

**CHALLENGES FACING MOBILE BANKING SERVICES IN
REACHING CUSTOMERS IN TANZANIA: A CASE OF
NATIONAL MICROFINANCE BANK (NMB) IN COASTAL
REGION**

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NATIONAL MICROFINANCE BANK (NMB) IN COASTAL
REGION**

By

Aneth Biteya

**A Dissertation Submitted in Partial Fulfilment of the Requirements for the
Award of Degree of Master of Business Administration in Corporate
Management (MBA-CM) of Mzumbe University**

2013

CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for the acceptance by the Mzumbe University a dissertation titled **Challenges facing mobile banking services in reaching customers in Tanzania: A case of national microfinance bank (NMB) in coastal region**, in partial fulfilment of the requirements for award of the degree of Master of Business Administration in Corporate Management (MBA-CM) of Mzumbe University.

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AND

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I, **Aneth Biteya**, declare that this dissertation is my own original work and that it has not been presented and will not be presented to any other University for a similar or any other degree award.

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DEDICATION

This report is dedicated to my Second born Walton Dennis with whom I shared a study with; for the fact that I was pregnant throughout my studies until I gave birth and raised him to become a young man and by the Grace of God I managed to pass my studies with the flying colours.

I also dedicate this to my late mother Frida Biteya; who taught me to persevere and prepared me to face challenges with faith and humility. No words are sufficient to describe my late mother's contribution to my life. I owe every bit of my existence to her. She was a constant source of inspiration to my life. I thank her so much for encouragement throughout my studies and even the time she devoted in taking care of my sons while at school; leaving the fact that she was also fighting for her life but she proved to be the best mother in the whole wide world; may your soul Rest in Eternal Peace.

ABBREVIATIONS AND ACRONYMS

ATM	Automatic Teller Machine
BoP	Bottom of the Pyramid
BoT	Bank of Tanzania
ICT	Information and Communication Technology
ITU	Information and Technology Unity
M-Banking	Mobile Banking
MMA	Mobile Marketing Association
M-Pesa	Mobile Pesa
NMB	National Microfinance Bank
NSGRP	National Strategy for Growth and Reduction of Poverty
PDA	Personal Digital Assistant
PEOU	Perceived Ease of Use
PI	Personal Innovativeness
PLC	Public Liability Company
PR	Perceived Risks
PU	Perceived Usefulness
RA	Relative Advantages
SIM	Subscriber Identification Module
SMS	Short Message Service
SN	Social Norms
TAM	Technology Acceptance Model
TAM2	Technology Acceptance Model Two
UNCTAD	United Nations Conference on Trade and Development
UNCDF	United Nations Capital Development Fund
WAP	Wires Application Protocol
WFP	World Food Programme
Zap/ Z-Pesa	ZainPesa

ABSTRACT

The study about challenges facing mobile banking services in reaching customers in Tanzania was conducted at NMB in coastal Region. The study aimed at examining the knowledge of NMB customers on the services offered by mobile banking; finding out challenges facing mobile banking services in extending their services to many customers; determining whether NMB customers are extensively using mobile banking; and identifying problems facing customers who live far from the nearest branch. A sample size of 80 respondents comprising of customers and bank staff were given questionnaires and interviewed accordingly. Secondary data were collected using documentary sources such as articles and research reports from distinguished academicians, media and internet. Analysed data were presented using percentage in tables, charts and graphs.

The findings showed that majority of respondents knew few services offered by NMB through mobile banking. The study revealed that few customers fear the use of extension of mobile banking services offered by the bank through mobile banking. They fear insecurity, high charges and unreliability of services. However, some customers do not use the services due to little knowledge on the services offered through mobile banking. The study further showed that distance from nearest branch or ATM affected customers from using mobile banking effectively.

The study concludes that NMB should educate its customers about the variety of services offered as well as the importance of using mobile banking in their daily activities. Therefore the study recommends that, NMB bank should make sure that its network is reliable and constant in offering services. The bank should ensure security, reduce charges of using the services and increase the amount of money to be transacted daily. The bank should invest on installation of many ATMs especially in rural areas for the purpose of attracting many customers in using mobile banking services.

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CHAPTER ONE

INTRODUCTION

1.1. Background Information

Technology today has changed the landscape for financial institutions. It has enabled new entrants to the banking system offering lower costs and the possibility of ubiquitous access to the banking service. Banking services sector relies on the internet as an electronic distribution channel for delivering services directly to customers through bank websites, where customer use web browser to access their accounts, which is known as internet banking, net banking or web-banking (Dimitriadis et al., 2011; Callaway, 2011; Lee *at al.*, 2011). Mobile technology advancement has made telecommunication industry to introduce more new services in order to continue retaining and attracting new customers. Activity in mobile payment service is now accelerating in many emerging market (Nyakiha, 2009). Mobile banking has changed the business of retail banks significantly in terms of cost reduction and increased convenience for the customers, despite its international adoption rates are still low and many banks try to market it to mobile users (Lin, 2011; and Zhou et al., 2010). It has also been noted that since traditional banks have not been able to service a large portion of poor people, particularly those in remote places, given the high expenses of maintaining bank branches, mobile banking for the poor is less about convenience and more about accessibility and affordability (Donner, 2007). Mobile telephone can facilitate the flow of money among rural and poor segments of the population at lower transaction costs (Jenkins, 2008).

It is said that mobile banking services will continue to grow as economic experts forecast that by 2013, 300 billion transactions worth more than 860 billion dollars will be done through mobile banking (Pavlou, 2003). As of January 2012, there were 5.2 billion mobile connections and only 2.2 billion people with bank accounts. Around the globe, various initiatives use the mobile phone to provide financial services to those without access to traditional banks, yet relatively little scholarly

research explores the use of these mobile banking/ m-payment systems (Jonathan & Camilo, 2008).

According to Leishman (2010) in October 2010 there was 83 mobile banking services launched by Mobile Network Operators (MNOs) in developing countries, and another 82 are being planned. Aker and Mbiti (2010) assert that the story of the growth of mobile telephones in Africa is one of a tectonic and unexpected change in communications technology. From virtually unconnected in the 1990's, over 60 percent of Africans now have mobile phone coverage, and there are now over ten times as many mobile phones as landline phones in use.

Considering the immense penetration of cell phones, Cruz *et al.* (2010) observe that banks has very large potential to offer mobile banking services to people living in remote villages where only few computers are connected to the Internet. Acknowledging the limitations of Internet banking as opposed to widespread mobile phone penetration, Dasgupta *et al.* (2011) suggest that the emerging mobile banking may give banks a good commercial opportunity providing their services to rural people who are unable to access the Internet. Thus, according to Gu *et al.* (2009) attracting potential customers and retaining existing customers is crucial to the long-term business success of mobile banking firms.

In Tanzania, NMB is the largest bank when ranked by customer base and branch network (NMB Annual Report, 2008). NMB has 147 branches throughout the country. This broad branch network distinguishes NMB from other financial institutions in Tanzania. NMB is committed to sustaining and enhancing its branch network in order to provide access to capital to citizens in all areas of Tanzania, including the most remote parts. In spite of having more than 400 ATMs by 2011 and increasing number of ATMs, which are located in different places all over Tanzania and work for 24 hours customers still spend much time in banking halls or on ATM queues. They always put their complaints on suggestion boxes and even on newspapers to show how much they suffer from this (Kibala, 2012).

In response to those complains and in recognizing the different needs and technological advancement, NMB had undergone some changes mainly by introducing mobile banking service called NMB mobile as a new service to its customers. This aimed at widening banks coverage and easy customer access to easily meet their financials needs (NMB Annual Report, 2009). With this introduction of Mobile banking Services there are existing challenges facing Mobile Banking services in reaching customers in Tanzania.

1.2. Statement of the Problem

Banks in the world, NMB in particular, started using traditional banking system for their operations. Customers were obliged to go inside the banks and make their transaction manually through bank tellers. This was done only during banking hours, which actually was during the day from 8.30am to 4pm. The time was so limited especially to people with emergency need of cash transactions. Most of them were affected adversely by this system. This accelerated the introduction of Automatic Teller Machines (ATM) which could save customers twenty four hours. But ATMs have been saving people with banks' accounts only.

Despite the introduction of ATMs among banks, some people were not satisfied by the invention. They continued to look for convenient ways which could not only save people with bank accounts but also those without bank accounts. Thus, NMB introduced NMB Mobile Banking to provide financial transaction services to its customers. The introduction of the NMB Mobile Banking service was aimed to be used by all NMB account holders who could use the services to make financial transactions to people with and without NMB accounts. This could not only help most people who are living in remote areas and who have no NMB accounts but also attract other people to open NMB account as the service could be considered convenient.

Experience has shown that majority of NMB customers are not using mobile banking services effectively. Moreover, there are complaints from the general public that even though their salaries are channelled through NMB, but branches of NMB are far

away to the extent that they had to travel long distances to those branches while they have heard about NMB Mobile banking. They expected to get financial transactions very easily as the distance between bank and customers could be minimized. Again, the service is expected to serve people, who live in remote areas where ATMs are not available, unfortunately, that is not the case. Majority of customers in Mkuranga District had to travel some distance to look for ATM forcing them to queue. They sometimes find the ATM to be out of service thus compounding their problem. The study therefore intends to examine the challenges facing Mobile banking Services in reaching customers in Tanzania.

1.3. Objectives of the Study

The overall object of the study was to examine challenges facing mobile banking Services in reaching customers in Tanzania.

Specifically, the study aimed at:

- i) To examine the knowledge of NMB customers on the services offered by mobile banking.
- ii) To find-out challenges facing mobile banking services in extending their services to many customers.
- iii) To determine whether NMB customers are extensively using mobile banking.
- iv) To identify problems facing customers who live far from the nearest branch

1.4. Research Questions

The study was guided by the following research questions:

- i) Do customers have knowledge on the services offered by NMB Mobile Banking?
- ii) What are the challenges facing NMB mobile banking in extending its services to many?

iii) Are NMB customers extensively using Mobile Banking?

iv) What are problems facing customers who live far from the nearest branch?

1.5 Significance of the Study

Majority of the customers who work in the study area are employees in the education and health sectors. Lack of banking services make them travel long distance leaving students and patients unattended. The findings of the study will assist the government and bank officials to come-up with interventions that will solve the problem and hence improve provision of social services in the area. The study thus is in line with the goal number two and number four of the Millennium which advocates for education for all and reductions of both child and maternal mortality rates. The findings of the study will also assist in eradicating poverty among community members since they will save time that they normally spend in getting financial transactions and some who normally do not bank their savings will do so if bank services are brought near to them. Eradication of extreme poverty is one among the goals of the National Strategy for Growth and Reduction of Poverty (NSGRP). The vision 2025 also advocates for eradication of extreme poverty.

1.6. Scope and limitations of the study

The study was confined to NMB Plc. covering customers Commercial Department, Back Office Department and Customer Service Department at Mkuranga Branch which is one of the Branches of NMB Bank in Coastal Region. The study area was chosen because it was one of the areas located at remote areas and therefore taken as roadmap of other remote areas in using the same services. Therefore, this study was primary focusing on the examination of the challenges facing NMB mobile banking in reaching customers in Tanzania.

However, the study was faced by the following limitations. First, it was difficult to get the required information. Some respondents treated their information as confidential and therefore, it was difficult to have access to them. However, this was addressed through ensuring the respondents that the required data were just merely for academic research work and not otherwise. Second, some respondents opted to provide wrong information during data collection. However, to solve this problem, respondents were informed on the objectives of the study and that motivated them to provide required information which assured them to provide valid information. There was a problem accessing documentation of the customers residing in a particular area of the study. Despite all the challenges, the quality of the study was not compromised and it adds up to opening the frontier of knowledge in general, and on policy implication.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter deals with literature review. The first part of this chapter consists of definitions of key concepts, the second part is about origin of mobile banking, third part deals with impacts of mobile banking, fourth part concerns with attitudes of people towards mobile banking, fifth part is about challenges facing mobile banking in Tanzania and the last part is about conceptual framework.

2.2. Definition of Key Concepts

These are key terms used in chapter one which their meanings have been given to suit the meanings intended by the study. These terms and their meanings are:

2.2.1. Mobile

Mobile is something which is not fixed at one place and that can be used quickly, anywhere and easily (Business Dictionary, 2012).

2.2.2. Mobile Phone

Mobile Phone is a portable telephone device that does not require the use of landlines. Mobile phones utilise frequencies transmitted by cellular towers to connect the calls between two devices. The first mobile phone operated on an analogy service and was developed by Motorola, Inc. Mobile phones have grown to be the most widely used portable device in the world. Mobile phones may also be referred to as wireless or cellular phones (Business Dictionary, 2012).

According to Nyiri (2005) the mobile phone is evolving towards the dominant medium. It is becoming the natural interface through which people conduct their shopping, banking, booking of flights, etc. Moreover, it is turning into the single unique instrument of mediating communication not just between people, but also between people and institutions or more generally between people and the world of inanimate objects. The mobile phone is also joining the sphere of mass media. In the

next few years the mobile phone will be the primary source for radio and television signals, as well as the link to up-to-the-minute information.

2.2.3 Automated Teller Machine

Automated Teller Machine (ATM) is an electronic banking outlet or computerized machine that permits bank customers to gain access to their accounts with a magnetically encoded plastic card and a code number. It enables the customers to perform several banking operations without the help of a teller, such as to withdraw cash, make deposits, pay bills, obtain bank statements, effect cash transfers. It is also called automated banking machine, automatic till machine, or remote service unit. ATM implies neither “avoids travelling with money” nor “any time money,” but certainly implies both. Slim ATM cards are fast replacing confounding withdrawal forms as a convenient way of getting your money from banks. In a way, they are rewriting the rules of financial transaction. A smart person no longer needs to carry a wallet-full of paper money on his person. All he needs to do is fish out an ATM card, insert it in the slot, punch in a few details and go home with hard cash (Business Dictionary, 2012). Perros (2000) defines ATM as a technology that provides a single platform for the transmission of voice, video, and data at specified quality of service and at speeds varying from fractional T1, i.e., $n \times 64$ Kbps, to Gbps. Voice, data and video are currently transported by different networks. Voice is transported by the public telephone network and data by a variety of packet-switched networks. Video is transported by networks based on coaxial cables, satellites, and radio waves, and to a limited extent, by packet-switched networks.

ATM is a cell-switching technology based on a fixed-length cell. It combines the high throughput, low delay and transparency of circuit switching and the bandwidth efficiency of packet-switching. Circuit-switching is used when bit-rate services need to be constant, such as for voice and imaging traffic. Packet switching is used when bit-rate services can be variable, such as for data transmission. ATM combines both of these features and provides a technology that supports many types of network traffic-voice, data, real-time video, CD-quality audio and imaging. ATM is a technology based on the transmission of fixed-size cells. Data is encapsulated into

ATM cells that are 53 bytes long-5 bytes are reserved for addressing information and the remaining 48 bytes represent the payload where data is carried. Any message to be transmitted is divided into 48-byte lengths and packaged into these cells, which are then transmitted across the ATM network via a series of switches. ATM technology can be integrated into both the LAN and the WAN environments. The initial focus has been on the deployment of ATM as a backbone network in the campus environment. This implementation is used to handle an organization's internal LAN traffic. Another major ATM implementation is expected to be in the WAN environment to create links over extended geographic distances. In this case, the service provider uses switches to handle WAN traffic from many different customers. However, ATM technology can be used all the way to the desktop to provide for high-speed networking services.

2.2.4 Bank

Bank means an entity that is engaged in the banking business; where “banking business” means the business of receiving funds from the general public through the acceptance of deposits payable upon demand or after a fixed period or after notice, or any similar operation through the frequent sale or placement of bonds, certificates, notes or other securities, and to use such funds, in whole or in part, for loans or investments for the account of and at the risk of the person doing such business (BOT Act 2006). Thus, a bank is a financial institution that provides banking and other financial services to their customers. A bank is generally understood as an institution which provides fundamental banking services such as accepting deposits and providing loans. There are also nonbanking institutions that provide certain banking services without meeting the legal definition of a bank. Banks are a subset of the financial services industry. The organized banking sector works within the financial system to provide loans, accept deposits and provide other services to their customers. The following functions of the bank explain the need of the bank and its importance:

- i) To provide the security to the savings of customers
- ii) To control the supply of money and credit

- iii) To encourage public confidence in the working of the financial system, increase savings speedily and efficiently.
- iv) To avoid focus of financial powers in the hands of a few individuals and institutions.
- v) To set equal norms and conditions (i.e. rate of interest, period of lending etc) to all types of customers

The term can also be defined as a person or corporation which holds itself out to receive from the public, deposits payable on demand by cheque. Horace White has defined a bank, as a manufacture of credit and a machine for facilitating exchange. Or a bank is an establishment which makes to individuals such advances of money as may be required and safely made, and to which individuals entrust money when not required by them for use.

There many types of banks including the following: Deposit Banks: The most important type of deposit banks is the commercial banks. They have connection with the commercial class of people. These banks accept deposits from the public and lend them to needy parties. Since their deposits are for short period only, these banks extend loans only for a short period. Ordinarily these banks lend money for a period between 3 to 6 months. They do not like to lend money for long periods or to invest their funds in any way in long term securities.

Industrial Banks: Industries require a huge capital for a long period to buy machinery and equipment. Industrial banks help such industrialists. They provide long term loans to industries. Besides, they buy shares and debentures of companies, and enable them to have fixed capital. Sometimes, they even underwrite the debentures and shares of big industrial concerns. The important functions of industrial banks are:

- i) They accept long term deposits.
- ii) They meet the credit requirements of industries by extending long term loans.
- iii) These banks advise the industrial firms regarding the sale and purchase of shares and debentures.

The industrial banks play a vital role in accelerating industrial development. In India, after attainment of independence, several industrial banks were started with large paid up capital.

Savings Banks: These banks were specially established to encourage thrift among small savers and therefore, they were willing to accept small sums as deposits. They encourage savings of the poor and middle class people. In India we do not have such special institutions, but post offices perform such functions. After nationalisation most of the nationalised banks accept the saving deposits.

Agricultural Banks: Agriculture has its own problems and hence there are separate banks to finance it. These banks are organised on co-operative lines and therefore do not work on the principle of maximum profit for the shareholders. These banks meet the credit requirements of the farmers through term loans, viz., short, medium and long term loans. There are two types of agricultural banks,

- i) Agricultural Co-operative Banks, and
- ii) Land Mortgage Banks. Co-operative Banks are mainly for short periods. For long periods there are Land Mortgage Banks. Both these types of banks are performing useful functions in India.

Exchange Banks: These banks finance mostly for the foreign trade of a country. Their main function is to discount, accept and collect foreign bills of exchange. They buy and sell foreign currency and thus help businessmen in their transactions. They also carry on the ordinary banking business. In India, there are some commercial banks which are branches of foreign banks. These banks facilitate for the conversion of Indian currency into foreign currency to make payments to foreign exporters. They purchase bills from exporters and sell their proceeds to importers. They purchase and sell “forward exchange” too and thus minimise the difference in exchange rates between different periods, and also protect merchants from losses arising out of exchange fluctuations by bearing the risk. The industrial and

commercial development of a country depends these days, largely upon the efficiency of these institutions.

Miscellaneous Banks: There are certain kinds of banks which have arisen in due course to meet the specialised needs of the people. In England and America, there are investment banks whose object is to control the distribution of capital into several uses. American Trade Unions have got labour banks, where the savings of the labourers are pooled together. In London, there are the London Discount House whose business is “to go about the city seeking for bills to discount.” There are numerous types of different banks in the world, carrying on one or the other banking business.

2.3.5. Mobile Banking

The term "mobile banking" refers to the use of mobile as a channel of offering and delivering banking services which includes traditional services such as funds transfer, as well as new services such as online and electronic payments. In fact, mobile banking is defined as doing bank transactions via mobile phone (Lin and Lu, 2001)

Kim *et al.*, (2009) and Tiwari & Buse (2007) define mobile banking as an application of m-commerce which enables customers to access bank accounts through mobile devices to conduct and complete bank-related transactions such as balancing cheques, checking account statuses, transferring money and selling stocks.

Luo, Li, Zhang and Shin (2010) define mobile banking as an innovative method for accessing banking services via a channel whereby the customer interacts with a bank using a mobile device like mobile phone or personal digital assistant (PDA)

Mobile banking (m-banking) is an application of mobile commerce that enables customers to bank virtually at any convenient time and place (Suoranta, 2003). Mobile banking is the term we use to describe financial services delivered via mobile networks using mobile phones. Normally, such services include depositing,

withdrawing, sending and saving money, as well as making payments. (Using a laptop and an Internet connection as the link to the bank would instead be referred to as Internet banking.) M-banking is by Porteous (2006) separated into two categories; additive and transformational, where the additive model uses M-banking as an extra access channel for existing clients. This model is the most commonly used amongst retail banks. The transformational category is according to Porteous categorized by business models that draw upon existing telecom and agent/ representatives infrastructure, run by new or alternative banking actors, and has a geographic coverage and pricing with the potential to attract previously unbanked segments. Further, it may also have a transformational effect in terms of formalising previously informal transactions and hence bringing people and their financial assets into the formal economy.

2.3.6. Microfinance

According to Robinson (1998) microfinance is Microfinance refers to small-scale financial services for both credits and deposits-that are provided to people who farm or fish or herd; operate small or microenterprises where goods are produced, recycled, repaired, or traded; provide services; work for wages or commissions; gain income from renting out small amounts of land, vehicles, draft animals, or machinery and tools; and to other individuals and local groups in developing countries, in both rural and urban areas.

Shamsher and Tariq (2012) define microfinance means providing financial assistance to poorest of the poor to alleviate poverty. It seems to be the effective tool to poverty alleviation with its social objectives. The moral edge, of the industry enjoys through providing loans to the poorest is rapidly eroded. There is the time need of an effective model which carries the social objectives of microfinance with justified profit motive of both lender and borrower.

Microfinance has a very important role to play in development according to proponents of microfinance. UNCDF (2004) states that studies have shown that microfinance plays three key roles in development. It:

- i) Helps very poor households meet basic needs and protects against risks
- ii) Is associated with improvements in household economic welfare
- iii) Helps to empower women by supporting women's economic participation and so promotes gender equity.

2.3.7. Banking

A banking system also referred as a system provided by the bank which offers cash management services for customers, reporting the transactions of their accounts and portfolios, throughout the day. The Banking sector offers several facilities and opportunities to their customers. All the banks safeguard the money and valuables and provide loans, credit, and payment services, such as checking accounts, money orders, and cashier's cheques. The banks also offer investment and insurance products. As a variety of models for cooperation and integration among finance industries have emerged, some of the traditional distinctions between banks, insurance companies, and securities firms have diminished. In spite of these changes, banks continue to maintain and perform their primary role-accepting deposits and lending funds from these deposits.

2.3.8. Services

In economics a service is an intangible commodity. That is, services are an example of intangible economic goods. Service provision is often an economic activity where the buyer does not generally, except by exclusive contract, obtain exclusive ownership of the thing purchased. The benefits of such a service, if priced, are held to be self-evident in the buyer's willingness to pay for it. Public services are those societies (nation state, fiscal union, and regional) as a whole pays for through taxes and other means. By composing and orchestrating the appropriate level of resources, skills, ingenuity and experience for effecting specific benefits for service consumers, service providers participate in an economy without the restrictions of carrying inventory (stock) or the need to concern themselves with bulky raw materials. On the

other hand, their investment in expertise does require consistent service marketing and upgrading in the face of competition (wikipedia.org, retrieved 19.7.2013).

2.3. The origin of Mobile Banking

2.3.1 The origin of Mobile Banking Worldwide

Ishengoma (2011) says that the earliest mobile banking services were offered via SMS with the introduction of the first primitive smart phones with WAP support enabling the use of the mobile web. In 1999, European banks started to offer mobile banking on this platform to their customers. Mobile banking until 2010 often been performed via SMS or the Mobile Web. The M-Banking system operates in such a way that a specific sequence of SMS messages will enable the system to verify if the client has sufficient funds in his or her wallet and authorize a deposit or withdrawal transaction at the agent. Also, when depositing money, the merchant receives cash and the system credits the client's bank account or mobile wallet. In the same way the client can also withdraw money at the merchant: through exchanging SMS to provide authorization, the merchant hands the client cash and debits the merchant's account.

2.3.2. The origin of Mobile Banking in Africa

Gray (2005) reports that in year 2004 alone the African continent was able to add up to fifteen million new mobile phone subscribers to its base, which is equivalent to the total number of telephone subscribers on the continent in 1996, which can be seen as growth. Boadi *et al.* (2007) and UNCTAD (2007) assert that there has been evidence of increase in the number of people subscribing for mobile phone in developed and developing countries. Accordingly ITU (2007) says that mobile phones are the most popular means of communication technology in Africa. This means that mobile banking which is among the most means of money transactions among the banked and unbanked people is also increasing in Africa. It further said that countries like South Africa, Nigeria and Egypt have the highest mobile market growth. However, according ICT works (2010) the largest subscriber of mobile user in Africa is Nigeria with about 70 million mobile subscribers. It is also said, according to Muganda *et al.*, (2008) that Nigeria is leading the mobile commerce usage in Africa.

2.3.3 The origin of Mobile Banking in Tanzania

Mftransparency.org (2011) asserts that mobile banking was started in Tanzania in 2009 with the launch of ZAP, a mobile banking partnership between Standard Chartered Bank and Airtel. ZAP is a payment system that allows Airtel customers to deposit, transfer and withdraw money at their convenience through their Airtel handsets, at any place where mobile coverage exists. The introduction of mobile banking in Tanzania has helped extend banking facilities to both the banked and unbanked community. Vodacom M-Pesa is now Tanzania's leading mobile payment services provider.⁵⁶ M-Pesa enjoys widespread influence with over TZS. 17 billion monthly transactions and 4 million subscribers served by 4,700 M-Pesa agents and Vodashops around the country. Other providers offering mobile money services include Zain's Zap, Tigo Pesa and Zantel Z-Pesa. Mobile phone users can use their phone to make deposits, withdrawals, check balances, transfer, pay utility bills, purchase airtime etc.

2.4. Impact of Mobile Banking

Enríquez *et al* (2009) hold that most popular banking services through mobile technologies are: (i) peer to peer money transactions (both domestic and internationally); (ii) accessing cash and purchasing goods, and (iii) paying bills and paying back loans. Mobile banking can be based on an additive model or a transformative one. There has been a number of surveys that explore if and how mobile phones are helpful to diminish poverty by identifying the patterns of use by poor income groups in developing countries (Donner, 2007; Horst and Miller, 2006). For example, Horst & Miller (2004) show that in the Philippines, Diasporas use mobile phones to communicate with family for both economic and social reasons. Donner (2007) finds that mobile ownership increases the income of micro entrepreneurs in Rwanda by increasing communication and enriching social networks. Molony (2006) finds that mobile phones are used by micro entrepreneurs in Tanzania to manage reputation while creating virtual offices.

Mobile banking offers the promise of integrating the currently excluded population. Mobile banking offers the possibility of addressing two key barriers to financial

inclusion for the poor: affordability and physical availability. Compared to branch-based banks, mobile banking does not incur in the cost of physical roll-out and faces lower costs in handling low-value transactions. Mobile banking delivery is commonly set up with existing networks that already reach poor unbanked people; adding certain types of financial services to the mobile phone can channel the power of new distribution networks for cash transactions such as airtime merchants (Gamos, 2006). Generally, the use of mobile banking greatly reduces the banking costs. It increasingly provides customer satisfaction through easy access to financial transactions at any time and place with the lowest possible mobile phone instead of waiting hours in line at the box office bank.

Mbiti and Weil (2011) conducted a study on Mobile Banking: The Impact of M-PESA in Kenya with the aim of examining how M-PESA is used as well as its economic impacts. After analyzing data from two waves of individual data on financial access in Kenya, they found that increased use of M-PESA lowers the propensity of people to use informal savings mechanisms such as roscas, but raised the probability of their being banked. Using aggregate data, they calculated the velocity of M-PESA at between 11.0 and 14.6 person-to person transfers per month. In addition, they found that M-PESA caused decreases in the prices of competing money transfer services such as Western Union. While they found little evidence that people use their M-PESA accounts as a place to store wealth. The results suggested that M-PESA improved individual outcomes by promoting banking and increasing transfers.

Pierskalla and Hollenbach (2013) conducted a study on the spread of cell phone technology across Africa has transforming effects on the economic and political sphere of the continent by investigating the impact of cell phone technology on violent collective action. They contend that the availability of cell phones as a communication technology allows political groups to overcome collective action problems more easily and improve in group cooperation, and coordination. Utilizing novel, spatially disaggregated data on cell phone coverage and the location of organized violent events in Africa, they were able to show that the availability of cell

phone coverage significantly and substantially increases the probability of violent conflict. Their findings hold across numerous different model specifications and robustness checks, including cross-sectional models, instrumental variable techniques, and panel data methods.

In fact, the development to make payments and transfers via mobile money instead of cash or credit cards has proliferated widely in Africa and lowers transaction costs for many market participants and citizens.⁵ Interestingly, in Africa, this digital revolution is largely driven by private entrepreneurs, which have built up an extensive wireless infrastructure in a matter of years, often independent of governments or government-funded infrastructure.⁶ Private cell phone providers have increased coverage at a vastly faster rate than landline providers. Today many areas that had never been connected to landline communication networks are covered by cell phone networks (Africa Partnership Program 2008). One of the advantages of cell phone networks is that the expansion is much costly in terms of infrastructure investments and thus a more decentralized expansion is possible. Existing economics research provides evidence of lower transaction costs through the provision of cell phones. While much of this work has emphasized the positive effects of this new technology on economic outcomes, research on the direct effects of cell phones in the political sphere is not quite as common. However, Ker, Collier, and Vincente (2011) show that in the case of Mozambique, cell phones can be used for voter education and can increase political participation in elections, as well as demands for accountability. The major takeaway is that cell phone usage, the availability of hotlines to voters, and text messaging can have positive effects on the political information available to voters as well as their political participation. In a similar vein Ballard (2009), using country level analysis as well as provincial data for Namibia, finds that the use of cell phones by citizens can decrease corruption. She argues that cell phones change the information environment, as they decentralize and increase the spread of information. In addition, the proliferation of cell phones increases the probability of detection of corrupt officials and thus alters “the cost-benefit calculus of corrupt behaviour by strengthening oversight and punishment mechanisms” (Ballard 2009).

Evidence further suggests that, through text messaging services, cell phones have been used to inform citizens of government wrongdoings, monitor elections, or report violence in many African states (Diamond 2012). More generally, observers of current events have linked cell phone technology to collective action, in particular peaceful protest, producing a new “protest culture” (Lapper 2010). In the context of authoritarian regimes, examples of cell phones aiding the organization of protests around the world are abundant, ranging from China in 1999, where Falun Gong was able to stage a large protest in a secure government complex, to Manila, Philippines in 2001 (Philippine Daily Inquirer 2001). Yet, cell phone technology does not only affect collective action in authoritarian governments. Protesters in Madrid, Spain in 2004 were able to organize quickly using text messaging (Shirky 2008). The increased organization capabilities of protesters have been noted by the police in the riots in London in the summer of 2011, as well as protests over G20 summits (Sherwood 2011).

The link between political behaviour and cell phone usage is also borne out in survey data. The 2008 wave of the Afro barometer public opinion survey includes a question on the usage of mobile phone technology and protest behaviour (Mattes *et al.* 2010). A simple regression of the protest item on cell phone usage, controlling for a number of socioeconomic factors, reveals a positive and highly statistically significant effect, i.e., cell phone users are more likely to participate in protests. While these observations and emerging scholarship highlight the positive effects of cell phone technology for peaceful forms of collective action, we argue that cell phones have another important effect: improved communication through cell phones can facilitate organization and coordination of groups for the purpose of violent collective action. In a recent working paper, Shapiro and Weidmann (2012) pose a similar question about the spread of cell phone coverage and political violence in Iraq.

The authors start from a theoretically ambiguous point. On the one hand, they emphasize that the availability of cell phones could lead to increased violence as it strengthens the position of insurgents against the coalition forces. On the other hand,

cell phones could allow for better insurgent surveillance by US and Iraqi forces, as well as lower the cost of whistle blowing on terrorists for the local population. Using district level data and a difference-in-difference design, the authors find that the expansion of the cell phone network in Iraq is associated with decreases in successful violent attacks by insurgent forces. Shapiro and Weidmann (2012) contend that this is due to the extensive use of cell phone surveillance by US and Iraqi anti-insurgent forces as well as successful whistle-blower programs. Similarly, in the African context, Livingston (2011) argues, that while cell phones might empower rebel groups and produce more violence, there also exists the potential for a reduction in violence through improved monitoring for international peacekeeping or governmental forces, although such efforts have been rare so far.

The rationale for impact studies is clear: the mobile is an incredibly powerful tool for exchanging ideas at a distance, and for managing daily life. The clearest examples of impact studies come from the ICTD perspective, where researchers are interested in whether mobiles promote or enable economic growth or broader well-being (Sridhar and Sridhar 2006). Thompson and Garbacz (2007), for example, use a stochastic model to identify a positive effect of telecommunications (but particularly mobiles) on productive efficiency in developing nations. In a paper appearing in a Vodafone report called *Africa: The Impact of Mobile Phones* Waverman, Meschi, and Fuss (2007) also take the macro view, reporting that higher levels of mobile penetration lead to higher rates of GDP growth, particularly among low-income developing countries. With its clear focus on impact, the Vodafone study generated much discussion within the ICTD community, and provided additional data at a time when little was available. The volume highlights other research (Lydon and Williams 2005) finding a correlation between mobile penetration levels and inflows of foreign direct investment. It also offers two studies at the micro level. One uses a survey approach to explore how those mobiles contribute to increased social capital (cohesiveness) within communities in South Africa and Tanzania (Goodman 2005).

The other focuses on how people use mobiles to substitute for travel, to start and open businesses, and to keep in touch with friends and family (Samuel, Shah, and

Hadingham 2007). Perhaps the strongest evidence about a microeconomic impact of mobile telephony comes from Jenson (2007), whose research tracked five years' worth of prices for sardines at various landing ports on India's Keralan coast. He found that the arrival of mobiles brought significant and immediate reductions in the variability of price and the amount of waste in the fishing system. Armed with better information, fishermen—most of whom purchased mobiles as soon as they could afford them—are more able to choose to land at a port with buyers willing to purchase their catch. Abraham (2006) too found clear benefits, mostly around reduced price volatility and increased responsiveness, to these fishing communities.

Yet the broader story of the mobile's impact on small enterprises, farmers, and the self-employed is not as clear-cut. The productivity gains associated with mobile use by SMEs are scarce or hard to measure (Chowdhury 2006). Additionally, there is a strong intermingling of business (instrumental) and personal uses of the mobile among small business owners (Donner 2004). A survey of urban micro entrepreneurs in Kigali, Rwanda, finds that 2/3 of calls were with friends and family rather than to customers or suppliers (Donner 2005). While mobiles could be used to find new customers and expand business networks, they are just as likely to be used to amplify strong ties with existing personal relations (Donner 2006). An extended report by the Gamos consultancy (Souter *et al.* 2005), looks at the impact of mobile use on rural livelihoods in Africa and India, again finding more use for emergencies and connections with friends and family than for dedicated economic activity.

This piece also raises important questions about the distribution of the benefit of telecommunications within a community, arguing that those with greater resources are more likely to make use of the technology. Of course, not all impact is economic. Other studies explore the mobile's impact on other institutions and human domains, such as non-governmental organizations (Rogers *et al.* 2006). Mutula (2002) ponders the implications of mobile telephones for libraries in Southern Africa. Others consider the mobile as a resource for e-learning in Tanzania (Stone, Lynch, and Poole 2003) and Thailand (Whattananarong 2005). All argue that the mobile's portability, simplicity, and affordability make it a natural fit for education initiatives

in places where PCs and internet connectivity may be scarce. Mobiles also seem useful in emergencies, like during the eruption of a volcano in Eastern Congo (Agar 2003). Idowu, Ogunbodede, & Idowu (2003) describe how Nigerian doctors use mobiles to communicate with each other across different parts of a large hospital, and to respond to emergencies when offsite, illustrate ways in which mobiles, in low-teledensity settings, serve functions we might normally attribute to landlines.

2.5. Attitudes of People towards Mobile Banking

Cheah *et al* (2011) conducted a study on factors affecting Malaysian mobile banking adoption with aims of investigating the factors that influence Malaysians' intention to adopt mobile banking by extending the renowned framework of Technology Acceptance Model (TAM). A self-administrated questionnaire were developed and distributed in Malaysia. Out of the 400 questionnaires, only 175 useable questionnaires were returned, yielding a response rate of 43.75 percent. Results were subsequently analyzed by using multiple regression and factor analysis. Factors such as perceived usefulness (PU), perceived ease of use (PEOU), relative advantages (RA) and personal innovativeness (PI) were found positively related with the intention to adopt mobile banking services. However, social norms (SN) were the only factor found insignificant. Perceived risks (PR) was negatively associated with the mobile banking adoption. The research findings provided several important implications for banks, service developers, and software engineer with better strategic insights to design and implement mobile banking services to yield higher consumer acceptance towards mobile banking in Malaysia.

Masinge (2010) conducted a research that examines the factors influencing the adoption of mobile banking by the Bottom of the Pyramid (BOP) in South Africa, with a special focus on trust, perceived cost and perceived risk including the facets of perceived risks: performance risk, security/privacy risk, time risk, social risk and financial risk. The research model includes the original variables of extended technology acceptance model (TAM2). Data from this study was collected through a physical hardcopy survey in townships around Gauteng. The research had found that

customers in the BoP will consider adopting mobile banking as long as it is perceived to be useful and perceived to be easy to use.

Beiginia *et al* (2011) conducted a study that examined the customers' attitude to mobile banking based on extended theory of planned behaviour. The study aimed at identifying the type of customers' attitudes toward mobile banking and factors affecting their attitudes to behaviour using the extended theory of the planned behaviour model. In most previous researches, attitude, subjective norm and perceived behavioural control are recognized as determinants of behavioural intention and technology adoption. They also found that influential factors such as quality of mobile banking services and its related factors such as quality of information, network security, and ease of use, the bank's reputation and the speed of transactions also had a role in explaining the users' behaviour. Considering the importance of the issue, the research hypotheses designed adding factors related to the network quality into the basic theory of planned behaviour and developing the models, and they tested with emphasis on the adoption of mobile banking from EN Bank customers in Tehran. The results of statistical analysis have revealed that adding factors related to the quality of the network into the basic model, significantly increases the determination power of "attitudes to behaviour" construct from 0.23 (in the basic model) to 0.57 (in the developed model) and also increase the determination power of "behavioural intention" construct from 0.56 to 0.64. So the results have shown that the extended theory of the planned behaviour model compared with the basic model has the more power to predict customers' behavioural intention regarding internet banking.

Mujemula's (2009) study was set out to determine the role of mobile banking in customer satisfaction. To achieve the objectives the study used a sample of 50 respondents who were randomly selected. Data were collected through the use of questionnaire instrument and interviews, observation and focus group discussions. Data were computed and analyzed to determine the impact of the variables on customer satisfaction. The findings indicate that mobile banking facility positively

influences customer satisfaction. Based on the findings, it was therefore concluded that there is customer satisfaction on the use of mobile banking.

Nyakiha (2009) conducted a study on customers' perceptions of M-PESA as a mobile banking service offered by Vodacom Tanzania Limited. The study aimed at assessing how customers perceive the introduction of M-PESA as a mobile banking service by Vodacom Tanzania Limited. In order to meet the intended objectives, exploratory research design was employed. The instrument used for gathering data was questionnaire for randomly sampled customers who were buying services in selected Vodacom outlets. Both qualitative and quantitative data were utilized in this study. The study revealed that customers perceive positively the introduction of M-PESA service as a mobile banking service by Vodacom Tanzania. The level of customer satisfaction and usage was high, also customers have positive attitude toward mobile banking service.

2.6. Challenges Facing Mobile Banking in Tanzania

Mujemula's (2009) observed that security over mobile financial transactions as the main challenge in Tanzania. Ishengoma (2011) quoted the findings conducted on January 2009 by Mobile Marketing Association (MMA) in their Banking Sub-Committee that was chaired by Cell Trust and VeriSign Inc published the Mobile Banking Overview for financial institutions in which it discussed the advantages and disadvantages of Mobile Channel Platforms (Short Message Services (SMS), Mobile Web, Mobile Client Applications, SMS with Mobile Web and Secure SMS). The following challenges were the following: on the handset operability it was found that there are a large number of different mobile phone devices and it is a big challenge for banks to offer mobile banking solution on any type of device. Some of these devices support Java ME and others support SIM Application Toolkit, a WAP browser, or only SMS. Another challenge was security. It was found that security of financial transactions, being executed from some remote location and transmission of financial information over the air. It was also found that there was a challenge of mobile banking infrastructure to handle exponential growth of the customer base.

Banks unable to meet the performance and reliability expectations may lose customer confidence.

Masinge (2010) found that the most critical factor for the customer was high cost and intrust due to insecurity. Thus, the service should be affordable and trusted as trust was found to be significantly negatively correlated to perceived risk. Nyakiha (2009) noted that despite the positive perception toward mobile banking services customers do face challenges and security threats when utilizing the service.

2.7. Conceptual Framework

The study assumes that most people do not use mobile banking services due to the lack of knowledge and enough education on the services offered. It is further assumes that the service which is connected to ATMs needs customers to walk/travel long distance from their residents, and this make them to opt for other financial services. Moreover, it assumes the lack of customers trust with the existing technology makes it difficult for them to use the service.

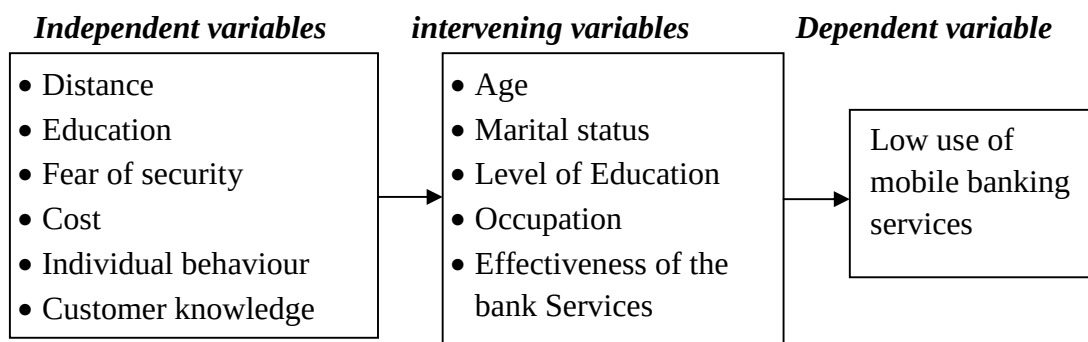
It is also assumed that financial risk being one of the challenges facing Mobile banking in reaching customers have become a big threat whereby customer's fails to tolerate. Furthermore it may be due to perceived cost which makes some customers to think that by using mobile banking they will pay more money for the service. Again, it may be associated by individual behaviour and the way communication has been transmitted via media and interpersonal

The concept model consists of independent variables which are distance, education, and fear of security, cost, individual behaviour and customer knowledge. This implies that if the independent variables are observed and well implemented by the bank through age, marital status, and level of Education, occupation, and effectiveness of the bank as intervening variables, customers will effectively use mobile banking services. But if it happens that there is a failure of implementation of the demands of the independent variables there is likely to infectiveness of using mobile banking services. This is supported with the view that people join to the introduced service simply because they trust the technology/service. This has also

been observed by Gu *et al.* (2009); Chung & Kwon (2009); Yu & Fang (2009); Shah *et al.* (2009) and Luo *et al.* (2010). It has also been observed that a financial risk is another factor that can affect the service which has been introduced. This is what they call potential for monetary loss due to transaction errors or bank account misuse (Lee, 2009). Moreover, cost is another factor that can affect mobile banking. Some people may hesitate to use the service thinking that they pay more money for the service. Again, individual behavior can affect the use of services like mobile banking among customers. Individual behavior is associated with age, income, educational level and mobile internet experience (Gu *et al.*, 2009).

These assumptions are summarised in Figure 1.

Figure 1: Conceptual Framework



Source: Author's own construct, 2013

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter consist of six parts. The first part discusses about study area, the second part explains research design and the third part deals with population of the study. Fourth part explains the sample size and sampling procedures, the fifth part is about data collection methods and sixth part concentrates on data processing and analysis.

3.2 Study Area

The study area was National Microfinance Bank (NMB) located in Coastal Region where sampling was drawn from customers and bank staff. It was believed that Coastal region was justifiable on the ground that it had enough NMB customers who responded to various questions from the study. This made it possible to consider reasonable conclusions for the up country areas.

3.3 Research Design

The study used case study approach due to its flexibility in data collection. According to Flyvbjerg (2011) a case study is an intensive analysis of an individual unit (for example a person, group, or event) stressing developmental factors in relation to context. The reason for using case study was to be consistent in looking at events, collecting data, analysing information and reporting the results in relation to challenges facing mobile banking services in reaching customers in Tanzania. In this study the ratio of 80 out of 73, 487 customers and NMB officers used as a case study to get systematic way of looking at challenges facing mobile banking services.

3.4 Population of the Study

Population means all the individuals or objects that meet certain requirements for membership in the overall group (Churchill and Brown, 2007). The population of the study compromised of NMB customers and officers. It is estimated that there are 73,487 customers and 83 NMB officers in Coast region as at February, 2013 (NMB Report, 2013). However, due to the need of effectively participating in data

collection and observing and time allocated for examining the challenges facing Mobile Banking services in reaching customers in that small area, the study was limited to the Coast region. Therefore, Mkuranga Branch in the Coast region was used as a case for examining challenges facing Mobile Banking services in reaching customers.

3.5 Sample Size and Sampling Procedures

3.5.1 Sample Size

Adam and Kamuzora (2008) defined sample as a subset of the universal population. Sample is a small group of respondents drawn from a population in which the researcher is interested in gaining information and drawing conclusions. Kothari (2007) defines sample as few items selected from the universe for the purpose of study. The coastal region had a total population of about 73,487. Customers, Commercial Department, Back Office Department and Customer Service Department were consulted in order to get perceptions from a diverse range of people from different cadres. A sample of eighty (80) respondents from NMB customers and officers were selected for the study. Out those respondents seven (7) NMB officers were selected for interview. These respondents were picked from different cadres, sex, occupation and education from the selected area of study.

Table 3.1 : Sample Distribution

S/N	Respondents category	Number of respondents	Percentage
1	Commercial Department	2	2.5
2	Back Office Department	2	2.5
3	Customer Service Department	3	3.8
4	NMB Customers	73	91.2
5	Total	80	100.0

Source: Study Findings, 2013

3.5.2 Sampling Procedures

Kombo and Tromp (2006) define sampling as the procedure a researcher uses to gather people, places or things to study. It is the process of selecting a number of individuals or objects from a population such that the selected group contains

elements representative of the characteristics found in the entire group. Greener (2008) defined sampling as a practical way of studying people and their activities, thoughts, attitudes, relationships in relations to business. WFP (2005) point out that sampling occurs when a subset of the population (or other unit) under study is selected from the larger group (the entire population under study).

This study adopted two sampling techniques; these were probability and non-probability sampling. Probability sampling provides equal chance for each unit of being selected (Kombo and Tromp, 2006). Adam and Kamuzora (2008) hold that non probability sampling is a biased sampling procedure that does not provide any basis for estimating the probability that each item in the population has a chance of being included in the sample.

The study employed probability sampling, whereby the stratified sampling was used since the population was divided into sub groups as indicated in the sample distribution Table 3.1 and then taking a simple random sample from each subgroup.

Non probability sampling was employed and purposive sampling was chosen for the study. Purposive sampling is the deliberate process whereby the researcher picks the only respondents who are most relevant or knowledgeable in the subject matter, and work with them more intensively (Omary, 2011). The respondents of about seven (7) NMB officers were selected under purposive sampling. These were chosen because they were knowledgeable about mobile banking services.

It should be noted that respondents were selected according to their roles in the institution. For example, those who were selected for interview were bank officers who were making sure that the bank operated accordingly. They had important information including the challenges facing NMB bank customers in using mobile banking. Likewise, those who were selected for filling in the questionnaire were customers of the NMB bank and the researcher expected them to encounter any challenges facing them in using mobile banking.

3.6 Data Collection Methods

Data is anything given or admitted as a fact and on which a research inference is based. It is anything actual or assumed used as a basis for reckoning (Oso and Onen, 2008). During data collection, both primary and secondary data were used for its validity and reliability as attached in Appendices 1 and 2.

3.6.1 Primary Data

This study used primary data which were obtained directly from the field. Data was collected from the sample population through questionnaires and interviews as attached in Appendices 1 and 2. Keya, *et al.* (1989) defines questionnaire as a set of questions that are drawn up to meet the objectives of the survey. The designed questionnaires were used to collect data from NMB customers and officers who amounted to 80 out of 73,487 for coastal region. The open ended questionnaire for NMB customers were used as attached in Appendix 1.

Ruane (2005) also defines an interview as a more personal form of survey research in which questions are posed in a face to face or telephone exchange between the interviewer and the respondent. The study used in depth interview method to gather data from NMB officers whose total is seven (7). The interview questions are attached in Appendix 2.

3.6.2 Secondary data

Secondary data are kinds of data obtained from literature sources or data collected by other people for some other purposes. Some of the data collected and stored by organizations include details on the payroll, income statements, and copies of letters and minutes of meetings. Newspapers, journals and textbooks are also sources of secondary data (Adam and Kamuzora, 2008). The study used internet, books, journals and reports; both published and unpublished and documentary reports as sources of secondary data. According to Bryman and Bell (2007) document is any written or recorded material, the preparation of which is not evaluation purpose or the request for the inquiry. Thus, during this study the available documents in relation to the needs of the study were reviewed.

3.7 Data Processing and Analysis

The collected data of this study was edited, coded and analysed descriptively. Quantitative data for this study was processed with the help of Statistical Package for Social Sciences (Version 20.0 for windows). SPSS was used to produce tables for the data presentation, graphs and charts. Qualitative data was collected through open-ended questionnaires and an interview was evaluated in terms of frequency of the respondents. However, the study interpreted qualitative data in accordance to the quality of arguments made rather than quantity of the respondents with the same opinions.

CHAPTER FOUR

PRESENTATION OF FINDINGS AND DISCUSSIONS

4.1. Introduction

This chapter discuss presentation of findings and discussions. It consists of five main parts. The first part is about background characteristics of the respondents, the second part deals with knowledge of NMB customers on the services offered by mobile banking and the third part concentrates on challenges facing mobile banking services in extending their services to many customers. The fourth part determines whether NMB customers are extensively using mobile banking while the fifth part explains the problems facing customers who live far from the nearest branch.

4.2. Background Characteristics of the Respondents

The characteristics of the respondents were sought in order to determine various aspects challenging mobile banking services in reaching customers in Tanzania at NMB bank. These included age, sex, level of the education, and occupation background of the respondents.

4.2.1. Age of the Respondents

Age of the respondent was important to this study in order to determine who were mostly involved in mobile banking. The results in Table 4.1 show that out of 80 respondents 56.2% were the age between 25 and 34. This was due to the fact the age comprises of many people especially young people and adult who are likely to be early technology adopters.

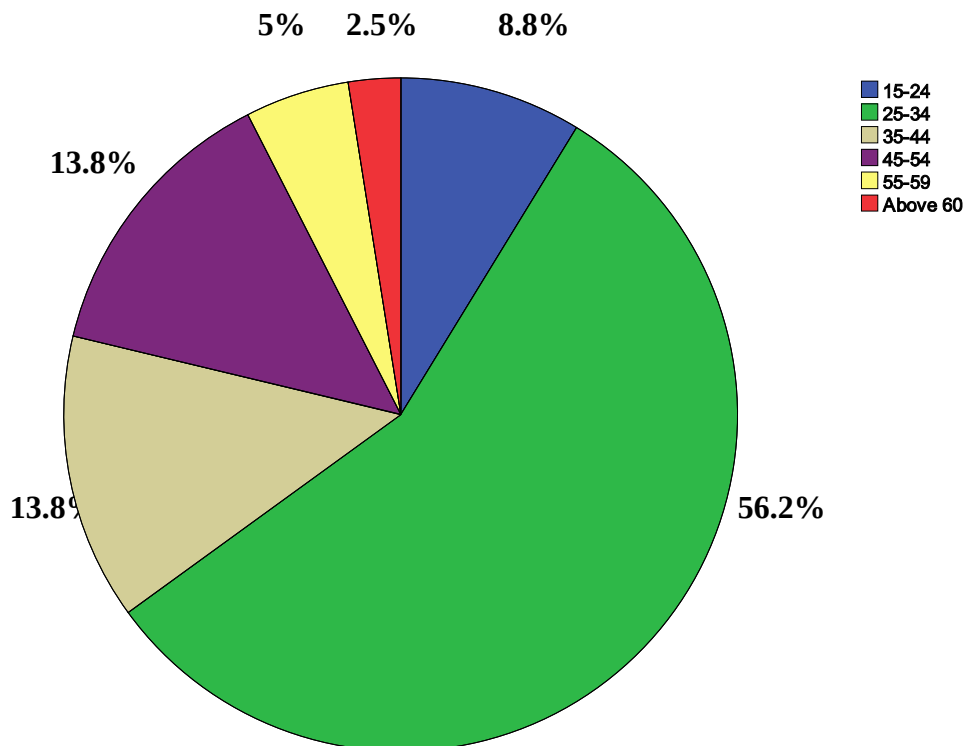
Table 4.1. Age of Respondents

Responses	Frequency	Percentage
15-24	7	8.8
25-34	45	56.2
35-44	11	13.8
45-54	11	13.8
55-59	4	5.0
Above 60	2	2.5
Total	80	100.0

Source: Study Findings, 2013

The same information is portrayed using pie chart as shown in Figure 2.

Figure 2: Age of the Respondents



Source: Study Findings, 2013

The majority of mobile banking users were between 25 and 34 years old. This implied that youth were active in using varieties of services offered by

communication technology specifically mobile phones. It was also implied that youth were active in making financial transactions through mobile banking at NMB bank.

4.2.2. Sex of the Respondents

Sex of respondents were asked in order to determine the contribution and challenges facing both sexes in using financial services specifically mobile banking at NMB bank. The findings are as shown in Table 4.2 indicate that 58.8 % were male while 41.2% were female.

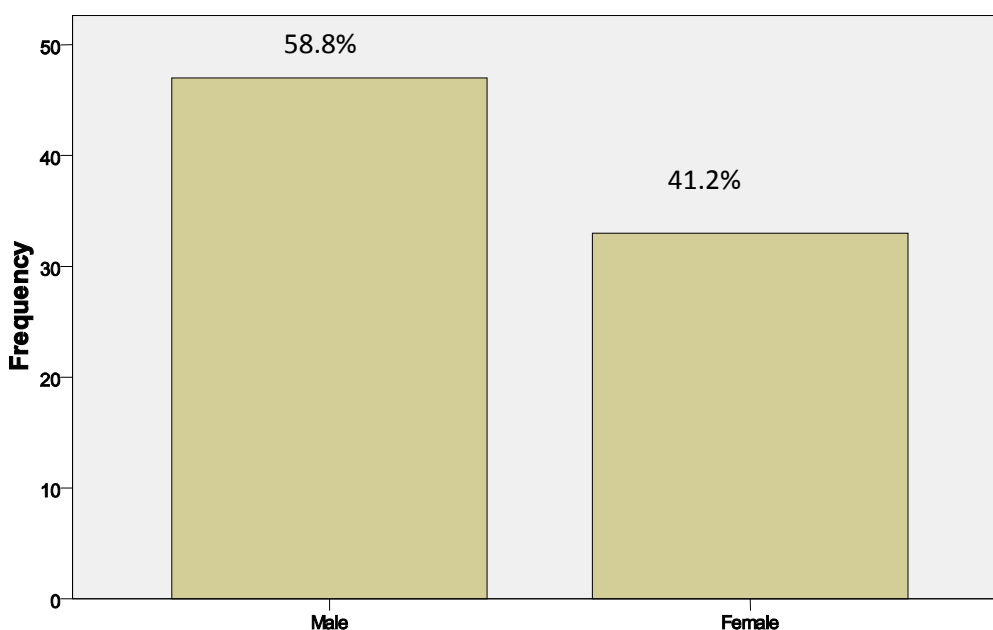
Table 4.2. Sex of the Respondents

Responses	Frequency	Percentage
Male	47	58.8
Female	33	41.2
Total	80	100.0

Source: Study Findings, 2013

The results also are summarised using the bar chart as shown in Figure 3 which shows the percentage of both sexes.

Figure 3: Sex of the Respondents



Source: Study Findings, 2013

The majority of the findings were male due to the fact that they were the most workers at Coast region. This was due to cultural factors where as women were not much given education which could make them either self employed or employed by various institutions.

4.2.3. Level of Education

Level of education of the respondents were asked in order to determine whether application of mobile banking were also associated with education level of an individual. Table 4.3 shows that out of 80 respondents 30% were bachelor degree holders and 25% had diploma. Thus, the majority were degree holders as the table indicates.

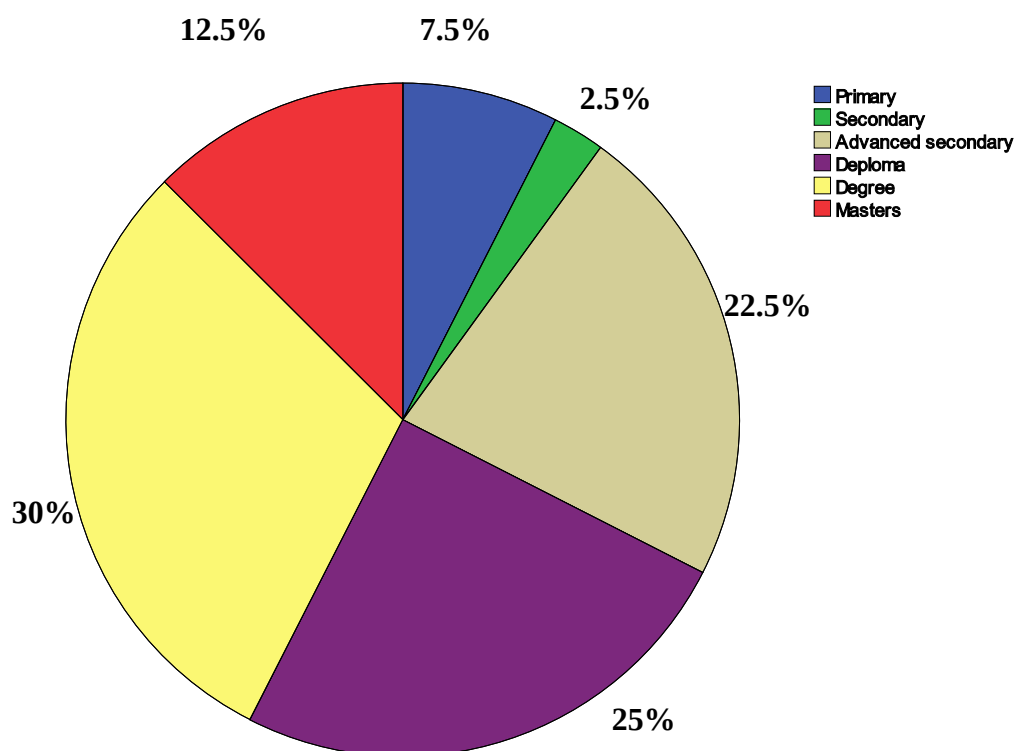
Table 4.3: Level of Education

Responses	Frequency	Percentage
Primary	6	7.5
Ordinary secondary	2	2.5
Advanced secondary	18	22.5
Diploma	20	25.0
Bachelor Degree	24	30.0
Masters	10	12.5
Total	80	100.0

Source: Study Findings, 2013

The same information is portrayed using pie chart as shown in Figure 4.

Figure 4: Level of Education



Source: Study Findings, 2013

These findings show that the majority of users of mobile banking in coastal region had advanced secondary education to bachelor degree holders as they did not differ much from each other.

4.2.4. Occupation of the Respondents

It has been observed that individual occupation contribute to the economy of the community. Since mobile banking is also related to poverty eradication, this study wanted to know how individual occupation had been contributing to uses of mobile banking at NMB bank. Table 4.4 shows that 41.2% of the respondents were employees of different companies or firms.

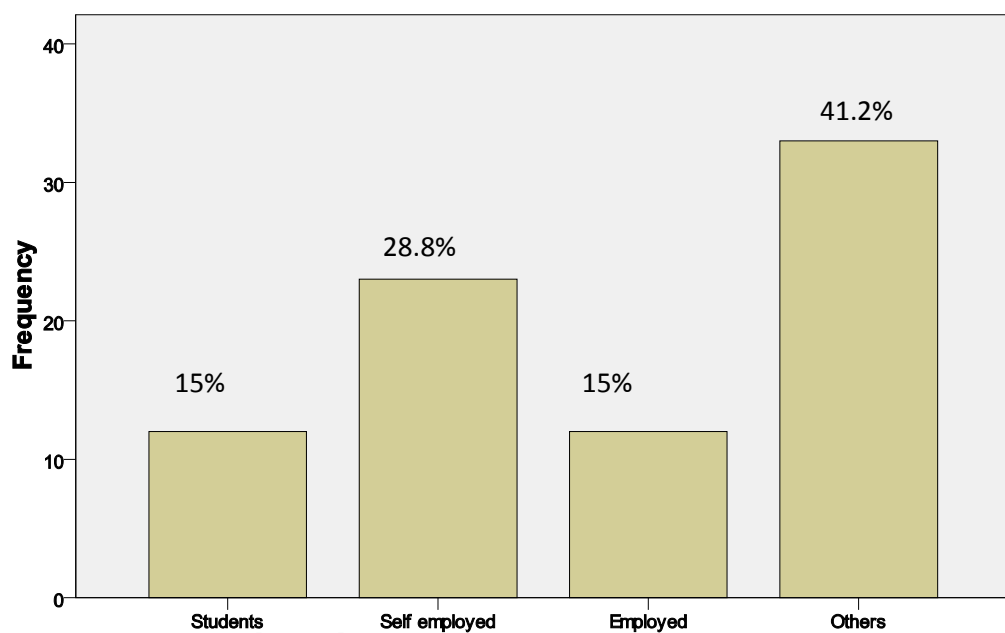
Table 4.4 Occupation of the Respondents

Responses	Frequency	Percentage
Students	12	15.0
Self employed	23	28.8
Others	12	15.0
Employed	33	41.2
Total	80	100.0

Source: Study Findings, 2013

The same results also are summarised using the following bar chart as showing in Figure 5.

Figure 5: Occupation of the Respondents



Source: Study Findings, 2013

These findings implied that occupation of an individual played significant effect in using mobile banking. Those with occupations were the most users of mobile banking compared to students and others who had no job. Those with no reliable job

and students were suffering from accessing income and therefore made them difficult to engage actively in mobile banking.

4.3. Knowledge of NMB Customers on the Services Offered by Mobile Banking

Knowledge of customers on the services offered by a particular institution is very important in using them effectively. If customers have no knowledge on the services provided by their subscribers they are likely not to use them effectively and the opposite is also true. According to Musara and Fatoki (2010) the role of technological innovations on efficiency and cost reductions in the banking sector is paramount to the successful and profitable service delivery in the sector. Technological innovations play a significant role in improving the efficiency of the banking sector as well as reducing the costs of banking transactions for customers. In this course the study wanted to know whether customers were aware of mobile banking services. The following were the results:

4.3.1. Respondents with Accounts at NMB Bank

The results obtained showed that out of 80 respondents 100% were account holders of NMB bank. Since the majority were account holders of NMB bank, it implied that the information obtained was from the right people. According to them, most of them had enough experience on mobile banking. Table 4.5 summarises the results:

Table 4.5 Respondents with Accounts at NMB

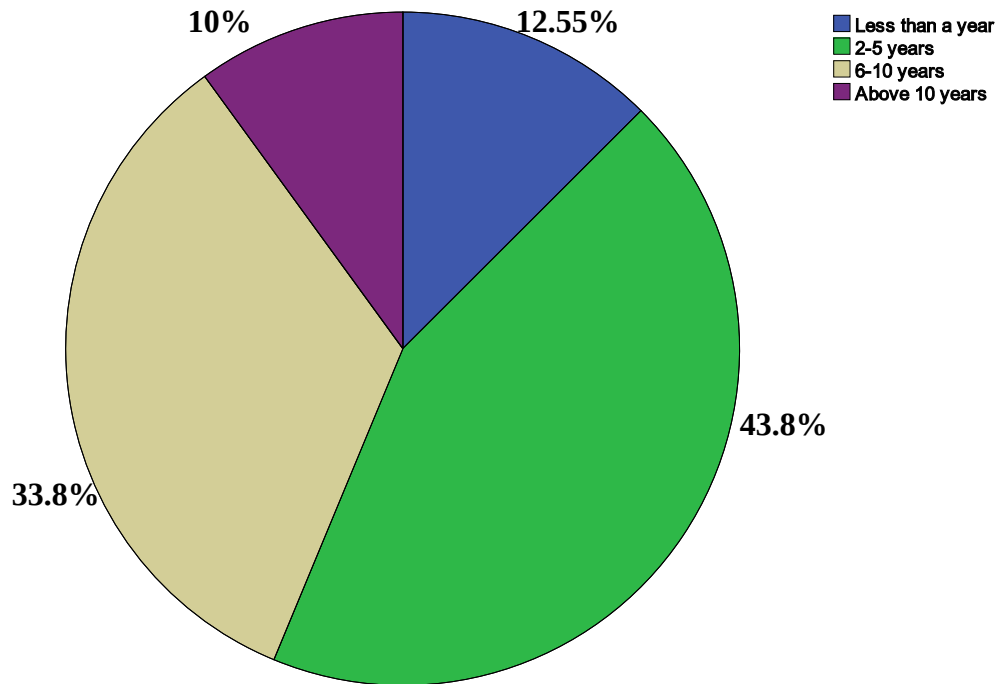
Responses	Frequency	Percentage
Yes	80	100.0
Total	80	100.0

Source: Study Findings, 2013

4.3.2 Longevity of Respondents with NMB Bank

The study wanted to know how long respondents had been NMB customers. The results as indicated in figure 6 show that out of 80 respondents, 43.8% had been with NMB bank between 2-5 years.

Figure 6: The Longevity of Respondents with NMB Bank



Source: Study Findings, 2013

The interviewees revealed different answers. Some said that they have been NMB customers for almost five years and other said that they had been NMB bank customers for more than ten years. Yet they were those who said that they had been NMB bank customers for three years. Generally the majority showed that they had been NMB bank customers for not less than two years but not more than ten years. Thus, as indicated in 4.2.2, most of them were youth who were not older and therefore their longevity as NMB Bank customers could extend beyond their age.

4.3.3 Awareness on the Services Offered by NMB Mobile Banking

The study wanted to know whether respondents were aware of the services offered by NMB mobile banking. The results in Table 4.6 indicate that out of 80 respondents, 58.8% respondents knew few services provided by NMB mobile banking. Those who were aware of the services mentioned them as bill payment,

balance inquiry, money transfer, mini statement, M-Pesa, PIN rescue as the most services offered by mobile banking.

Table 4.6 Awareness on Services Offered by NMB Mobile Banking

Responses	Frequency	Percentage
I know all of them	28	35.0
I know few of them	47	58.8
I know only one	5	6.2
Total	80	100.0

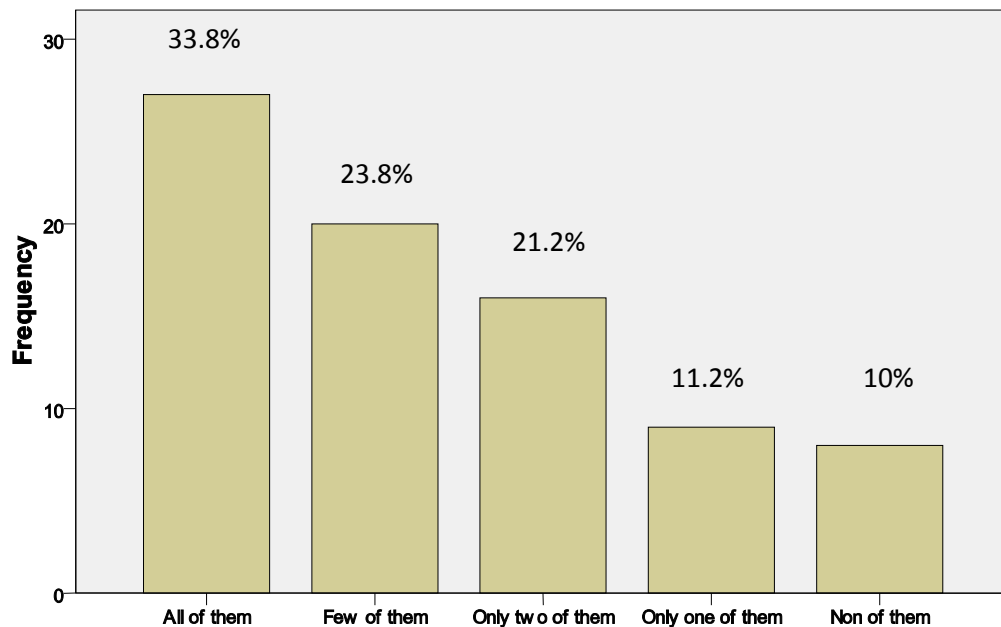
Source: Study Findings, 2013

During the interview, it was revealed that interviewees were aware of all the services offered by NMB mobile banking. This was due to the factor that the interviewees were bank officers or officials. Since the majority knew few services offered by NMB mobile banking, it implied that NMB customers were not utilising full the services offered by NMB mobile banking. This can be supported by Table 4.8 which also shows that 33.8% of the respondents used all the services.

4.3.4 Mobile Banking Services Used by Respondents

The study wanted to know mobile banking services used by customers. The findings in figure 7 show that 33.8% of the respondents were using all services offered by NMB mobile banking.

Figure 7: Mobile Banking Services Used by Respondents



Source: Study Findings, 2013

During the interview, it was found that people were using NMB mobile banking services according to their needs. Others were not using it effectively because they did not know how to write and read.

4.4. Challenges Facing Mobile Banking Services in Extending their Services

The introduction of any service may result to challenges in its uses. The challenges can be associated with extending the services to many users. Ishengoma (2011) quoted the findings conducted on January 2009 by Mobile Marketing Association (MMA) in their Banking Sub- Committee, found the following challenges were associated by mobile banking: on the handset operability it was found that there are a large number of different mobile phone devices and it is a big challenge for banks to offer mobile banking solution on any type of device. Some of these devices support Java ME and others support SIM Application Toolkit, a WAP browser, or only SMS. Another challenge was security. It was found that security of financial transactions, being executed from some remote location and transmission of financial information over the air. It was also found that there was a challenge of mobile banking

infrastructure to handle exponential growth of the customer base. Banks unable to meet the performance and reliability expectations may lose customer confidence. The study wanted to know the challenges facing mobile banking services in extending their services to many customers. The following were the results obtained:

4.4.1 Respondents' Awareness on Making Transactions

Awareness on using a service among users is very important for it to prosper. The study wanted to know whether respondents were aware of making transactions through mobile banking services. The findings as indicated in Table 4.7 show that 86.2% were aware of making transactions via mobile banking.

Table 4.7 Respondents' Awareness on Making Transactions

Responses	Frequency	Percentage
Yes	69	86.2
No	11	13.8
Total	80	100.0

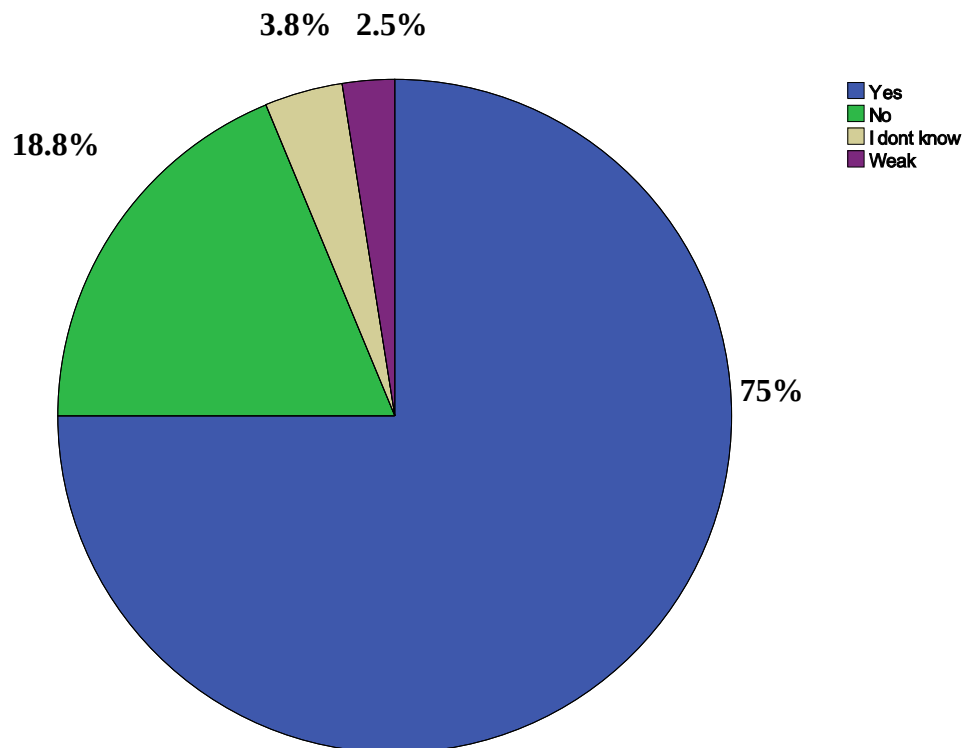
Source: Study Findings, 2013

The interview made showed that respondents were aware of making transactions through mobile banking. One of the respondents said *“you know...it is very easy. You just press the signs and figures authorised by your network and then you dial...after that everything will be displayed...then you choose a service you want....after that...you definitely make it.”* The findings show that the majority of the respondents were aware of making transactions through mobile banking. This implied that most of them were educated and thus there were the early adopters of technology. These results do not differ with those of Porteous (2007) who suggested that mobile banking users in South Africa are wealthier and better educated than the average South African with a bank account, let alone the average unbanked South African. Porteous suggests that the profile of the typical m-banking user in South Africa still resembles that of the “early adopter”

4.4.2 Proper Uses of NMB Mobile Banking Among Respondents

The most important thing is to know it and use it as recommended. This study wanted to know whether respondents were using NMB mobile banking properly. The results in figure 8 show that out of 80 respondents, 75% were using NMB mobile banking properly.

Figure 8: Proper Uses of NMB Mobile Banking



Source: Study Findings, 2013

During the interview, it was revealed that respondents were using the service properly. They said that their proper use of the service was due to paying attention to instructions given about the service. The findings show that the majority of respondents were properly using the service. This implied that most of them might be the learned ones. This can be supported by Cracknell (2004) and Peevers *at el.* (2008) who assert that even the simplest handsets have features buried deep in menu structures. If navigating an m-banking/m-payments interface is difficult for experienced mobile users with bank accounts, even greater is the difficulty for first-time users in the developing world, many of whom will have only been using a

mobile for a year or two. Again, Singh (2007) say that the challenges may run deeper than interface design. People coming to banking for the first time via the mobile handset require a command of abstract concepts about invisible/virtual money. Consider the lack of ways to wrap or “gift” a digital money transfer however, for those who were not using mobile banking are described by Chipchase *et al.* (2005) that their beliefs, misunderstandings, habits, and concerns must be addressed if people who are used to storing money in cash are asked to store it “in” a handset.

Generally, it was said that the main challenges facing NMB mobile banking in extending its services to many customers were network failure or unavailability of network in some areas, fraud or theft of customers’ money, little knowledge of customers in using the services, system error and limitation of transaction. All of these made the services not reaching many people as possible.

4.5. Use of Mobile Banking by NMB Customers

Extensive use of the service has many implications. It may imply that the service is good to consumers as it may be free from any harm to consumers. It also concern with the extent to which deliberate efforts were taken to make sure that the service is known to consumers. The study wanted to know whether NMB customers were extensively using mobile banking services. The results were as follow:

4.5.1 The Use of NMB Mobile Banking Among Respondents

The study wanted to know the uses of NMB mobile banking among respondents. The results in Table 4.8 indicate that out of 80 respondents, 85% used NMB mobile services.

Table 4.8The Use of NMB Mobile Banking

Responses	Frequency	Percentage
Yes	68	85.0
No	12	15.0
Total	80	100.0

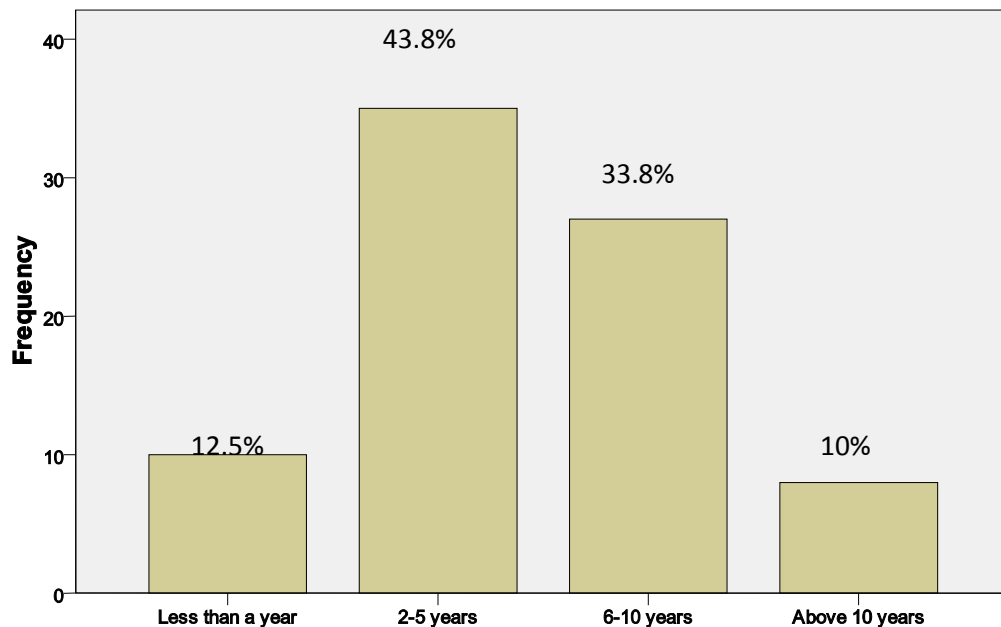
Source: Study findings, 2013

During the interview, it was revealed the majority were using mobile banking services. They said that NMB mobile services have helped them to save time of visiting their bank branches unnecessarily. These results implied that customers were benefiting from the uses of mobile banking that accelerated them to use the service extensively. According to other empirical studies like Porteous (2007), it shows that the best impact assessment is operationalised using an “access frontier,” which divides those who have the wherewithal, a monthly income from a formal source to open the most basic of conventional bank accounts. Those, the frontier who use m-banking/m-payments systems do so as an alternative or addition to other choices. Those from above the frontier have done so by necessity. Porteous concludes that the “transformational” impact of m-banking/m-payments services in South Africa has been small (so far) because virtually all of the users are from the frontier. Donner (2007) note that it has also been noted that since traditional banks have not been able to service a large portion of poor people, particularly those in remote places, given the high expenses of maintaining bank branches, mobile banking for the poor is less about convenience and more about accessibility and affordability.

4.5.2 The Longevity of Using Mobile Banking Services Among Respondents

The study wanted to know how long the respondents have been using NMB mobile services. The findings in figure 9 show that out of 80 respondents, 43.8% had been using the service for two to five years. 33.8% of the respondents had used the service more than five years but less than eleven years.

Figure 9: The Longevity of Using Mobile Banking Services



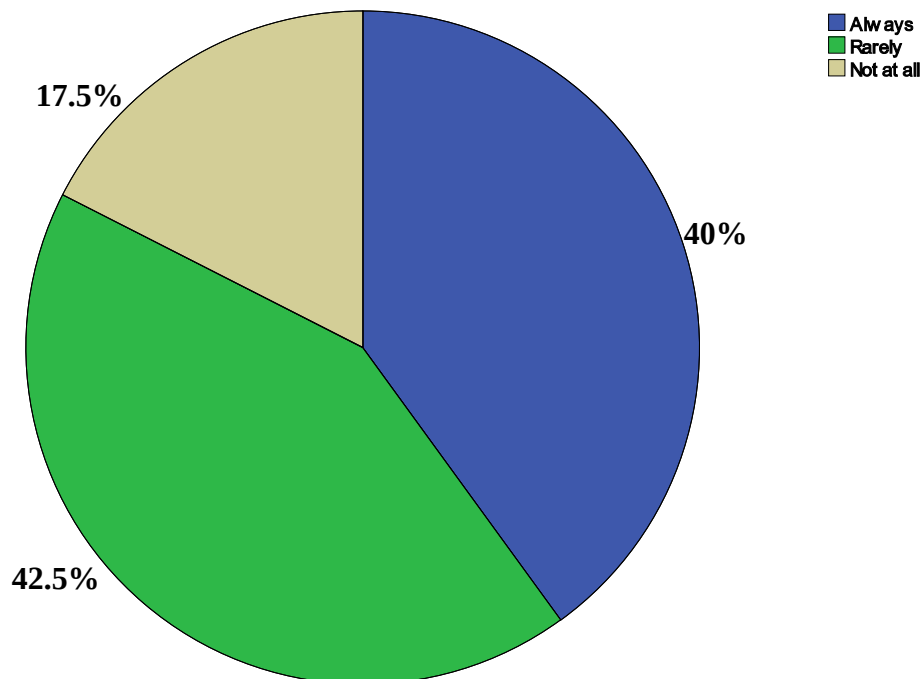
Source: Study Findings, 2013

The majority of interviewees indicated that they had been using the service more than two years. These results implied the majority of NMB customers had no long history of using mobile banking. This might be associated with the history of the service in Tanzania. For example, Mftransparency.org (2011) asserts that mobile banking was started in Tanzania in 2009 with the launch of ZAP, a mobile banking partnership between Standard Chartered Bank and Airtel. ZAP is a payment system that allows Airtel customers to deposit, transfer and withdraw money at their convenience through their Airtel handsets, at any place where mobile coverage exists. Now days there are many mobile banking services offered by banks and mobile phones operators.

4.5.3 The Rate of Using Mobile Banking Services Among Respondents

The study wanted to know the rate of using mobile services among respondents. The results in figure 10 show that out of 80 respondents, 42.5% were using the services rarely while 40% were always using the services.

Figure 10: The Rate of Using Mobile Banking Services



Source: Study Findings, 2013

The interview conducted showed that the rate of using NMB mobile banking depended on financial ability of an individual and business circulation. It was said that if a person was doing business and his/her business was doing good, he/she could use the service frequently contrary to the one who had no business. These results implied that there were no frequent uses of mobile banking among customers due to various reasons. Table 4.9 shows that people were not frequently using the services due to insecurity which counted 42.5% while high charges counted 22.55% of the respondents.

Table 4.9 Reasons for Not Frequently Using Mobile Banking Services

Responses	Frequency	Percentage
Inaccessibility	8	10.0
Insecurity	34	42.5
High charges	18	22.5
Never heard the services	11	13.8
Unreliability	9	11.2
Total	80	100.0

Source: Study Findings, 2013

These results concur with other empirical studies on mobile banking. For example Cracknell (2004) and infoDEV (2006) assert that users in the developing world, on the other hand, the appeal of these m-banking/m-payments systems may be less about convenience and more about accessibility and affordability. Furthermore infoDEV (2006) argue that mobile phone operators have identified m-banking/m-payments systems as a potential service to offer customers, increasing loyalty while generating fees and messaging charges. However, those observations also differed with those of Donner and Camilo (2008) who says that a large proportion of the volume of m-transactions may reflect existing transactional relationships, shifted over to the new channels. This is not to say that a shift is not itself valuable, there are significant benefits of cost, reliability, safety, flexibility, and immediacy associated with m-banking/m-payments systems. Again, Masinge (2010) found that the most critical factor for the customer was high cost and untrust due to insecurity. Thus, the service should be affordable and trusted as trust was found to be significantly negatively correlated to perceived risk. Nyakiha (2009) noted that despite the positive perception toward mobile banking services customers do face challenges and security threats when utilizing the service.

4.5.4 The Visiting of Respondents After Started Using NMB Mobile Banking Services

Table 4.10 showed that the majority were using NMB mobile banking services that were impressive outcomes to the bank and customers as well. However, the study wanted to know whether customers were still visiting their branched after they had started using mobile banking services. The results show that out of 80 respondents, 71.2% were still visiting their branches.

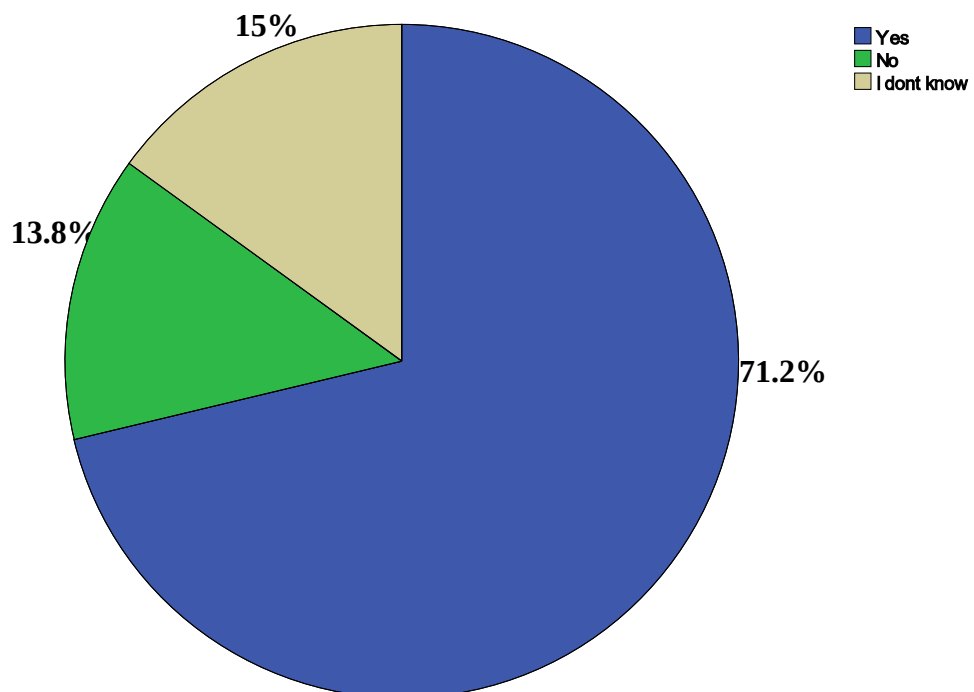
Table 4.10 The Visiting of Respondents After Using NMB Mobile Banking

Responses	Frequency	Percentage
Yes	57	71.2
No	11	13.8
I don't know	12	15.0
Total	80	100.0

Source: Study findings, 2013

The same information can be portrayed using pie chart in Figure 11.

Figure 11: The Visiting of NMB Branches Among Respondents After Using NMB Mobile Banking



Source: Study Findings, 2013

During the interview, it was revealed that despite the fact that mobile banking was there, NMB customers had to visit their branches because some of the services like deposit money forced them to visit their bank branches. One of the respondents said *“it is necessary to visit your branch no matter how many times you use mobile banking. Remember that there are limited uses of mobile banking.....it is very difficult to transact more than....let say five hundred thousand shillings. In this case you must visit your nearest branch for the service.”* The results show that the majority visited their branches even if they used mobile banking. This was due to various reasons as shown in table 4.11.

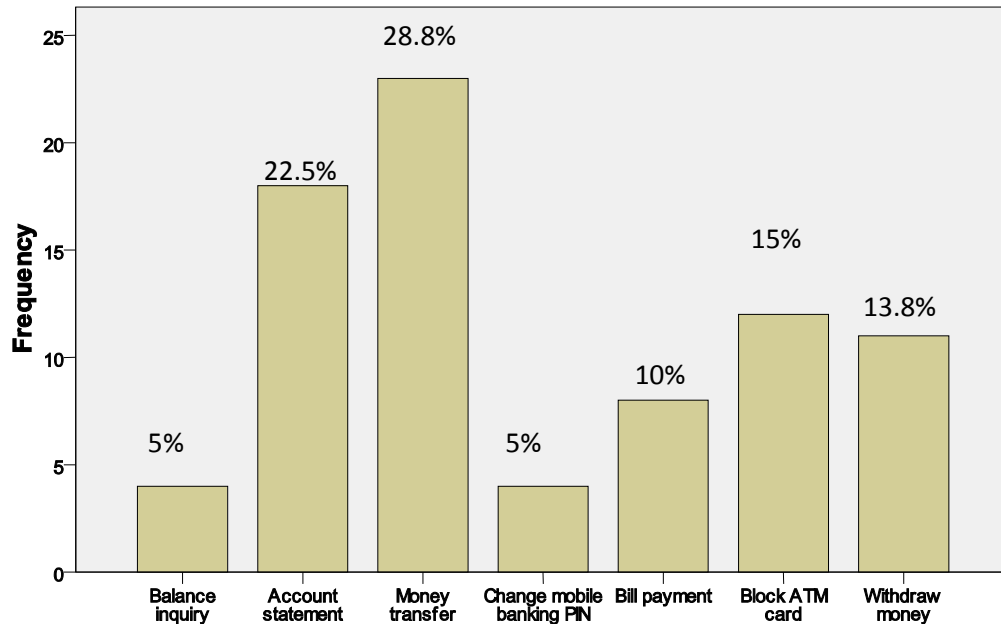
Table 4.11 The Main Reason of Visiting NMB Branches

Responses	Frequency	Percentage
Balance inquiry	4	5.0
Account statement	18	22.5
Money transfer	23	28.8
Change mobile banking PIN	4	5.0
Bill payment	8	10.0
Block ATM card	12	15.0
Withdraw money	11	13.8
Total	80	100.0

Source: Study Findings, 2013

The same information can be shown using bar chart in Figure 12.

Figure 12: The Main Reason of Visiting NMB Branches



Source: Study Findings, 2013

Table 4.11 shows that some reasons which made NMB customers to visit their branches were money transfer which counted 28.8% of the respondents especially the amount which could not be performed by mobile banking while those who visited for accounts' statements especially hard copies counted 22.5% of the respondents.

4.5.5 Respondents' Satisfaction With Mobile Banking Services

Customers' satisfaction is one of the important aspects that can attract them to use the service extensively. The study wanted to know whether customers were satisfied by the services offered through mobile banking. Table 4.12 shows that out of 80 respondents, 63.8% were satisfied with the services offered.

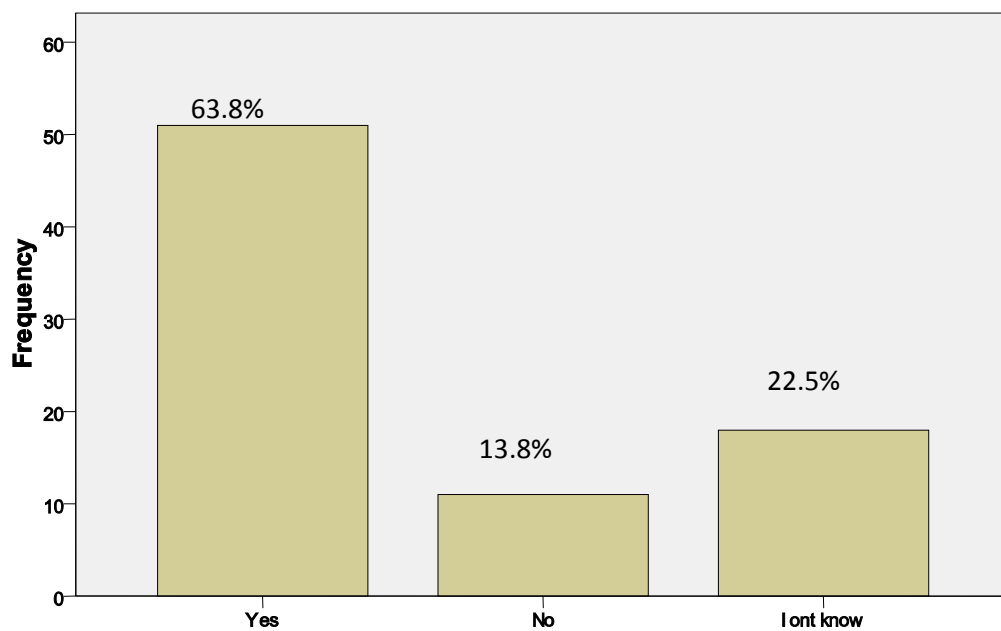
Table 4.12 Respondents' Satisfaction with Mobile Banking Services

Responses	Frequency	Percentage
Yes	51	63.8
No	11	13.8
I don't know	18	22.5
Total	80	100.0

Source: Study findings, 2013

The same information can be portrayed by bar chart as shown in Figure 13.

Figure 17: Respondents' Satisfaction With Mobile Banking Services



Source: Study Findings, 2013

The interview conducted show that the majority were satisfied with the services offered by NMB bank through mobile banking. These results implied that the service could attract many customers in a near future. These results do not differ with those of Mujemula (2009) who studied on the role of mobile banking in customer satisfaction. He found that mobile banking facility positively influences customer

satisfaction and he concluded that there is customer satisfaction on the use of mobile banking.

4.6. Problems Facing Customers Who Live Far From The Nearest Branch

Distance from the services may affect people from using a particular service. People always feel tired to go through ridges and valleys looking for a particular service which may have a substitute. Distance to financial services has long been a constraint for financial inclusion in sub-Saharan Africa, a region characterised by an especially high proportion of rural dwellers. In 2010, 63 percent of Sub-Saharan Africans lived in rural areas, and while this percentage has declined steadily from 85 percent in 1960, the absolute number of rural residents in sub-Saharan Africa has risen to 534 million from 196 million in 1960 (World Bank Development Indicators 2012). Evidence for the role played by geography in financial exclusion was provided in King (2012) who found that the usage of formal financial services was lower in rural areas across 11 sub-Saharan African countries surveyed, with rural penetration rates less than 15 percent in the poorer countries; Kenya, Malawi, Mozambique, Rwanda, Tanzania, Zambia as well as in Nigeria. It was from this perspective that drove this study to identify whether distance was among the problem facing NMB customers from using mobile banking. The results were as follow:

4.6.1 Accessibility of Transaction Services Via Mobile Phones

The study wanted to know whether there was accessibility of transaction services via mobile banking among NMB customers. The following as indicated in table 4.13 were the results. Out of 80 respondents, 50% were not accessing the service in their time in need.

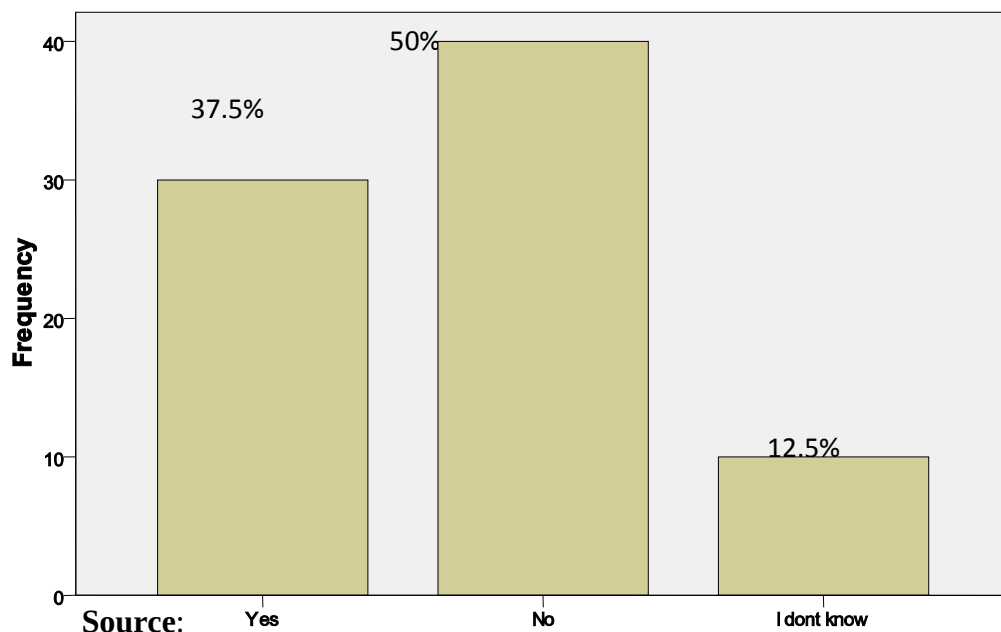
Table 4.13 Accessibility of Transaction Services via Mobile Phones

Responses	Frequency	Percentage
Yes	30	37.5
No	40	50.0
I don't know	10	12.5
Total	80	100.0

Source: Study findings, 2013

The same information can be shown using bar chart as indicated in Figure 14.

Figure 14: Accessibility of Transaction Services via Mobile Phones



Study findings 2013

Respondents interviewed showed that sometimes the services were accessible and sometimes the services were not accessible at all. These findings show that the majority were not accessing the services as their time in need. This implied that there was no assurance of the services among the customers that cause some of them not using or relying on them. For the purpose of ensuring accessibility of the service to customers, specifically ATM services which facilitate mobile banking at NMB,

Sekeran (1992) says that distance and related factors have to be considered in order to reduce wastage of time and sometimes guarantee of service at any time needed among customers.

4.6.2. The Distance of Respondents From Nearest Branch

The study wanted to know how far the respondents were living from the nearest branch. The following were the results as indicated in Table 4.14. Out of 80 respondents, 41.2% lived more than ten kilometers from the nearest branch. 28.8% were living two to five kilometers far from the nearest branch.

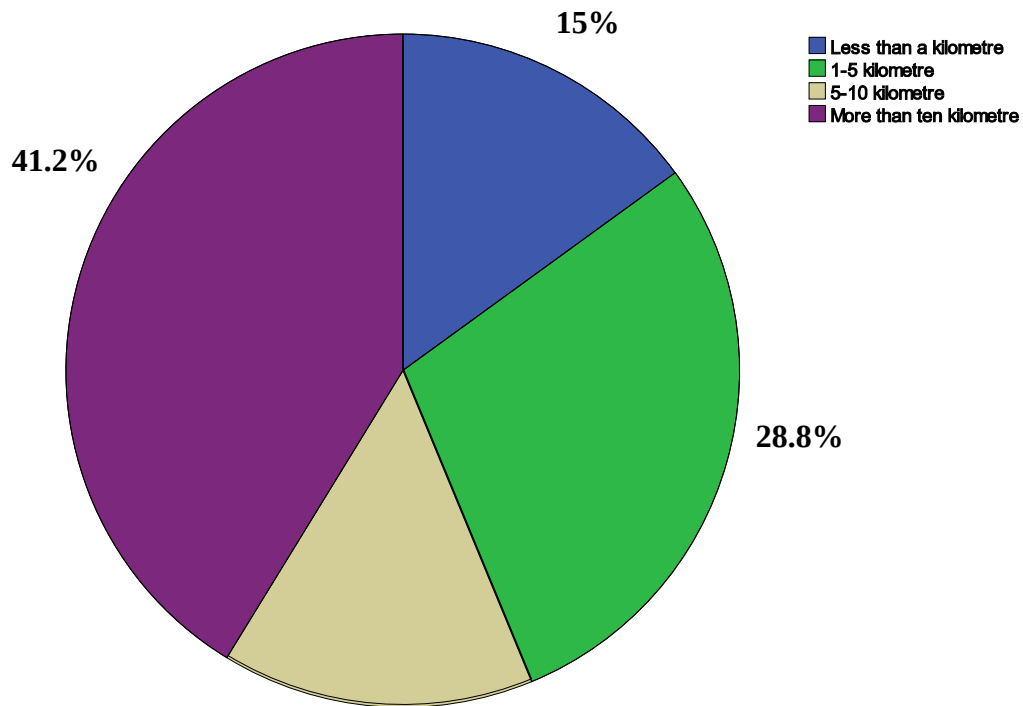
Table 4.14 The Distance of Respondents from Nearest Branch

Responses	Frequency	Percentage
Less than a kilometer	12	15.0
1-5 kilometer	23	28.8
5-10 kilometer	12	15.0
More than ten kilometer	33	41.2
Total	80	100.0

Source: Study Findings, 2013

The same information can be portrayed using pie chart as shown in Figure 15.

Figure 15: The Distance of Respondents From Nearest Branch



Source: Study Findings, 2013

The interviewed revealed that they were living more than one kilometer from the nearest branch/ATM. Only few of them were living almost two to eight meters from the nearest branch of NMB. These results implied that the services were not nearby by customers' lives. Thus, it could not attract them to use the services as one of the best services in the time of urgent. This might be associated with security purpose which the bank seeks most before installing any ATM. In this regard, Sekeran (1992) asserts that ATM is supposed to be a safe place where customers can go and withdraw the money without any interruptions. Security measures must be taken into account so that customers enjoy the services offered by bank. However, Kazibila (2010) says that poor infrastructure, supervision and security control system were found to be the main problem to the users.

4.6.3 The Effect of Distance On Using Mobile Banking

The study wanted to know the effect of distance from nearest branch/ ATM. The results in table 4.15 show that out of 80 respondents, 72.5% were affected by distance from using mobile banking.

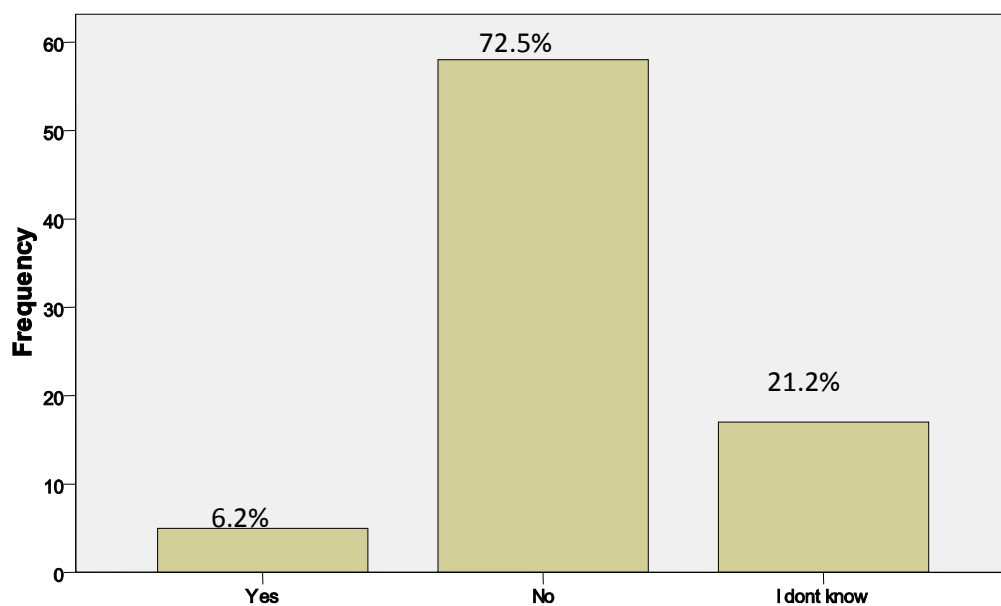
Table 4.15. The Effect of Distance on Using Mobile Banking

Responses	Frequency	Percent
Yes	58	72.5
No	5	6.2
I don't know	17	21.2
Total	80	100.0

Source: Study Findings, 2013

The same information can be obtained using bar chart as shown in Figure 16.

Figure 16: The Effect of Distance On Using Mobile Banking



Source: Study Findings, 2013

During the interview, it was revealed that distance from a nearest branch or ATM was not a factor of whether using or not using mobile banking. They said that there were many services that did not need ATMs or NMB branches. They mentions them like bill payment, money transfer, M- Pesa etc. one of the respondents said *“I don’t think whether distance is a problem because sending money to someone from your mobile phone does not need ATMs or a branch... it is just a matter of having cash in your account.”* The majority said that distance from a nearest branch/ ATM was

among the factors which affected them from using mobile banking services. They said that mobile services were useless if a person lived in remote areas where there was no ATM, branch and M-Pesa to mention but few, that he/she could not access cash money even if his/her account had enough money. However, these results differ with those of King (2012) who found that mobile banking in Kenya has overcome the tyranny of distance to bank infrastructure for the financial inclusion of all economic groups in Kenya. It should also be noted that King's (*ibid*) results cannot refute the fact that where people depend on ATM to draw their money from mobile phones, distance becomes the major factors of limiting users from using the services.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

The study concludes that since the majority of respondents knew few services offered by NMB through mobile banking, most of them applied few services. Thus, customers could use many services as possible if they could have the information about the services offered through mobile banking.

It is further concluded that the extension of NMB mobile banking was faced by fear of customers on using the services offered by the bank through mobile banking due to little knowledge among customers on the services offered through mobile services, fear of insecurity and network failure/error. This limited the uses of mobile services among customers of NMB bank.

Moreover, it is concluded that despite the uses of mobile banking among NMB customers only few of them were using the services effectively. This according to them was due to inaccessibility, insecurity, high charges and unreliability of the services.

It is also concluded that distance from nearest branch or ATM affected customers from using mobile banking effectively. Most customers were living one to ten kilometres far away from a nearest branch or ATM that limited their accessibility of the services.

5.2. Recommendations

Based on the findings of the study, the following recommendations are made:

- (i) Since the findings showed that the majority of respondents knew few services offered by NMB through mobile banking and therefore they were applying few services, this study recommends that NMB should educate its customers about the variety of services offered as well as the importance of using mobile banking in their daily activities.

- (ii) NMB bank should make sure that its network is reliable and constant in offering services. This will attract many customers to register for the services and therefore ease up their daily transactions.
- (iii) The bank should ensure security, reduce charges of using the services and increase the amount of money to be transacted daily so that customers can apply many services as they can.
- (iv) Since the distance from nearest branch/ATM seemed to limit customers from using mobile banking services, the bank should invest on installation of many ATMs especially in rural areas for the purpose of attracting many customers in using mobile banking services.

5.3. Areas for Further Research

This study examined challenges facing mobile banking services in reaching customers in Tanzania. Therefore, other studies can be conducted on the same issue but focusing on pure public sectors or pure private sectors to make comparisons with these study findings of this study. The study also can be conducted on motivational factors which hinder extensive uses of various services offered by banks through mobile banking.

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APPENDICES

Appendix 1 : Questionnaire for NMB customers

1. Introduction

Dear Respondent,

I am a student from the Mzumbe University undertaking Master Degree in Business Administration - Corporate Management (MBA – CM). In this regards, I am kindly asking your help in filling in this questionnaire which will be used as a data in examining the **challenges facing Mobile Banking Services in reaching customers in Tanzania**. The research is purely for academic purpose. I would like to assure you that the information given will be strictly confidential and will be used for academic purpose and not otherwise. I am humbly requesting your help to make this exercise successful.

A: Background Characteristics of the Respondents

1. Your sex (please tick only **one** answer)

Male []

Female []

2. Your age (please tick only **one** answer)

15-24 []

25-34 []

35-44 []

45-54 []

55-59 []

60 and above []

3. What is your education? (Please tick only **one** answer)

Primary	
Ordinary secondary	
Advanced Secondary	
Diploma	
Bachelor degrees	
Master degree	
PhD	

4. What is your Occupation?

- Employee []
Self employed []
Student []
Others [] Specify.....

F: Knowledge of NMB customers on the services offered by Mobile Banking.

5. Do you have any account with NMB Bank Plc? (Please tick only **one** answer)

- Yes []
No []

6. How long have you been with NMB Plc? (Please tick only **one** answer))

- Less than 1 year []
2-5 years []
6-10 years []
Above 10 years []

7. Do you know the services offered by NMB mobile banking? (Please tick only **one** answer)

- I know all of them []
I know few of them []
I know only one []
I don't know []

8. Please, mention the services offered by NMB mobile banking?

- i.....
ii.....
iii.....
iv.....
v.....
vi.....

9. How many of them do you use? (Please tick only **one** answer)

- All of them []
Few of them []
Only two of them []
Only one of them []

C: Challenges facing mobile banking services in extending their services to many customers

10. Are you aware that you can make transactions through Mobile banking services? (Please tick only **one** answer))

Yes	[]
No	[]
I don't know	[]

11. Can you use NMB mobile banking properly? (Please tick only **one** answer))

Yes	[]
No	[]
I don't know	[]

13. What do you think are the main challenges facing NMB Mobile banking Services in extending its services to reach many customers in Tanzania?

i.....

ii.....

iii.....

iv.....

D: NMB customers and extensive use of mobile banking

14. Are you using mobile banking services? (Please tick only **one** answer)

Yes	[]
No	[]
I don't know	[]

15. How long have you been using NMB mobile banking services? (Please tick only **one** answer)

Less than 1 year	[]
2-5 years	[]
6 - 10 years	[]
Don't remember	[]

16. How many times do you use Mobile Banking Services? (Please **tick only one** answer)

Always	[]
Rarely	[]
Only once	[]
Not at all	[]

17. If answer in question 17 is NOT 'Always'; why don't you use Mobile Banking services? (Please tick **many** answers as possible)

It is not accessible easily []

I am not sure of the security []

Transaction charges are high []

I have never heard the service []

There is no reliable network []

18. Do you still visit your bank since you started using Mobile banking Services? (Please tick only **one** answer)

Yes []

No []

I don't know []

19. What is the main reason that you typically visit your bank branch? (Please tick only **one** answer)

Balance inquiry []

Account statement []

Money Transfer []

Change Mobile Banking PIN []

Bill Payments []

Block ATM Card []

20. Are you satisfied with Mobile banking services?

Very Satisfied []

Not Satisfied []

I'm not sure []

E: Problems facing Mobile banking customers who live far from the nearest branch

21. Is it always accessible when making transactions via mobile phone? (Please tick only **one** answer)

Yes []

No []

I don't know []

22. How far do you live from the nearest branch? (Please tick only **one** answer)

Less than one Kilometre []

1 - 5 kilometres []

5 – 10 kilometres []

More than Ten kilometres []

22. Is the distance from the nearest branch or ATM has affected you from using mobile banking? (Please tick only **one** answer)

Yes []

No []

I don't know []

23. Do you think that distance limits people from using mobile banking services?
(Please give reasons)

i.....

ii.....

iii.....

iv.....

THANK YOU AND GOD BLESS YOU FOR YOUR COOPERATION.

Appendix 2: Guiding Checklist Questions for Bank Officials

1. How many ATMs do you have in your area?
2. Are they capable of saving the population?
3. What do you think are the challenges facing you in extending your services in this area?
 - i.....
 - ii.....
 - iii.....
 - iv.....
4. Are your customers using Mobile Banking service?
5. How many customers do they use Mobile Banking services?
6. Are NMB customers extensively using Mobile Banking?.....
7. Are the customers living far from the nearest branch/ATM use Mobile Banking services?
8. What are problems facing customers who live far from the nearest branch?
.....
9. Do customers have knowledge on the services offered by NMB Mobile Banking?
.....
10. How many services are mostly used by them?

THANK YOU VERY MUCH FOR YOUR COOPERATON