services, thus more than 80% remained unbanked (Njenga, 2013). In Kenya these services were provided by Safiricom and Zain, the two leading mobile network operators where Safiricom’s mobile banking services is branded ‘Mpesa’ and Zain branded as ‘Zap’ (Njenga, 2013). The African Development Bank (AFDB), depicts that about half of the world’s population is not involved in the formal channels of borrowing and saving that is banking (financial exclusion). In Africa, about 39% of the overall population are banked and 61% do not have access to financial services. Rural commercial bank branch network is underdeveloped. However this is in contrasts with the high concentration of mobile phone usage even in rural areas, which only gives vivid picture that mobile phones are an ideal platform through which outreach for enabling financial inclusion in rural areas.

Finscope of 2014 indicates that 70% of the Zimbabwean population resides in rural area and only 23% of the population is formally banked compared to 46% of the urban population. This shows that the financial services providers in Zimbabwe are not able to reach to all parts of the populace so that they is financial inclusion.
(Agarwal, 2010), states that commercial banks traditionally do not serve low income earners, rural communities and the poor thus the unbanked and this is so because of the high cost involved which makes them unattractive. Mobile banking has become the catalyst of financial inclusion, poverty reduction and business development. According to RBZ report some of the reason for financial exclusion include long distance to the nearest access point, irregular and low incomes, poor rural infrastructure which does not support development of these micro enterprises into sustainable large business ventures among the others.

(Mago, 2013) postulated that the RBZ came up with a framework of financial inclusion in 2007 which was premised on the pillars which include expanding the outreach of established development financial institutions such as people’s own saving bank(POSB), Zimpost and Agribank, expanding the outreach of establishing commercial banks and building societies, enhancing provision of microfinance services through establishment of microfinance banks (MFI Banks) or financial inclusion Centres (FICs) and urging relevant authorities to ensure provision of adequate infrastructure including roads, telecommunication coverage, provision of electricity and provision of appropriate incentives to financial institutions engaged in rural banking among others. (Mago, 2014). The government of Zimbabwe is more concerned with cognizant of the marginalization of the low income earners and rural communities who are unbanked and enable them to contribute meaningful contribution to the economy. The government have formulated strategies which include promotion of financial inclusion through creation of more financial institutions that include the microfinance banks and leasing companies (Ministry of Finance 2011). Lately Zimbabwe has joined the AFI network in 2012 with the help of G20 principles so as to widen the accessibility of financial services to rural people and promote the economic prosperity. The Alliance for financial inclusion (AFI) came up with the different concepts related in financial inclusion including the (access) of making financial services available and affordable to users and enables the customers to use the financial services frequently (usage) and regularly and make the financial services tailored to the client’s needs (quality) (Ncube, 2013)

In Zimbabwe the banking industry has wide grown instituted a number of incentives to broaden access to financial services however gaps still exist on access, usage and quality level of financial services and products. These micro groups include small and
medium enterprises. (MSMEs) women, youth and rural population and the small scale agriculture sector (RBZ, 2016). Financial inclusion promotes efficient allocation of productive resources which can potentially reduce overall cost of capital. According to RBZ, (2015), experience worldwide has shown that bringing more people into the financial system increases savings.

1.2 Problem statement
Finscope of 2014 indicates that 70% of the Zimbabwean population resides in rural area and only 23% of the population is formally banked compared to 46% of the urban population. If borrowing they relay of friends and family and when saving they save at home. Though a significant (inclusive the adults) of the population are financially included however they are informally served and use comparatives, farmer association, savings clubs and groups and private money lenders. (Mago, 2014). When 77% of the rural population are financially excluded, this becomes a teething problem. The adoption of Mobile banking and various strategies to curb the financial exclusion problem has been viewed as a solution to financial inclusion and the challenge is to confirm whether mobile banking is the solution to financial inclusion in Zimbabwe.

1.3 Objectives of the study
The main objective of the study is to evaluate the effectiveness of mobile banking in enabling rural financial inclusion in Mt Darwin. The following are the secondary objectives to the research study.

- To determine the levels of acceptance of mobile banking as a financial service by rural dwellers
- To determine relationship between mobile banking and financial inclusion to rural communities
- To identify strategies that can be used to improve effectiveness of mobile banking in enhancing rural financial inclusion.

1.4 Research Questions
The study will answer the following questions

1. What are the levels of acceptance of mobile banking as a financial service by rural dwellers
2. How effective is mobile banking in facilitating rural financial inclusion
3. What is the relationship between mobile banking and financial inclusion to rural community
4. What are the strategies that can be used to improve effectiveness of mobile banking in enhancing rural financial inclusion

1.5 Significance of the study
To the researcher

Besides the benefit of fulfilment of the researcher’s degree program. The researcher will gain the essential skills which will be useful at any organisation that the researcher will get employed to. The researcher will also gain an in-depth knowledge in the financial inclusion area and enhancing the researcher’s time management capabilities.

Rural community

This research will be of significance to residence of rural communities with the hope of that through conducting such research on financial inclusion. Rural community will realise the benefits in mobile banking as a financial solution and decide to be part of financially included in the financial system.

It will also provide in-depth understanding on the rural community consumer behaviour to the telecommunications industry through mobile banking in enabling financial inclusion.

To the central bank

This will be crucial in that it may assist the central bank in formulating financial inclusion policies for the excluded Zimbabwean population.

1.6 Assumptions
The following assumptions will be considered during the study since the environment is characterised by uncertainties.

- The responded had an understanding regarding the subject of mobile banking and financial inclusion
- The research shall create value to the rural community, public and policy makers
- All the respondents provide accurate information
1.7 Limitations of the study
Certain constraints were encountered during the process which include travelling expenses affected some of the schedules between the researcher and the respondents but the researcher made great use of the available respondents who were reachable. The researcher faced challenges of time constraint since much time was needed to collect and compile data from the questionnaires. However the researcher have managed to overcome the challenge through utilising the limited time efficiently.

The researcher also lacked experience as it was the first time to conduct research work so it may have loopholes here and there because of lack of experience in the field. To overcome this challenge the researcher consulted the supervisor on regular basis for the research to be successful.

1.8 Delimitations of the study
The study was conducted in Mt Darwin and its populace. This was because of its accessibility to mobile banking and the ability of rural residents to get money for banking where the residents are basing on commercial farming. The research will be targeting the unbanked. So the researcher’s main focus was on the residents of the settlement areas, growth points, business area/centre and all the area likely to attract the researcher to the unbanked. The time period of the study ranges from 2012 to 2018.

1.9 Definition of terms
Financial inclusion- it is a process of ensuring that all classes of the society, particularly the poor and vulnerable, gain equal access of financial products and services as stated by (chitungo, 2013).

Mobile Banking- this is the use of mobile telecommunication devices, particularly mobile phones in carrying out banking (Njenga, 2013).

1.9 Summary
This section provide an overview of the reasons for the research that is the background of the study, the problem statement, the objectives of the research and the research questions. It also alluded the importance of the study in different dimensions and to different people, the significance of the study as well as the assumptions which enables the study results and conclusion to be valid. The next section will look at the literature review.
CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction
Literature review is the test of scholarship that serves to confirm or indicate the degree of knowledge that the researcher has in the subject of matter. Kotler (2001) defines it as a continuous process where findings are used in data analysis, conclusions and recommendations. The purpose of literature review is to find out what other authors have said in mobile banking in enabling rural financial inclusion and the researcher will focus her study in trying to define the objectives according to the literature relating the objectives of this study. This will facilitate in precisely bridging the gap between past researchers and current events relating.

2.1 Theoretical framework

2.1.1 Technology acceptance model (TAM)
Modern technology has brought exceptional changes in banking sectors. In this study the technology acceptance model (TAM) was considered to be the most suitable model due to the environment the researcher will be working on. It captures the attention of the most information system societies (Venkatesh, 2014).

The (TAM) model is an information system theory that tries to explain the way that users start to accept until use the technology. The technology Acceptance Model
Technology acceptance model

According to (Worthington, 2008), this model states that whenever users are presented with new technology or system, they may have a tendency to consider many factors which will influence their decisions on how they are going to use the technology. As a result, the usage behavior of customers in this case mobile subscribers in using m-banking as a technology to access financial services in rural areas are predicted using the technology acceptance model. The usage is likely to be dependable on factors such as perceived value associated with the technology and the perceived ease of use of mobile banking that will bring forward the intention to the subscribers to use the perceived technology.

- **Perceived ease of use (PEOU)**

Perceived ease of use can be defined as the extent to which the technology is believed to be free of effort when using it. According to technology acceptance theory, customer do not go for technology that is difficult to use and they at times tend to ignore new technology because they don’t want to put that effort in learning new things. Bagozzi and Warshaw, (1992) noted that people tends to form attitudes and intentions towards trying to learn to use the new technology prior to initiating efforts. Therefore, the study findings in this research are made basing on the assumptions made in the TAM model since it has behavioral element on intention to user /act and be free to act without any limitations.

2.1.2 **Mobile banking**

Mago (2014) states that Mobile banking initiatives have come from the banks and telecommunications companies and most banks have introduced the mobile banking product.
In order to adopt financial inclusion, Zimbabwe has no law binding on the adoption of financial services provided by the banks. (Mago, 2014)

Njenga (2009) defines mobile banking as the use of banking services and products offered by financial institutions by the use of and electronic mobile device. Chaudran (2014) denote that mobile banking refers to provision of banking and financial services with the help of mobile telecommunication devices. Gefen (2015) goes on to suggest that mobile banking is just a channel or system where customers interact with banks by being provided financial service through the use of mobile devices such as mobile phone. Mobile payments imply the use of mobile devices in carrying out financial transactions whereby funds are transferred from payer to receiver directly or through an intermediary (Mallat, 2006) However as an argument, Donner, (2008), states that M-banking is an application that enables people to use their mobile phones to manipulate their bank accounts, store value in accounts linked to their handsets, transfer funds and access credit.

Mobile banking involves the transfer of ownership or rights to use goods and services that is initiated or completed by using mobile access to computer-mediated networks with the help of an electronic device (Tiwari.R, 2006). It is an application that lives on a mobile phone that access and manipulates a customer's banking accounts at anytime and anywhere. Thus the provision and ailment of bank related financial services is done via mobile telecommunication devices. Typically financial services that can be accessed through mobile banking are balance enquiry, fund transfer between accounts, credit/debit balance alert, inter-banking mobile payment services, mobile top-up and minimum bank alert.

Mobile banking can be performed via SMS or web platform of users’ mobile phones. A customer’s account is mapped onto the mobile phone number in that it will be remotely accessed through ASSD or Web platform. This is made possible by a technology called Electronic Data Interchange (EDI) which refers to computer exchange of data sent in form that allows for automatic processing without manual intervention (T.Lucey, 2005). It operates in such a way that specific sequence of SMS messages enables the system to verify the balance within specified bank account or mobile wallets in that if he/she wants to make either a deposit or withdrawal from an agent it will be authorized. When depositing money, the merchant or agent receives cash and the system thereby credits the client’s mobile wallet or bank account. The client following the same procedure can withdraw money from a merchant or agent via an exchange of SMS to facilitate the authorization, hence an agent hands out the money to the customer followed by a debit SMS notification on merchant’s account.
Mobile banking services are enabled by allowing customers to register with their bank or mobile money service provider using 32K or 64K sim card and mobile phone. Once registered a password (PIN) is created and the customer can access the banking application remotely using a mobile phone. Standard rates apply and cost charge of data bundle is prescribed by the mobile network provider. Registration can be done at an ATM point where a customer simply inserts his/her ATM card and provide details required for the registration that include phone number and password for the application. A person can also register through self-administration that is by downloading the mobile application or accessing the system via mobile phone enabled Unstructured Supplementary Service Data (USSD) platform. A customer has to undergo the same registration process as the one done via ATM. Once this is done, a message notification is sent to a customer’s mobile phone as a sign of showing that the application was successful (A. Hellstrand, 2016)

This has been recognized as advancement in banking technology where access and control is done wherever a customer may be. These initiatives have prompted banks to formulate strategies that have ensured the movement that traditional branch banking to mobile a center point of attracting new customers and retaining existing ones through ease of transacting and convenience. Banks have adopted this mode since it has proven to reduce operations costs, improves customer satisfaction, improves branding and provides multiple services under single mobile. This is a feature that has quickly cut across the global banking industry becoming turbulent and competitive thereby forcing banks to innovate for survival.

2.1.2 Services provided by mobile banking
In the mobile banking, services are characterized by anytime and anywhere immediate connectivity regardless of geographical location. These services are backed by systems that allow users to carryout bank-related transactions like balance checks, funds transfers, and utility bills payments via mobile phone devices.

2.1.2.1 Mobile Accounting services
Mobile accounting services are divided into two that is account operations and account admiration. Account operations on mobile banking offers services like funds transfer, bill payments, mobile phone top up. These are actual transactions that have either a debit or credit effects on a mobile wallets or account holder’s balance. More so transaction charges come into play matched against the volume of transaction with regards to the band limits. On the other hand, account administration services offered by mobile banking includes remote
ordering of checks, updating personal information and profile managing stolen or lost cards (Bayero, 2015).

2.1.2.2 Mobile financial information services
It includes information on branches and ATMs, statements and balance alerts, balance enquires, and agent locators etc. this information is either provided instantaneously or within specified period of time usually monthly to give the customer enough information regarding the account. Also market information is also provided pertaining to ruling daily exchange rates, interest rates, latest products and services etc. they have helped in improving financial literacy skills of account holders which is key in enhancing financial inclusion.

2.1.2.3 Mobile Brokerage Services
It encompasses services that are related to the buying and selling of stocks, securities and the obtaining of current information about securities. With growing pace of technology, investment is being done via mobile phone in that one can manage his/her portfolio without the need to approach a broker. Also information pertaining to performance of various stocks markets around the world is accessible as one can get hold of important information of stock performance on JSE or LSE using his/her phone.

2.1.3 Financial inclusion
Sarma & Pais (2008) defines financial inclusion as the process that ensures the ease of access, availability and usage of the formal financial system for all the members of an economy, broadly it means access to finance services for all in a fair, transparent and equitable manner at an affordable cost. Kuri & Laha (2011) states that financial inclusion is a process of bringing the weaker and vulnerable sections of society within the ambit of the organized financial system. He goes on to say it create conditions for access to timely and adequate credit and other financial services by vulnerable groups. Moloi (2009) postulates that proxies such as distribution of the bank branches or the number of ATMs per 1000 people, together with transport costs and the opportunity cost associated with the time travelled determines the ease of access to financial products and services.

2.1.3.1 Financial services
Financial services are sub divided into two categories namely formal financial services and informal financial services. Formal financial services is defined by (Justine Sykes, 2016) as those that are subject to the financial regulations of the countries in which they are offered examples include microfinance institutions, banks, non-banking savings institutions such as post offices money transfer companies and mortgage and insurance providers. While informal financial services encompass the wide range of financial activities and services that take
place beyond the scope of a country’s formalized financial institutions and that are unregulated by central banks of other supervisory authorities for instance services provided by large number of community-based financing vehicles, such as supplier credit, money landers and money borrowed from friends and family. (Justine Sykes, 2016).

2.1.3.2 Motives for financial inclusion
Donner and Tellez (2015) had the same view with Abosi that the financial inclusion has far reaching implications for rural communities especially to the youth. They made suggestions that if rural communities are given access to financial services and products, it allows them to formally save, prevent concentration of economic power of few individuals and it helps in mitigating the risk that the rural dwellers face as a result of economic shocks. Ideally through financial inclusion more money is allowed to circulate around the formal system, allows government taxation and encourages the investment of the money that is currently not in formal circulation (Donner and Tellez, 2015)

2.1.3.4 Effectiveness of M-banking in enabling rural financial inclusion
Effectiveness of mobile banking in serving the unbanked rural population can be reconnoitered through the competitive advantages it has over the traditional banking. MNOs and banks have the potential to reach over millions of potential customers especially the unbanked in rural communities. Since more than 50% of the adult population in the world have access to mobile phones (Njenga, 2013). Mobile banking gives the rural community a chance to access financial services as proven by several successfull countries such as India, Kenya and South Africa among other countries.

In most developing countries the cost of formal banking such as cost of financial transaction are high which makes it difficult for rural dwellers to access financial services. Therefore mobile banking came as a solution of providing financial services to the unbanked since it is affordable mobile phones can be accessed everywhere. Jeffris, (2007) goes on to agree with the above view put forward by Njenga (2007) that mobile banking have the power to transform the economies of services deliverd by reducing cost of financial transactions.

Sulaiman, (2007) and other various authors highlighted servaral benefits of mobile banking over traditional banking in terms of coverage, flexibility and accessibility. Mobile banking enables banks to provide outstanding customer experienced even if the nature of the services
is not personalised. Mobile banking platform has replaced primitive forms of savings in the rural communities of most developing countries as people now have trust in mobile technologies as it delivers their money safely (Riivari, 2005).

Mobile banking will also allow banks to reach their clients as well as increase the clientele base. According to Reddy, (2010) this was done through capturing those customers who are outside the range of their traditional services delivery without having to invest in infrastructure such as banking halls and ATMs, in other words, m-banking presents an opportunity for branchless banking which is cost effective to banks as it encourages few investments in terms of infrastructure. Branchless banking that uses the mobile phones is preferable more than the traditional ways of banking that involves traveling branches which are located far away, or saving in cash and physical assets. Mobile banking has truly emerged to be a vital force financial inclusion of rural areas as it is able to make financial services easily accessible through its ability to minimize the time and distance the customers have to spend as well as reducing the bank’s transactions-related costs that they would have incurred as stated by the Consultative Group to assist the Poor (2006).

Riivary (2005) noted that European banks and financial services providers are driving countless benefits from mobile banking facilities. He made suggestions that some of the major drivers to the use of m-banking are the recent innovations in technology, improvements in customer services, reduced costs and an increase in response from service providers such that mobile phones present great opportunities to service providers such that phones present great opportunities to service providers for offering, more personalized services to their customers.

### 2.1.3.5 Measures of financial inclusion

Hannig, (2010) states that financial inclusion can be measured through four lenses namely access usage and impact in order of complexity shown below

1. **Access:** Hannig (2010) argue that having an access of financial services does not automatically mean you are using it. Access involves access to bank account, access to banking services band access to credit. The first step to achieve financial inclusion is credit inclusion for the disadvantaged and vulnerable sections of the society. RBZ, (2016) states that financial services delivery should be within the proximity of intended beneficiaries so as to promote regular use of the same. There should be an accessibility of financial products and services to the majority of the population.
2. **Quality:** Serrao et al. (2013) supports that quality measures the relevance of financial services that encompasses customers experience, attitude and opinion towards financial products available. Products should be tailored to client’s needs and also appropriate segment to develop products for all income levels. If products are tailored for all income levels and distributed to the appropriate segments of the market so that everyone can have an access to the product will improve financial inclusion.

3. **Usage:** Demirgüç, (2008) argues that usage estimates population that is using financial services (deposits, loans, insurances, pensions and investments). This measure throws light on the depth and extent of financial service/products. Usage should go beyond the basic adoption of banking services and focus more on the permanence and depth of financial service and product use. Demirguç, (2008) says that usage is determined by demand as well as supply of services. Usage of financial products can be measured by the regularity, frequency and sustainability over time.

4. **Impact:** Hannig, (2010) suggested that the impact measures changes in the lives of consumers that can be attributed to the usage of a financial device or service. This information can be sourced either from demand side, that is at the individual, household, or firm level or from the supply side, at the level of financial institution or from a combination of both.

**2.1.3.6 Mobile banking and financial inclusion**

Mobile banking contributes to the financial inclusion process by providing a range of market instruments and enabling access to financial services. The mobile banking concept allows users to perform banking transactions such as bill payments, checks of account balance, and funds transfers via mobile phones. Guarav (2007) postulated that mobile banking services are innovative way of encouraging a culture of saving without requiring minimum account balances and other traditional banking fees.

Mobile banking is being recognised for helping mobile operators and the financial industry deliver affordable financial services that provide safety, security and convenience to millions of unbanked customers. Transactions are carried out at lower costs and the systems have offered solutions for higher accessibility levels. The concept provides a platform that offers more opportunity and stability to lower and middle-class citizens by helping them reach their developmental goals in an equitable manner. The unbaked are now using this platform for transactional purposes such as remittances for both international and domestic, payroll deposit, utility bills payments, loan receipt and repayments. It has facilitated the flow of
money from one person to another via communication infrastructure that already connects so many customers locally, regionally and internationally. Jack, (2010) noted that mobile banking for long is enabling remittances to diversify risk and improve consumption smoothing.

Mobile banking in developing world is emerging not as an addition to regular banking but it has become an alternative to limited or non-existent brick and mortar banks that freely don’t want poor people as customers anyway. The poor tend to be terrified of banks since they are often humiliated or ignored when they try to enter in banking halls. This means that they are able to perform their savings or any payment of bills through m-banking.

2.1.3.7 Benefits of financial inclusion to rural community
1. Promoting economic diversification and triggering productive transformation for rural employment.
2. Promoting access to services, protection and employment-intensive investment
3. Developing the rural economy through easy access to finance
4. Promotes investment in rural infrastructure for economic development.
5. Social and environmental protection and inclusive growth

2.1.3.8 Financial inclusion and rural development
The majority of the population in Zimbabwe lives in rural area and they depend on farming as stated by finscope. However despite achieving little progress in agriculture and rural development, poverty is still a major problem in Zimbabwe. Various explanations have been provided for the poor performance of rural sector, particularly the agriculture sector. The key among these is lack of limited access to financial services, including financial exclusion challenges. (Barbara Victoria, 2012)

(Barbara Victoria, 2012) Noted that although it would be simplistic to suggest that improving access to finance alone will address all the challenges in agriculture and rural development, improving access to rural financial services would contribute significantly towards removing many of the constraints limiting rural development.

2.1.3.8 The G20 Principles on Innovative Financial Inclusion
The purpose of G-20 principles was to formulate a framework on financial inclusion. It states that there should be innovative financial policies that supports or remove the impediments for innovative products, innovative channels, (use of third parties for delivery of financial services), innovative identifiers (bio-metric identifiers and use of third parties for AML/CFT.
identification purposes) and recognize the need for regulators and industry to collaborate with each other on a continuing basis. In support of the above they came up with the following principles

1. **Leadership**: cultivate a broad-based government commitment to financial inclusion to help alleviate poverty

2. **Diversity**: implement policy approaches that promote competition and provide market-based incentives for delivery of suitable financial access and usage of a broad range of affordable services (savings, credit, payments and transfer, insurance) as well as diversity of services providers.

3. **Innovation**: promote technological and institutional innovation as means to expand financial system access and usage including addressing infrastructure weakness

4. **Protection**: Encourage a comprehensive approach to consumer protection that recognizes the roles of government, providers and customers.

5. **Empowerment**: develop financial literacy and financial capability

6. **Cooperation**: create an institutional environment with clear lines of accountability and coordination within government and also encourage partnerships and direct consultation across government, business and other stakeholder.

7. **Knowledge**: utilize improve data to make evidence-based policy, measure progress and consider an incremental test and learn approach accepted to both regulator and service provider.

8. **Proportionality**: build a policy and regulatory framework that is proportionate with the risks and benefits involved in such innovative products and services and is based on an understanding of the gaps and barriers in existing regulation.

9. **Framework**: Consider the following in the regulatory framework, reflecting international standards, national circumstances and support for a competitive landscape: an appropriate, flexible, risk-based AML/CFT regime; conditions for the use of agents as a customer interface; a clear regulatory regime for electronically stored value; and market-based incentives to achieve the long-term goal of broad interoperability and interconnection

2.2 **Theoretical review**

Sekaran, (2013) define theoretical framework as a logically developed described and explained network of association among variables of interest of the research.
2.2.3 The Innovation-Decision Process
In order for innovations to be adopted, there must be a decision process that takes place (Rogers, 2003). This process helps an individual or decision-making entity decide if an innovation should be accepted or rejected. The person or entity must determine if the innovation will help them in some way. Rogers, (2003) calls this five-phase process the Innovation-Decision Process. The elements of this decision process are explained in Table 2.1
Table 2.1: Decision Process

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>knowledge</td>
<td>Occurs when an individual (or other decision-making unit) is exposed to an innovation’s existence and gains an understanding of how it functions.</td>
</tr>
<tr>
<td>Persuasion</td>
<td>Occurs when an individual (or other decision-making unit) forms a favorable or an unfavorable attitude towards the innovation.</td>
</tr>
<tr>
<td>Decision</td>
<td>Takes place when an individual (or other decision-making unit) engages in activities that lead to a choice to adopt or reject the innovation.</td>
</tr>
<tr>
<td>implementation</td>
<td>Occurs when an individual (or other decision-making unit) puts a new idea into use.</td>
</tr>
<tr>
<td>confirmation</td>
<td>Takes place when an individual seeks reinforcement of an innovation-decision already made, but he or she may reverse this previous decision if exposed to conflicting messages about the innovation.</td>
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</table>


The Innovation-Decision Process is an important component of the Innovation Diffusion Theory because it encapsulates the process through which innovations are adopted. For example, as a new technology is released to the marketplace, consumers must go through this process to determine if the new innovation will address their specific need and if so, to what extent.

In addition, Rogers, (2003) suggested five attributes in the Theory of Innovation Diffusion which determines the adoption of new technologies. The first attribute, Relative advantage, indicates the extent of technological innovation over previous innovations. These benefits can
be seen from the standpoint of technical, economic, prestige, comfort and satisfaction. If people feel that a technological innovations provides high relative advantage, then they will adopt the technology. The second attribute, Compatibility, is the suitability of a technological innovation with the adopter value, adopter experience, and adopter needs. The third attribute, Complexity (Rogers, 2003), refers to the level of difficulty of understanding and use of a technological innovation. The more complex and sophisticated the technology innovation, the more difficult it is to be adopted. The fourth attribute, Trainability (Rogers, 2003) is the extent to which a technological innovation can be tried and tested. The last attribute is observability. This attribute is related to the extent to which the results of adoption of technological innovations can be observed and communicated. If an innovation can be tried before it is adopted, it will increase the willingness of individuals to adopt new technologies (Wahid & Iswari, 2007).

Technology adoption intention is also determined by the characteristics of adopters (Bellaaj, et al., 2008; Mizar, et al., 2008). Roger, (2003) stated that based on individual characteristics, such as socio-economic conditions, behaviour in adopting an innovation can be divided into five categories: innovators, early adopters, early majority, late majority, and laggards. Roger, (2003) described the behaviour toward the adoption of new innovations forms the normal distribution curve.

Empirical studies stated that innovators are usually younger individuals (Elias, et al., 2012; Suharti, et al., 2013). The old aged individuals tend to belong to the group of laggards, they are very slow to adopt new technologies because they implement step by step adoption process starting from the observation to the implementation stage. The adoption will happen if they are very convinced with the costs and benefits from the adoption of new technologies, (Hedrayx, 2008).

2.2.5 Mobile banking models
Muraleedharan, (2014) states that mobile banking can be broadly classified into two models namely bank led model and mobile services provider led model. The mobile banking models are discussed below

2.2.5.1 Bank led model
On bank led model, only customers of a banks can benefit the mobile banking services from the banking, hence enhancing financial inclusion. With these facilities, the customers can do
variety banking transactions. Most banks in Zimbabwe have partnered with mobile phone companies to offer banking with a wider range of services. Customers may have access to enquire account balance, view account statement, purchase airtime, make inter account transfers and remittances and pay bills. ZB bank and FBC are some of the banks that are offering e-wallet services through all the cell phones companies. (Mago, 2014). The bank and GSM network provider are linked through mobile banking platform and the customer must have account with bank. Meaning that those without bank accounts are automatically excluded which means most bank les mobile banking products have limitation serve for financial products or services. (Mago, 2014).

2.2.5.2 Non-bank led model
(Mago, 2014) States that non-bank led mobile banking products is where a telecommunication company offers mobile banking services that are not directly links to a bank. The telecommunication company contributes to the branding, product designs and/or distribution manner of a bank based product and the banks does not come into a picture and the telecommunication company performs all functions (Muraleedharan, 2014). In Zimbabwe this has been pioneered by Econet wireless through the Ecocash product followed by one wallet from Netone. It is modelled along the M-PESA mobile banking facility of Kenya (Wambari 2009). Mbiti, (2012) postulated that the model is transformational in nature since it could attract the vulnerable groups of people who does not have a bank account to banking transaction through the mobile service provider. In this research the researcher mainly focus on non-bank led model.

2.2.6 The relation between bank led model banking and financial inclusion
Bank led model is a model where only customers of a bank can benefit the mobile banking services from services from the bank. Customers can be able to do their transactions via banks. So under this model, customers can have the opportunity to do savings, making payments for instance payment of bills, having an access of affordable credit, insurance as well as financial advice from the banks since in this case the bank is the mobile banking service provider hence financial inclusion. Customers who access their bank accounts through mobile banking can also instruct their banks to remit money to pay for their bills. Bahawan and Marg (2013) state that availability of this service also drive customers to register for mobile banking most of the bills are being paid electronically vial mobile banking platforms.
2.2.7 The relationship between non-banking led mobile banking model and financial inclusion.
In a non-bank led, the telecommunication company contributes to the branding, products designs and or distribution manner of a bank based product and bank does not come into picture but the telecommunication company performs all functions (Devaden, 2013). The users can access their services using their mobile phones under non-bank led model (Abunyang, 2007) This shows that there is a relationship between mobile banking and financial inclusion sine the telecommunication company enables customers to perform their savings, payments, having access to affordable credit, financial advice and will be having their accounts. (Mago, 2014) States that Ecocash, one Wallet and Telecash allow the users to do savings and payments. Additionally they will be able perform payments of bills such as insurance and hospital bills hence financial inclusion. The available of these mobile banking services driver a customers to join hence financial inclusion.

2.2.8 Financial inclusion drivers
As banking services are in the nature of public goods, financial inclusion should therefore be viewed as availability of banking and payment services to the entire population. Gardeva, (2011) highlighted the key factors that drive financial inclusion as illustrated in Figure 1. The centre for strategy and evaluation services alluded that the objective of financial inclusion is to extent the scope of activities of the organized financial system to include within its ambit people with low incomes. This is only possible if an organisation is pursuing an appropriate business model. (Devlin, 2009) States that the services must meet requirements of individuals’ ranging from consumption of basic education, health and other services. He goes on to say in order to have financial inclusion, almost all requirements should be met such as savings, bank account, insurance, payments, financial advice and affordable credit. The drivers of financial inclusion are depicted in the table below
2.2.9 Challenges of using mobile banking in serving rural community

While mobile banking has great potential to be the main tool in expanding financial services to the poorest segments of the population in the areas where wired telecommunications and ICT services do not exist, there are still limits to its capabilities. Mas, (2010) point out that those issues concerning inter-operability are a common concern amongst mobile banking users. There is lack of standards and limited collaboration between players which is currently a key barrier to inter-operability between approaches. Habitually inter-operability tends to be not possible even within the dissimilar systems of large banks and MNOs. Though slight in comparison with physical infrastructure, wired networks is still necessary for mobile applications and services to be available in rural areas. Infrastructure still remains limited, with immense need to be developed further and also low incomes, illiteracy and large poor network coverage are other key obstacles to the efficient use of mobile banking facilities by rural communities.

The above problems are worsened by high taxes such as 30% of overall charges in some countries such as Tanzania and Uganda (AfDB, 2010). Other challenges such as those
pertaining to regulatory issues are faced in almost countries as their governments cite that mobile banking technology is bypassing regulatory guidelines, but yet at the same time current regulations do not cater for such technology. Consumers are intimidated by technology complexity especially where they have a direct interface for example an ATM or mobile telephone (Mallat, 2006). Using mobile phones for banking or payments is still tedious for users as compared to swiping a card or signing a form.

2.3 Empirical evidence
Interest grew among scholars, authors and researchers around the world to analyse the contribution of financial inclusion through mobile banking to rural youth development on round societies.

2.3.1 The impact of mobile banking on financial inclusion in developing countries

Kenya
Etim (2014) studied about the impact of mobile banking and mobile money on financial inclusion. A sample of 286 respondents in Kenya was used. The researcher found out that mobile phones were widely adopted and used hence increasing the number of MPesa users hence having positive relationship to financial inclusion. In addition the researcher claims that M-Pesa mobile banking is effective since it has brought financial inclusion to the unbanked population in Kenya and M Pesa customers use the mobile phones to move money quickly and in a secure manner across long distances to other mobile users. However she initiate that mobile banking are lowly accepted because of the charges that banks require when using mobile banking services. The researcher recommended that the Central Bank should provide policies that enable banks to conduct mobile banking at a low cost.

Zimbabwe
Ndlovu, (2014) conducted a study on effectiveness of mobile banking on financial inclusion in Zimbabwe. They took a sample of 37 respondents from Gwanda District. The sample comprised of respondents drawn from various banks, agents of mobile operators, rural residents including farmers from irrigation schemes in Gwanda District. The findings of the study revealed that mobile banking is reducing rural financial exclusion faster than traditional rural banking, microfinance and financial development aid. They further said that mobile banking through the Ecocash product of Econet enabled small scale rural business people to undertake many low value money transfers as well as payments for their business activities, therefore they concluded that mobile banking serves as a strategic tool to promote financial inclusion. They also found out that mobile banking offers an opportunity to serve the unbanked since Ecocash allows money transfer without having to use bank accounts, it is
cheaper and it also enables everywhere banking at any time. However, they also found out that there is lack of scalable identity solutions that can allow various services to be produced securely. They also found out that customers need financial literacy on how the services work and how fast and convenient they are in transactional activities.

Mago, (2014) studied about the impact of mobile banking on financial inclusion in Zimbabwe. They used a case study of Masvingo Province. The sample size for the study was 270 respondents from 4 districts divided into 50 respondents from informal sector and 20 tertiary students from each district namely Chivi, Bikita, Gutu and Masvingo. They found out that mobile banking services are easily accessible, cheaper, more convenient and faster means of sending and receiving of money. However, mobile banking services have costs such as high transaction costs charged on sender and receiver, no access to loans and long waiting periods when an agent has no cash. Findings of the study revealed that out that low income people are willing to adopt mobile banking and reasons are that it is easily accessible, convenient, cheaper and easy to use. So mobile banking is ideal to promote financial inclusion. They also recommended that the mobile phone operators must come up with ways of empowering all cell phone users by ensuring that mobile banking functions are made easier but secure to operate so that more people are motivated to use the product and Central bank to supervise non-bank led mobile banking models and manage their cash holding limits and cost structures.

**India**

Chopra, (2011) carried out a study in India on effect of mobile banking on financial inclusion through electronic or mobile banking. The researchers use Reserve Bank of India as a sample to represent 20 commercial banks in India. They revealed that mobile banking has a correlation with financial inclusion. However, they noted that some of the customers are unable to handle large volumes of low value transactions at low cost which is one of the significant barriers to financially exclusion. They found out that mobile banking is cost effective and airtime top up in very small denominations have proven the possibility of offering a similar proposition for financial products. However, they also noted that security is difficult to accomplish together and comprise is made for example M-Pesa customers face the issue of losing money by wrongly transacting to an incorrect account. The research recommended that mobile banking operators have to design well designed pricing considered to one of the top reasons for M-Pesa’s success.
Dhillon, (2014) carried out a study about the effectiveness of mobile banking on financial inclusion in Rural India. A total of 580 questionnaires were distributed and 522 questionnaires returned back. The findings of the research indicated that mobile banking services are effective since they are now accessible and cost effective. However, mobile banking is costly since security is poor and mobile banking is not available on all devices. Some banks do not offer mobile banking at all and others require users to use a custom application of mobile banking which is applicable to smart phones alone like RIM blackberry and Apple iPhone. Third party mobile banking application or software is not always supported and more advanced features cannot be seen in normal phones. The researcher further said that mobile banking act as a tool for the financial inclusion in rural areas. She recommended that the users must closely review application requests for permission, install mobile security software and regularly have to update the security patches in order to detect the viruses. Furthermore they must setup a personal firewall to protect the mobile device from unauthorized electronic access. The firewall can be set on various levels by permitting varying degrees of limited access. She further said that the challenges associated with security in mobile banking could be overcome and the users can enjoy the benefits of mobile banking services.

**Bangladesh**

Siddik et.al (2014) carried out a study in Bangladesh on the impact of mobile banking on financial inclusion. The target population of the study was 16.7 million people. A total of 650 questionnaires were distributed and 555 returned back. The study was conducted in Rangpur district of Bangladesh. They found out that commercial banks need to consider the factors that affect behavioural intention of the individual towards adoption or continue to use mobile banking. Therefore, making an effective strategy to attract potential customers and retain customers by enhancing customer satisfaction and improving operational efficiency which in turn, will have a progressive impact on financial inclusion of the country. The researcher also found that mobile banking allow the users to check their account balances, transfer of funds and access of other banking products and services from anywhere at any time. However, the researchers found that transaction costs are high for mobile banking in Bangladesh that cell phone is considered costly to the people, thereby hindering them to adopt (or continue to use) mobile banking. The researchers also found that policy makers should reduce the transaction costs charged on mobile banking.
**Indonesia**

Munir *et al* (2013) conducted a study on customer acceptance of mobile services and influencing factors using the Technology Acceptance Model in Makassar. The researcher conducted a descriptive research design and focused on a sample of 180 customers selected by convenience sampling. Results from the study concluded that customer preference or intention to use mobile banking services were influenced by the use of Perceived Usefulness and Perceived Ease variables of TAM. Usefulness variables were found to be a more dominant influence than the Ease of Use variables in influencing intentions to use. To increase the adoption the study recommended that banks should be in a position of providing simple and easy user-interfaces that are fair enough to stimulate customers’ intentions of using mobile banking, a factor that leads to an up sage of actual usage behaviour. The study goes on to encourage customer awareness through consistent communication about mobile banking, free training should help in emphasising and communicating the benefits of mobile banking to customers while providing manuals accessed online and offline Munir *et al* (2013).

**2.3.2 Adoption of mobile banking in developed countries**

**Europe**

Mallat, (2013) undertook a study to evaluate the uptake of mobile commerce in Europe, with specific reference to banks, MNOs, and other financial institutions such as internet companies, software providers and manufacturers of mobile devices. The authors concluded that the industry of mobile financial services is still in its infancy but with the advent of newer technology in this field, acceptance and usage of these services by consumers are likely to increase in the future.

Australia has a large geographic size and contains a large rural population whose inhabitants do not have the privilege of having high speed internet connectivity and bank branch networks compared to urban areas (Keffala, M.R. (2010)). Keffala conducted a study in 2010, exploring the adoption of mobile banking in the rural peripheries of Australia. In order to conduct the study, two Australian financial institutions that offer m-banking services were employed as case studies. Through semi-structured interviews with the relevant managers from each institution, the overall findings indicate that the conditions of the rural areas in Australia; in which the population is dominated by senior citizens who do not conduct financial transactions frequently and the mobile platforms are not well developed to support m-banking services, and as a result, the service is still at infancy.
Australia
(Arashiro, 2010) Conducted a research on diagnosing financial exclusion in Australia. Firstly he stated that it is important to highlight two limitation that are financial exclusion is not static but can occur at particular periods of the life and in different areas of finance, statistical data will always fall short of capturing the complete picture. The second limitation refers to the lack of disaggregated and updated statistics that would allow a detailed analysis and monitoring of financial exclusion across time.

According to (Arashiro, 2010) financial exclusion needs to be grounded in social and economic contexts in order to gain policy relevance. Studies on wellbeing and happiness have found that these subjective measures are influenced with the context in which live and socialise. Studies shows revealed that 97% of the respondents had an ordinary everyday banking account. However to measure poverty and social exclusion in Australia, he suggested that the components should be disaggregated as the Bristol Social Exclusion Matrix. The framework can be complimented with Bristol Social Exclusion Matrix’s indicator of vulnerability of stigma as impacting on health and wellbeing, which is an important aspect low-income clients identify.

In addition the unequal distribution of wealth deserves attention. So as to encourage use of financial services and adequate financial protection is also essential to reduce vulnerability in insurance.

Asset building society is another strategy to diagnose financial exclusion. These structural transformations resulted in the rise of individual financial vulnerability, without the traditional social safety nets that in the past were assumed at a state responsibility under the terms of social contact.

2.4 Gap analysis
Despite the growing recognition of the incidence of the financial exclusion of the sizeable population in developed and developing countries, the subject matter of mobile banking in relation to the to rural financial inclusion has not attracted attention of many researchers to the extent it deserves, particularly among rural dwellers. The reviews broadly focus on particular group of community like artisans and people below the poverty datum line in rural area. So this study seeks to fill in the gap of the existing literature and thereby to create a new dimension of financial inclusion to rural community.
2.5 Chapter summary
This chapter looked at literature review, introduction, theoretical framework, empirical evidence and gap analysis. The literature review has been relevant to the objectives of the research project.
CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction
This chapter presented the research methodology used in collecting necessary data from the field. It describe the research design, population and sample design. In addition, the chapter focuses on data collection instruments, data collection procedures, methods of data and data analysis. It also explains the research ethical considerations. The procedures and limitations of the methodology were also covered in this chapter. The chapter focused on the selected population from which a sample was chosen.

3.1 Research design
The research design for this study gives the researcher a framework for the research plan. (Shajahann, 2005) Suggested that research design is the specification of the methods and procedures for obtaining information needed to solve problems. This is almost similar to Shajahan, Kombo & Tromp, (2006) who stated that research design can be thought of as the structure of research. The research study employed the use of descriptive survey research design since it includes exploring the difficulties and the ways to tackle these difficulties.

3.1.1. Descriptive survey design
The research descriptive design provides numerical descriptions and in-depth explanation of events as they occur, enable in determining options, attitudes and habits. This survey has high turnaround in data collection and can be used to identify characteristics of population from a sample so as to provide quantitative and numeric descriptions of attributes of the population. Sapsford, (2007), argues that survey research design is the collection of quantifiable data from a sample frame for purpose of description on identity verifications that may point to casual relationships.

3.1.2 Justification of descriptive survey research design
Descriptive survey research design helps to portray an accurate profile of persons, evens and situation. It allows for in depth analysis of variables of the population to be studied and as well as collection of large amounts of data in highly economical way. Descriptive research design is chosen since it enables the researcher to generalize the findings to a large population. Cooper, (2003) states that descriptive research approach is deemed appropriate due to the fact that it allows analysis and relation of variables. It provides enough provisions for protection against bias thus maximizing reliability (Kothari, 2008). This research
approach enables the researcher to gather quantitative and qualitative data. It relies on both primary and secondary data.

3.2 Population of the study
According to (Taylor, 2002) population is any group of people/individuals that have one or more characteristics in common that are of interest to the researcher. In other words a population is the entire collection of study subjects from which a selected sample will be drawn so as to effectively study the group. The targeted population will comprise of everyone with or without a mobile phone and banking facilities with any bank or any financial services provider in Mt Darwin area. Some of the selected banks consists of the population. The researcher included these in the population because she believes that they possess information relevant to the study and the usage of mobile banking.

3.3 Sample design
Sampling is vital to any study. Sampling can be defined as a procedure used to select some elements of a population that are used to deduce characteristics of the whole population which the sample is drawn (Cooper & Schindler, 2003). If the population is very large. It can be satisfactorily covered through sampling.

3.3.1 Sample size
Kumar, (2011) refers to a sample as a selected subgroup of the population which the researcher is interested in. A sample is preferred because it simplifies the study and increase the intensity of the data gathering since it is very difficult to study every member of the population. A sample is also much more cost efficient than a census as the study subjects will be narrowed down, reducing the need for much travelling. In the study a sample of 90 villagers were drawn from the population, a sample of 5 banks and 3 MNOs. The total sample was 105 respondents picked from the population. The researcher considers these samples to be fair representation of the populations from which they were drawn.

3.3.2 Sampling technique
The researcher used a non-probability sampling technique which is also known as the convenience sampling. It can also referred to as deliberate sampling, purposive sampling and with this technique the sampling is selected deliberately by the researcher (Cooper & Schindler, 2003). The researcher selected the respondents that were easily accessible to her. The purpose of this technique is to reduce the costs associated with sampling and it also saves time hence it enhances speediness for the research to quickly be completed. For the Banks judgement sampling was used. The process involves purposely handpicking individuals from the population based on the research’s knowledge and judgement. It is a
non-probability sampling technique based on judgement. When using this method, the researcher was confident that the chosen sample was truly representative of the entire population. It ensures optimization of time and resources since information is sought from these respondents with valuable information and knowledge about the study. This makes the technique cheaper and easier since respondents with relevant information are chosen.

3.4 Sources of data
The researcher used two sources of information. These are primary and secondary source of information. The sources were combined so they complement each other to give a well detailed research.

3.4.1 Secondary sources
Cooper & Schindler, (2003) defined secondary data as the data that already exist somewhere, which was gathered for another purpose. This may be for literature review. The research heavily depended on secondary data from textbooks, journals. Newspaper release, RBZ economic bulletins and monetary policy statements, national financial inclusion strategy and FinScope reports written by various authors so as to gain a comprehensive understanding of the study area. With the help of internet, the research was made easier since most of the information was available there.

Secondary information was used due to its low costs and the information has already been collected. Secondary information has an advantage of less time consuming since the time it takes to obtain data is less than the time it takes obtaining the information first hand. However some of the data might be obsolete.

3.4.2 Primary sources
Saunders, et al., (2009) states that primary data is data collected first time and thus is original in character and serves the purpose at hand. Primary information is information gathered to aggress the current problem that the researcher is facing. The researcher will gather first-hand information concerning the effectiveness of financial inclusion to rural youth development. The primary information is gathered through research instruments such as questionnaires, interviews, interviews and observations.

Primary data is essential to the study as it present more resent and accurate information. This improves the validity and reliability of the data collected. However gathering of this type of data is time consuming, which might slow down the progression of the research.
3.5 Research instruments
These are tools used to gather primary information. A various combination of research tools are used which include questionnaires, interviews, and observations. This ensures that more data is gathered which is more accurate and reliable. The tools can complement each other and cancel out each other’s weaknesses.

3.5.1 Questionnaires
(Abawi, 2013) States that a questionnaire is a data collection instrument consistent of questions and other prompts for the purpose of gathering information from respondents. The questionnaires contained closed-ended questions and also a few open questions as per Wai-Ching, (2001) designing. The structured questions were utilised to save responded time and get definite answers. The unstructured questions were meant to ensure that respondents’ feelings are not disregarded. The questionnaires ensures that the data collected is standardised since the respondents will be responding to the same questions. This makes comparison much simpler to make.

The researcher preferred using this method because it is very cheap and impersonal unlike other methods. The questionnaires were given to respondents to fill at their own convenience and collected later after completion so as to give the respondents more time to consider their answers. However due to their impersonal nature, questionnaires might not obtain appropriate responses to questions that demand further explanation and clarity.

3.5.2 Interviews
Leedy, (2010) defines interview as a method of data collection that involves researchers asking respondents basically questions relating to the topic at hand. (Cooper & Schindler, 2003) simplifies it as a purposeful discussion which takes place between two or more people. The researcher used personal interview to the banks through visiting and directly asking questions relating to the objectives of this research. A few randomly selected individuals from the sample were also interviewed. The interview was semi-structured, where the pre-set questions leave room for further questions in order to get more information. This type of interview allows probing of the respondents since the respondents will be asked to clarify some of their responses and they can also ask for clarification of questions where necessary. The interviews also enabled the researcher to gather information which is too complex to be questionnaires alone. However due to personal nature of the interviews, the personality of the researcher or that of the respondents might have a bearing on the information gathering. More so, the gathering and coding of data from the interviews might be difficult due to different responses that are given by respondents to the same questions.
3.5.3 Observation
Gray, et al. (2013) defines observation as the systematic description of events, behaviour and artefacts in the social settings chosen for study. The researcher also made use of observations to compliment the data gathered through questionnaires and interviews. Observations were used because they are inexpensive since they merely consists of discerning what is already in existence. They also have the advantage that they are free from bias due to their lack of involvement as the observations will be made from distance. However they might not provide the accurate data since they usually not accompanied by an explanation.

3.6 Ethical presentation
According to Bhattacherjee, (2012) it is imperative to think about the research implications where research disciplines involves human beings who have potential to think and experience physical or psychological distress. The researcher enhances research ethics through enabling the questionnaires and interviews to be designed in a way that they were not offended, harm, provoke or stress any of the participants in any way. Respondents were made aware that their participation was voluntary and if they felt like they were not willing to continue with the process, they had to decline at any point in the study (Saunders, et al., 2012). The researcher communicated to the respondents that all results were going to be treated with confidentiality given a scenario of some with privacy to preserve. The researcher assured the respondents that the research was approved by the university.

3.7 Data validity and reliability
Validation is the measure of the extent to which the research instruments are purported to measure the outcome (Leedy, 2010). To ensure validity, the researcher used a range of questions with open ended and closed ended questions. The questions asked in both interviews and questionnaires were also derived from the objectives of the research in order to avoid asking irrelevant questions. A pilot study helped the researcher to collect initial thoughts of the respondents and assess if the questionnaire was relevant in covering important aspects. Resultantly, the pilot provides valuable insights into potential results to be obtained during actual data collection. The feedback from the supervisor and few individuals who participated in the pilot testing helps in the modification of the instruments.

On the other hand, reliability measures the level of the data accuracy. Creswel,( 2014) states that it is consistency with which a measuring instrument yields a certain result when the entity being measured has not changed. To ensure reliability, the researcher made use of properly constructed structured questions and category questions in order to ensure uniform responses. These allows similar conclusions to be drawn by any other researcher.
3.8 Data presentation and analysis
Data presentation and analysis plays a pivotal role in the research process. Data analysis allows the researcher to make inferences from data collected. Thus data collected from both primary and secondary sources. The data was pre-processed by the researcher to eliminate unwanted and unusable data which was contradictory or ambiguous. The data which was considered to be relevant was processed, analysed and presented.

3.8.1 Data presentation
The researcher choose clear, accurate and appropriate ways of presenting data out of several data presentation methods. The researcher used tables to present large qualities. Tables showing measurements units clearly and are easy to refer and the data can be easily interpreted. Pie charts were also used to present data which is compared. They are easy to understand and quick to interpret. Bar graphs were also used to present data. They uses bands of standard width and varying length to present magnitudes and used to present data covering time. They help to facilitate comparisons by virtue of their clear visual impact.

3.8.1 Data analysis
Data collected was analysed using descriptive statistics. The descriptive statistical tools such as frequencies, percentages, mean, variances and standard deviation helped the researcher to describe quantitative data.

3.8 Chapter summary
This chapter provides an overview of the research design, study population and data collection instruments to be used in this research, measures that will be taken to ensure validity and reliability and how the data is going to be presented and analysed. The next chapter of the research will look at the data analysis and presentation of the research.
CHAPTER FOUR
DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.0 Introduction
This chapter provides the data that have been gathered from the field. The data collected using questionnaires, interviews and observation with the combination of secondary data. The data was then presented using bar graphs, pie charts and tables in analysing the data and to reveal the noticeable element of the data. This analysis is crucial to the research since it is the basis from which conclusions and comments pertaining to the research will be drawn.

4.1 Analysis of Response Rates
The researcher distributed 90 questionnaires but got 69 responses. Some of the respondents did not manage to return the completed questionnaires to the researcher, possible because they were not interested or did not have time. On interview, the researcher gathered information through research with commercial banks and the MNOs managers. The researcher managed to conduct 7 interviews out of 15 anticipated interviews, the commercial banks interviews were conducted with 3 branch managers. From Agribank, Zb bank and Steward bank. For MNOs the researcher managed to interview Econet, Telecel and Netone in Rushinga business area and managed to interview them all. The table below illustrates the respondents’ rates.

Table 4.1: Analysis of Response Rates

<table>
<thead>
<tr>
<th>Respondents targeted</th>
<th>Number of targeted respondents</th>
<th>Number of completed Questionnaires</th>
<th>Response rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaires</td>
<td>90</td>
<td>69</td>
<td>76.7%</td>
</tr>
<tr>
<td>Interviews</td>
<td>15</td>
<td>7</td>
<td>46.7%</td>
</tr>
<tr>
<td>Total</td>
<td>105</td>
<td>76</td>
<td>72.4%</td>
</tr>
</tbody>
</table>

Source: Primary Data

The researcher prepared 90 questionnaires and were distributed, 35 where distributed to Rushinga business centre and 82.9% were completed and returned. Another 30 questionnaires were distributed to Dotito rural area and 63% were returned and usable for
analysis. 25 questionnaires were distributed to Nembire area and 84% were returned for analysis. Therefore the overall response rate for the questionnaires was fairly good even though 21 of them did not manage to complete the questionnaires. The researcher considers the response rate of 76.7% which is considered reliable in giving results (Cooper and Schindler, 2003). On interview, the researcher obtained a 46.7% Response rate. Four scheduled interviews failed due to busy schedules of the respondents especially those of commercial banks and as well as authorization issues from their respective head offices. Overall the response rate where sufficient to give research representative and valid.

4.2 Demographic profile of the Respondents
This section focuses on the characteristics in terms of gender, age, academic level and employment status.

4.2.1 Respondents Gender
Combining respondents of questionnaires and interviews, a total of 69 responses were useful for analysis and all 69 were clear about their gender information. From the respondents who participated in the study, the difference is slightly lower between females and males. 46.4% of the respondents in this research were males, 53.6% of the respondents were females. This clearly shows that the both males and females have participated. Figure 4.1 illustrates gender of the respondents

Respondents’ Gender

![Respondents’ Gender](source: Survey Data n=69)
4.2.2 Percentage distribution of respondents by age (n=69)
The researcher managed to obtain a total of 69 respondents and the age composition of the sample is shown in the table below marked as Figure 4.2 Respondents between the ages of 25-34 occupied the majority of the sample under study since they are the most active and make use of mobile banking, with a response rate of 36.2% followed by respondents between the ages of 35-44, with a response rate of 26.1% while those from 18-24 constituted 23.2% and 45 and above had 14.5%.

Fig 4.2 Age of respondents

Source: Primary data  n=69

4.2.3 Distribution of respondents by level of education
This section is going to concentrate on the academic level of the respondent so as to precisely analyse the information given to the researcher.
Many respondents indicated that they had primary level qualifications which comprised of 20 (29%). Followed by tertiary level which have 18 (26.1) of response rate. 26 respondents fell in the secondary level with 23.2%. Those without education accounted for 21.7%. Karjaluoto and Pento (2003), carried out a research on factors affecting mobile banking and find out that educated community adopts to new mobile banking technologies better than the uneducated.

**4.2.3 Employment status**

This section focuses on the employment status of the respondents. It aims to outline how many respondents from each category use the mobile banking services. The pie chart below illustrate various respondents’ statuses of the respondents.

---

**Fig 4.3: distribution of respondents by level of education**

*Source: Primary Data*
The majority of the respondents were those who are self-employed with 33% response rate. They include those who are in income generating business such as farming, those in small medium enterprises (SMEs) sector such as vendors and tuck shops owners. Followed by students accounted for 29% of the respondents. Most of the students who take part were in tertiary learning institutions and a few from secondary schools. The third group was respondents who were employed to various organisations who accounted for 16%. Lastly was the unemployed and not engaged in any income generating activities group of respondents with 22% respond rate.

4.3 Analysis on the current levels of Mobile Banking Adoption
In order to determine the current level of mobile banking in rural communities, the researcher asked so many questions so as to see the effectiveness of mobile banking to rural financial inclusion.

4.3.1 Respondents with access to bank accounts
In Figure 4.6 indicates the respondents who have bank accounts.it is indicated that most of the respondents who are formally employed and students own bank accounts thus 43.5%. The majority which accounted to 56.5% have no bank accounts.
4.3.2 Ownership of bank account versus Gender
The analysis of data was conducted in a cross-tabulation which reviewed that more males have access to bank accounts than females, the reason being that it’s difficult for females who are not employed to have bank accounts or savings. Most men who have bank accounts use them to receive their salaries, deposit their funds and savings since most men are bread winners.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Bank account holder</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Male</td>
<td>20</td>
<td>23</td>
</tr>
<tr>
<td>Female</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>37</td>
</tr>
</tbody>
</table>

4.3.3 Analysis on the bank account versus Age
The range from 26-34 years category emerged with the response rate of 36.2% which is the greatest proportion of banked people, followed by those within the range of 35-44 years with 26.2%, there is a mere difference of 3% for the 18-20 age range (23.20%) and lastly 14.4% for those in 45 and above category. Due to these results, it clearly indicates that the rural
communities in Zimbabwe are unbanked and financially excluded, with all the age groups. The table below illustrate the number of people who own bank accounts in different age groups.

**Table 4.3 analysis of bank account holders versus Age**

<table>
<thead>
<tr>
<th>Age</th>
<th>Bank account holder</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>18-24</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>25-34</td>
<td>18</td>
<td>7</td>
</tr>
<tr>
<td>35-44</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>45 and above</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>30</td>
</tr>
</tbody>
</table>

*Source: primary data*

From the above 43.5% of the respondents had bank accounts and were asked if their banks offer mobile banking services and they all confirm that their banks offer the mobile banking facilities. Few respondents from the age of the age of 18-24 have bank accounts. They indicated that though they need bank accounts, they still cannot access the services since the same stringent requires are needed to do so.

**4.3.4 Reasons for not having bank accounts**

In this sector the researcher will focus on the reasons for not holding a bank account. Research findings noted various reasons for not holding bank accounts.
Respondents had different views on mobile banking which limit them from having bank accounts. Lack of trust in banks due to previous economic crises is the major reasons for not holding bank accounts. During 2007-2008 era most had lost all of their funds and this lead to loss of trust and confidence in banks. 33.9% of the respondents lack trust with banks some state that they feel insecure using banks to save their funds and they opt to use other alternatives like micro finance institutions and village rotational savings groups and as a result there will be left with less money circulating in the formal system and effective rural financial inclusion will be reduced.

23.8% of the respondents indicated that bank accounts are expensive to maintain and to own due to the charges, charged by banks on either withdrawal or deposing the funds. Emit (2014) noted that banking are lowly accepted because of the charges that banks require when using banking services. Additionally account opening fee which is charged on opening a bank account is another constraint for holding or having a bank account. Literally the fee ranges from $5-$15 together with account maintenance fee levied by banks among the reasons. As many people in rural area are considered low income earners therefore the charges will be very high for them. The respondents pointed out that the banks are currently paying out low interest rates on deposits and cash crises which will limit them from withdrawing money due to cash shortages. 15.6 % sited that they do not have bank accounts due to failure by banks to
offer banking services that are suitable for them. 26.7% of the respondents highlighted that they do not own bank accounts due to lack of appropriate documentations required by banks such as pay slips, proof of residents. They said banks require stringent documents. It will sometimes be difficulty to present those documents since some will be newly resettled farmers and most stands will be sold by headman not by the city council, hence proof of residence will not be issued by the headman. The rural dwellers are mainly based in informal sectors such as farming, mining or vending were payslips cannot be produced. Due to these reasons a lot of people will not open bank accounts. As a result formal banking channels are out of reach of the rural population in Zimbabwe. Donner and Tellez (2008) goes on to say that MNOs have the potential of reaching millions of the customers in the rural areas by providing mobile banking.

Dhillon (2014) carried out a similar research and find out that mobile banking is not available on all devices. Some banks do not offer mobile banking at all and others require users to use a custom application of mobile banking which is applicable to smart phones alone like RIM blackberry and Apple iPhone. Third party mobile banking application or software is not always supported and more advanced features cannot be seen in normal phones

4.3.5 Duration of use
The aim of this segment was to establish how long the respondents had been using the banking services. The intention was to determine the level of experience that the respondents possessed when it comes to functionalities of the mobile banking services. The information is presented in the below pie chart Fig 4.6. The majority of the respondents used mobile banking on a monthly bases with 58% followed by 29% of the respondents who used mobile banking on a weekly basis. 13% of the respondents used mobile banking on daily bases. No respondents used mobile banking on either semi-annually or annually basis.
4.3.6 Effectiveness of mobile banking to the rural Community

Respondents were asked to give their views on whether mobile banking was the effective solution to their needs and the results are shown below.

73% of the respondents replied with yes which indicated that they are satisfied and they view mobile banking as a solution to their financial needs and in their response give out the
benefits derived from using mobile banking services. The other group highlighted that they were not satisfied by mobile banking the reason being that mobile banking will not provide loans facilities such as mortgages. (Ndlovu, 2014) Carried a research of effectiveness of mobile banking and he noted that mobile banking is reducing rural financial exclusion faster than traditional rural banking, micro finance and financial development aid. He goes on to say mobile banking serves as a tool to promote financial inclusion.

4.3.7 Most frequently used mobile banking services
This section focuses on the financial services which are used most frequently via mobile banking services. Respondents were asked to indicate the services they use most frequently with more than one response allowed. The question helped in satisfying requirements of the third objective of the study of determining the relationship between mobile banking and rural financial inclusion. The question was structured in a way that could identify current services that are being accessed by the rural community thus making a judgement as the kind of relationship between the two variables. Below is the table 4.3 which shows services used by the respondents.

<table>
<thead>
<tr>
<th>Financial services</th>
<th>Response</th>
<th>Response rate</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Withdrawals</td>
<td>20</td>
<td>29%</td>
<td>1</td>
</tr>
<tr>
<td>Deposits</td>
<td>15</td>
<td>21.7%</td>
<td>2</td>
</tr>
<tr>
<td>Payments transfers</td>
<td>14</td>
<td>20.3%</td>
<td>3</td>
</tr>
<tr>
<td>Savings</td>
<td>10</td>
<td>14.5%</td>
<td>4</td>
</tr>
<tr>
<td>Loans</td>
<td>8</td>
<td>11.6%</td>
<td>5</td>
</tr>
<tr>
<td>Utility payments</td>
<td>2</td>
<td>2.9%</td>
<td>7</td>
</tr>
</tbody>
</table>

Multiple responses of services utilised by the respondents. They were positioned from 1 to five so as to see the most serves used. Most of the respondents indicated that they were using withdrawals (cash-in) as part of financial services. Few of rural population are receive salaries and pensions in banks and withdraw their funds from the banks. They accounted for about 29% of the respondents followed by deposits (cash out) with 21.7% the respondents will
be depositing cash for either savings or for other purposes. Other financial services are still underutilised.

The results shows that the respondents are aware for the financial services offered by mobile banking platform and they are utilising them. Withdrawal was ranked the first. Followed by deposits and other services followed. The savings and loans application is relatively a new product range offered in mobile banking circles being recently introduced by Ecocash as EcoSave which enables the subscribers to save and apply for loans via mobile banking. This has a positive relation between mobile banking and financial inclusion in enabling access to financial services. Additionally in enables banks and MNOs to be more innovative in terms eliminating traditional banking products via mobile solutions.

Nyandika (2003) in Kenya found out that the use of mobile banking had a tremendous effect on access to financial services. Awareness on all products, consumers could access via mobile devices resulted in an increased frequency to access to accounts, cost effectively and increasing the number of informal accounts managed via mobile devices (Nyandika, 2013).

4.3.8 Distribution of respondents based on their reasons for choosing mobile banking for rural financial inclusion

In order to examine the level of acceptance of mobile banking services by rural population the researcher had to ask multiple-response questions. These questions where ranked according to the response rates collected from the respondents that is in form 1-5. The table below shows that that numerous respondent’s convenience of mobile financial services with 51% response rate positioned first. The bank based model indicated that mobile banking if far more convenient and efficient introduction of branchless banking has made mobile banking more convenient and effective (Gautam, et al., 2006)

Followed by respondents who specified that their reason was that mobile banking is fast and timely with 15.4%. These are the factors which influence the adoption of mobile banking. Mukherjee & Nath, (2003) indicated that speed of response affect consumer trust in online banking productivity.

Some were opting for mobile banking because of 24 hour access having the response of 11.5% positioned third. Gupta & Das, (2011) stated that users do not need queue for their banking activities, but they can access the services at the comfort of their homes or anywhere they will be during banks working hours or after. With the same view (Wambari, 2009) they
noted that mobile phone users can conveniently carry out banking transactions 24 hour daily since the users can access a mobile phone all the time.

Safety and security reasons was positioned forth with response rate of 10% the adoption of mobile banking is more influenced by safety and security of individual s funds. Yang. (2009) indicated that mobile banking charges and security issues are the primary factors, affecting mobile banking adoption in Taiwan.

Cash crisis was placed at the fifth position with response rate of 7%. Given the current situation in the economy some of the respondents indicated that adopting mobile banking was effective since every transaction will be made through banks. However a study by Munir et al (2013) in Indonesia pointed out perceived usefulness variables of the TAM Model at the most dominant over the Ease of Use variables. In this case, mobile banking being used as an alternative for cash to avert the current liquidity crunch would had been positioned first rather than other factors of financial services (an Ease of Use variables). Munir et al (2013) goes on to say that it is subjective area and choice is based on the user.

System quality with 6% placed at the last. System quality is an important factor though most respondents view it as minor factor. System quality enables all the mobile banking users to perform all of their transactions and payments. Rodgers (2003) on his theory of Innovation Diffusion theory stated that one attribute that determines adoption of new innovations is complexity which he referred to the level of difficulty of understanding and use of a technological innovation. The more the complexity the technology innovation the more difficulty it is to be adopted.

The results indicated that rural population are accepting mobile banking but at the slightly higher rate. However those who rare making use of mobile banking service have the main reasons for enjoyment of a 24 hour access to mobile financial services at the comfort of their houses. Safety and security is crucial in that it safe guides funds and other financial security from unexpected leakages.

Apart from these factors, respondents aired out issues to do with confusing and technical jargons (knowing that the majority of the respondents only went through secondary school level) used in the traditional model of banking which is now being substituted by mobile banking terms and branchless banking that are expressed in simple language easy to
understand. MNOs have been given credit for such ground breaking initiatives that stimulate uptake of financial services.

Nag and Chitokwindi (2014) supported the fact that mobile banking services are easily accessible, cheaper, more convenient and faster means of sending and receiving of money. However, mobile banking services have costs such as high transaction costs charged on sender and receiver, no access to loans and long waiting periods when an agent has no cash. Similarly Chopra and Wright (2011) carried out a similar research and found out that some of the customers are unable to handle large volumes of low value transactions at low cost which is one of the significant barriers to financially exclusion. They found out that mobile banking is cost effective and airtime top up in very small denominations have proven the possibility of offering a similar proposition for financial products. However, they also noted that security is difficult to accomplish together and comprise is made for example M-Pesa customers face the issue of losing money by wrongly transacting to an incorrect account. The research recommended that mobile banking operators have to design well designed pricing considered to one of the top reasons for M-Pesa’s success.

### Table 4.5: reasons for choosing mobile banking

<table>
<thead>
<tr>
<th>Reason</th>
<th>Response</th>
<th>Response rate</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convenience</td>
<td>16</td>
<td>51%</td>
<td>1</td>
</tr>
<tr>
<td>Fast and timeous banking</td>
<td>14</td>
<td>14.5%</td>
<td>2</td>
</tr>
<tr>
<td>24 hour access to service</td>
<td>12</td>
<td>11.5%</td>
<td>3</td>
</tr>
<tr>
<td>Safety and security</td>
<td>10</td>
<td>10%</td>
<td>4</td>
</tr>
<tr>
<td>Cash crisis</td>
<td>9</td>
<td>7%</td>
<td>5</td>
</tr>
<tr>
<td>System quality</td>
<td>8</td>
<td>6%</td>
<td>6</td>
</tr>
</tbody>
</table>

#### 4.3.9 Mobile banking prescribed to mobile money services

The researcher further asked the respondents the mobile banking service provider they are prescribed to. Most of the users were the unbanked that substituted them from opening a bank accounts by joining mobile banking service providers such as Econet. Responses were grouped for mobile banking users and Ecocash was found to be the dominating services used by respondents with 92.2%, whereas 7.8% were attributed to telecash and textaesh in their insignificant proportions. Only 5 respondents used mobile banking services through their bank accounts which were provided by their banks. Econet had a greater proportion because it is the most mobile services provider in Zimbabwe due to wide range of services it offers.
and aggressiveness in promotion and adverting its services. (Ndlovu, 2014) Stated that mobile banking through the Ecocash products of Econet enables small scale rural business people to undertake many low value money transfers as well as payment for their business activities.

4.4 Enhanced financial inclusion
This section will determine whether mobile banking has enhanced rural financial inclusion. It was focusing on establishing if mobile banking has enabled everyone to access financial services. The respondents were asked to rank their responses. The following data was gathered.

![Fig 4.8: response for enhanced financial inclusion](Source primary data)

Most of the respondents agreed with the notion that mobile banking, enabling rural financial inclusion, with respond rate of 41%. 29% respondents strongly agreed to mobile banking enhancing financial inclusion. However 17.4% of the respondents were neutral about their view, they were indifferent about their opinion. Respondents who ranges to 13% disagreed. This brought us to total supporting respondents of 70% of the entire sample who were supporting the enhancement of financial inclusion. Chotra and Wright (2011)’s research findings states revealed that mobile banking has a correlation with financial inclusion.
4.4.2 Respondents satisfied in using mobile banking
Fig 4.8 will illustrate the extent to which respondents are satisfied in using mobile banking. The main objective is to determine the level of satisfaction to the rural community and find ways to satisfy the need.

![Survey Results](image)

**Fig 4.9 Respondents satisfied with mobile banking.**

*Source: primary data*

Majority of the respondents strongly agree that they were satisfied by mobile banking services. 36.1% strongly agree with the notion and 24.6% agree, they all add up to 60.7%. While 6% strongly disagreed and 14.5% disagreed and combined they were 20.5%. This shows that most of the respondents were satisfied by mobile banking.

The innovation-Decision Process of the diffusion theory suggested that the process through which innovations are adopted after satisfaction by adopters. In this case, a new technology was released in the market place and rural population went through that process to determine if the new innovation will address their specific needs and the extent they are being addressed. Hence after satisfaction with mobile banking, great levels will be adopted.

4.4.3 Recommendations made by respondents to increase the level of financial inclusion.
This question was asked to the respondents to give their opinions on rural financial inclusion. They give several views which are presented below. Additionally the banks and MNOs managers also give their opinions. Due to tight schedule and other various reasons only 20% of the questionnaire respondents manage to give their opinions. There was 100% response
rate from banks managers and MNOs shop flow managers. The responses were classified into demand-side and supply-side.

**Fig 4.9: Suggestions on ways of improving rural financial inclusion**

*Source: primary data*

A total of 24.6% of the respondents suggested that the reserve bank should issue agriculture rural finance to promote financial inclusion. Followed by 21.7% respondents on the supply side who were suggesting that there should increase awareness through financial literacy, adverts and make use of micro-housing finance products that target the low income groups in rural. 17.4% suggested that

Since most of rural population specialise in farming issuing of agriculture finance is very important. Sharma and Prasad (1971) noted that the introduction of latest technology without credit facilities would not have significant impact on income of the farmers. Naryanan (1987) goes on to observe that due to inadequate credit given to them, there was no increment in the income of the beneficiary. Burgess and Pande (2005) states that an increase in number of banks in rural locations reduce poverty by a significant percentage.

The MNOs and mobile banks providers suggested that there should be an increase in financial literacy and advertisement of various financial products to increase awareness to rural dwellers. It is important to advertise mobile financial products through various channels such as media channels, promotions and mobile banking fares. The Zimbabwe National Financial strategy 2016-2020 clearly stated that awareness could be achieved through consumer education and financial literacy programs. (R.K.Uppal, 2010.) Supports the
suggestion made by mobile banking services providers in the demo-fares, consumer knowledge via SMS, posters, information over their counters and posters on different places were regarded as essential in raising awareness. He goes on to say reveal emerging issues regarding to m-banking covering rural and semi-urban areas, widening scope of mobile banking, transparency and security. Extension of network coverage to remote areas that are excluded was one of the suggestion made by respondents. This can be enhanced through provision of e-commerce and linking mobile banking and Ecocash accounts.

On infrastructure sharing and promotion interoperability among mobile banking services was another suggestion made. This will enable linkage between service providers. This is in the case of infrastructure sharing agreement between banks and MNOs as the case for Ecocash that has entered into agreements with banks agreeing to transfer funds to and from wallet accounts to bank accounts. There should be assurance of safety in movements of funds through enabling quality networks or internet infrastructure. Banks should also ensure a smooth flow of funds to recent is the ZIPIT system of mobile banking that enables instant transfers of finds across all banks. Uppal (2010) supports the notion of E-channels enables great networks of banks and its customer’s hence increasing customer loyalty and utmost satisfaction as the services are tailor-made to be more of convenience.

4.5 Chapter Summary
This chapter presented the results of data analysis based on the data collected in the field and discussing on the effectiveness of mobile banking in enabling rural financial inclusion. The findings were based on data collected through distribution of questionnaires and interviews that gave the outlook of the practical situation on the ground. The next chapter is going to present conclusions and recommendations of the study.
CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction
This chapter seek to come up with the conclusions of the research study on the effectiveness of mobile banking in enabling rural financial inclusion in Mt Darwin. It is divided into three parts which is the study findings, conclusions and recommendations on the study. Recommendations and suggestions will be given for further research.

5.1 Summary
The objective of the research study was to determine the levels of acceptance of mobile banking as a financial service by rural dwellers, to evaluate the effectiveness of mobile banking in enabling rural financial inclusion in Mt Darwin. Rural financial exclusion was a major issue of concern over many years. The study was guided by three sub-objectives of determining the effectiveness of mobile banking in facilitating financial inclusion in rural area, to determine relationship between mobile banking and financial inclusion to rural communities, to determine strategies that can be used to improve effectiveness of mobile banking in enhancing rural financial inclusion.

The study showed that rural communities are accepting financial services offered by mobile banking due to the convenience of the services provided. Mobile banking customers will be able to enjoy all the services offered by mobile banking without the need for walking or going to the banks. Factors like 24 hour access, fast and timeous, safety and security are other driving factors into accepting mobile banking as financial services.

There was a clear indication that utilisation level of mobile banking in Mt Darwin is still low though the most used forms being Ecocash and mobile banking. These forms are used at a higher level which enables reduction of financial exclusion among the rural dwellers. Research findings shows that there is positive relationship between mobile banking and financial inclusion to rural population as evidenced by a variety of financial services and platforms that offers enough to transform the state of rural population. The study also identified strategies of improving the effectiveness of mobile banking in enabling rural financial inclusion in Mt Darwin. One of the findings was agriculture rural finance which will promote the rural community hence enabling financial inclusion.
The MNOs and mobile banking providers suggested that there should be an increase in financial literacy and advertisement of various products for awareness. Hence this will increase the usage of financial services offered by mobile banking. The MNOs have made a great stride in provision of low value transactions to promote mobile banking usage since most of the rural population are low income earners.

Another strategy was infrastructure sharing and interoperability among mobile banking services. The main objective of this strategy was to ensure access to accounts from either sides. This is evidenced by Ecocash that has entered into agreement with all the banks to create links between wallets accounts and bank accounts and the ZIPIT system of mobile banking that enables instant transfer of funds across all banks.

5.2 Conclusion
Based on the research findings, the researcher concludes that mobile banking is playing a vital role in enhancing rural financial inclusion. Mobile banking offers convenient and a cash crisis solution not only to rural communities, but to all the Zimbabwean population. It has become a safe and sound alternative method of transacting, saving and any payments for rural dwellers. Therefore the study conclude that if all the necessary infrastructures, education, advertisement and awareness programs can be put in place mobile banking will continue to be an effective tool for reaching the unbanked in rural community.

5.3 Recommendations
Basing on the research study conducted, the researcher have recommendations to the following so as to fulfil the research objective of the study.

5.3.1 Recommendations to Banks and MNOs
Banks and the MNOs should continue to collaborate so as to improve the delivery of financial services and increase the ratio of financial services. Mobile banking access should be widened, enables freedom, frequency use and ease of access. This calls for banks and MNOs to reach all communities for awareness and informing the public about the use of mobile banking so as to have a complete financial inclusion. Extensive marketing campaigns by mobile banking services provider should be in place. Training and educating people on how to use mobile banking should also be considered.

5.3.2 Recommendations to Regulators
The government should provide guarantee to banks through related Ministry and regulators so that rural population can access knowledge, loans and easy registrations requirements. There should be a reduction of taxation on bank transactions and charges particularly for rural
community to promote financial inclusion. Most of Zimbabwean population resides in rural area and they rely on farming which is a pivotal role in socio-economic transformation thereby certain regulations should be passed that leave no chances of them being financially excluded. This is going to be a positive step towards achieving the National Financial Inclusion strategy 2016-2020 as a nation. The government should work on improving adequate financial services for all types of agriculture producers and agri-business complimented by other measures for rural community.

5.3.3 Recommendations to policy makers
Policy makers need impose structures that adopts gender sensitive policies and practices in the area of product architecture, monitoring, marketing and delivery. There should be equity participation and accessing on financial services.

5.4 Suggestions for further research
Further researches should be done on financial inclusion specifically on rural youth and rural women entrepreneurs who are currently suffering huge financial exclusion due to lack of collateral base and gender respectively. They have a big role to play in the economy.

5.6 Chapter summary
This chapter was the final chapter of the study on the effectiveness of mobile banking in enabling rural financial inclusion. It highlighted the summary of the major findings, the conclusions and the final recommendations of the study. Areas for future study were also highlighted.
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Appendix 1
Questionnaire letter

My name is Tendai Munikwa, a fourth year student from Bindura University of Science Education studying Bachelor of Commerce (honours) in Banking and Finance. I am carrying out a research to evaluate the effectiveness of mobile banking in enabling rural financial inclusion in Mt Darwin.

In this regard, I kindly request for your assistance in carrying out this research through completing the following questionnaire. Please be assured that the information you are going to provide shall be treated with strict as confidential and will be used for academic purposes only. It will be much appreciated if the questionnaires could be returned at your earliest convenience.

Your participation and cooperation is much appreciated. Thank you in advance.

Yours sincerely

Tendai Munikwa
QUESTIONNAIRE
SECTION A: DEMOGRAPHICS

Please tick appropriate response in the space provided

Please do not write your name on any part of the Questionnaire

<table>
<thead>
<tr>
<th>SURVEY QUESTIONNAIRE</th>
<th>Answer the following questions by ticking where appropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>SECTION A-DEMOGRAPHIC INFORMATION</td>
<td></td>
</tr>
<tr>
<td>1. Gender</td>
<td>Male ☐ Female ☐</td>
</tr>
<tr>
<td>2. How old are you?</td>
<td>Below 25 ☐ 26 - 35 ☐ 36-45 ☐ 46 and above ☐</td>
</tr>
<tr>
<td>3. Level of education</td>
<td>No education ☐ Primary level ☐ Secondary level ☐ Diploma ☐ Degree ☐</td>
</tr>
<tr>
<td>4. Employment status</td>
<td>Unemployed ☐ Employed ☐ Self employed ☐ Student ☐</td>
</tr>
</tbody>
</table>

Section B: Mobile banking

| 5. Do you have a bank account? | Yes ☐ No ☐ |
| 6. If No what are the reasons | Expensive to maintain ☐ expensive to maintain ☐ no confidence in bank ☐ stringent requirements ☐ no suitable products ☐ |
| 7. Do you have knowledge about mobile banking? | Yes ☐ No ☐ |
8. If yes how often do you use your mobile banking

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Daily</th>
<th>weekly</th>
<th>monthly</th>
<th>Semi-annually</th>
<th>annually</th>
</tr>
</thead>
</table>

9. What are the reasons for choosing mobile banking

<table>
<thead>
<tr>
<th>Reason</th>
<th>Safety and security</th>
<th>24hr access to services</th>
<th>system quality</th>
<th>cash crisis</th>
<th>fast and timeous banking</th>
<th>convenience</th>
</tr>
</thead>
</table>

10. what financial service do you access from mobile banking system

<table>
<thead>
<tr>
<th>Service</th>
<th>Deposits(cash-In)</th>
<th>withdrawals(Cash-out)</th>
<th>transfers</th>
<th>Payments</th>
<th>savings</th>
<th>loans</th>
<th>Utility Bills Payments</th>
</tr>
</thead>
</table>

11. do you view mobile banking as a secure way of banking

<table>
<thead>
<tr>
<th>View</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

12. other than mobile banking which forms of mobile money do you use

<table>
<thead>
<tr>
<th>Method</th>
<th>Ecocash</th>
<th>Telecash</th>
<th>One wallet</th>
<th>Netcash</th>
</tr>
</thead>
</table>

13. do you face any challenges when using mobile banking

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

14. in your own opinion do you see mobile banking as an efficient way of keeping, sending and receiving money

<table>
<thead>
<tr>
<th>Opinion</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

15. Do you recommend others to open bank accounts

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

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**SECTION C; Benefits of mobile payments**

Please rank the statements in accordance with the following (indicate your choice by ticking under the appropriate column).
<table>
<thead>
<tr>
<th>Statement</th>
<th>1 SD</th>
<th>2D</th>
<th>3N</th>
<th>4A</th>
<th>5SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile banking has enhanced financial inclusion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile banking have lowered the need for cash transactions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am satisfied in using mobile banking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Banks and mobile network operators give enough information about the benefits of mobile banking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall, how satisfied are you with services provided by mobile banking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mobile banking is the best solution to financial inclusion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What recommendations do you propose that will increase the level of rural financial inclusion?

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Thank you for your time!!!!!
APPENDIX 2

Interview guide for banks

1. To what extent are the rural communities utilising mobile banking platforms within your services offer range.

2. Do they understand how to use mobile banking system you offer?

3. Are there any challenges being faced by rural communities in using or accessing mobile banking systems?

4. To the best of your knowledge, what are the major factors affecting the adoption of mobile banking by rural population in Mt Darwin?

5. Comment on how mobile banking is enhancing financial inclusion among rural community

6. Suggest strategies that may be implemented to improve mobile banking services so as to enhance rural financial inclusion