AN INVESTIGATION ON MOBILE BANKING ADOPTION IN THE ZAMBIAN BANKING INDUSTRY: A CASE OF INDO-ZAMBIA BANK

By

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ABSTRACT

Mobile phones have grown into a tool for everyday use and this creates a chance for the evolution of banking services. The study investigated factors that influence the adoption of mobile banking adoption among bank customers in Zambia, with specific focus on Indo-Zambia Bank and a special focus on awareness, perceived usefulness and perceived ease of use. The research model includes the original variables of extended technology acceptance model (TAM2). The results from the study revealed that, awareness, perceived usefulness and perceived ease of use had some level of significant effect on consumer intention to adopt mobile banking services provided by Indo-Zambia Bank. It was, therefore, recommended that banks in Zambia embark on massive awareness campaigns to capture the attention of customers and in order to build customer's confidence in mobile banking. Equally, banks should also endeavor to regularly update their mobile banking service to ensure that the service remains relevant and ease to use.

Key words: Mobile Banking, Adoption, Zambian Banking Industry, Indo-Zambia Bank, Awareness, Perceived Usefulness, Perceived Ease of Use.

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LIST OF ACRONYMS

ANOVA	Analysis of Variance
App	Application
BOZ	Bank of Zambia
DMRT	Duncan's Multiple Range Test
GSMA	Global System for Mobile Communications Association
ICT	Information and Communication Technology
IZB	Indo-Zambia Bank
MNOs	Mobile Network Operators
PEOU	Perceived Ease of Use
Pr	Probability (P-Value)
PU	Perceived Usefulness
SMS	Short Message Service
SPPS	Statistical Package for the Social Sciences
TAM	Technology Acceptance Model
TRA	Theory of Reasoned Action
USSD	Unstructured Supplementary Service Data
ZICTA	Zambia Information and Communication Technology Authority

CHAPTER ONE - INTRODUCTION

1.1 Background of Study

The improvement in Information and Communication Technology (ICT) within the world and so in Zambia has affected the service delivery in most organizations. Mobile phones have grown into a tool for everyday use and this creates a chance for the evolution of banking services to achieve the antecedently unbanked population through mobile banking (Luakkanen and Lauronen, 2005). Mobile banking can be defined as a facility that delivers banking services like transaction history, funds transfer, balance enquiry and bill payment via a user's mobile (Stair & Reynolds, 2008).

The convergence of telecommunication and banking services has created opportunities for the emergence of mobile commerce (Gu, Lee & Suh, 2009). Mobile banking services provide time independence, convenience and promptness to customers, along with cost savings (Gu, Lee & Suh, 2009). Indo-Zambia Bank like other banks has taken advantage of this opportunity and introduced mobile banking to its customers.

In the developing economies, there are more mobile banking users than bank account owners. The results of the ZICTA 2015 Survey showed that there were 24.5% of respondents using formal banking services compared to 28.5% using digital financial services. The convergence of telecommunication and banking services has created opportunities for the emergence of mobile commerce, in particular mobile banking. Mobile banking services provide time independence, convenience and promptness to customers, along with cost savings. Mobile banking presents an opportunity for banks to expand market penetration through mobile services (Lee, Lee & Kim, 2007).

According to Central Statistical Office estimate as at end of June, 2016 Zambia has an estimated population of 16 million people and according to a Zambia Information & Communications Technology Authority (ZICTA) report, the country has 11,309,494 mobile phone subscribers out of which 5,715,493 are mobile internet

users. There is significant growth in the use of mobile phones, with over 60% of the population in Zambia using them (ZICTA, 2015). In the same report ZICTA also announced that the number of mobile phone subscribers in the country has grown at a rate of 19.5% per annum in the last 8 years and service penetration of 70.3% in 2015. Mobile network coverage is improving in Zambia, especially as competition intensifies among the three players in the market and was reported to be as high as 92.8% among individuals (ZICTA, 2015).

Mobile phones have become a tool for everyday use, which creates an opportunity for the evolution of banking services to reach the previously unbanked population through mobile banking. The low-income people can have more access to basic banking services through the use of mobile banking, helping them minimize the distance and time to the nearest retail bank outlets. The major players in the mobile banking market in Zambia are banks and mobile network operators (MNOs) i.e. Airtel, Zamtel and MTN, though it is known as Mobile Money among MNOs (Bank of Zambia, 2017). The pioneers of mobile banking in Zambia was Zanaco, with its' Xapit offering in 2008 and it is not only the first in the country but has proved to be the most popular. Mobile banking offers the opportunity to reach out to the current 11million mobile phone users.

There are eight out of eighteen commercial banks that currently provide mobile banking services in Zambia i.e. Barclays Bank, First National Bank, Standard Chartered Bank, UBA, Zanaco, Investrust, Atlas Mara and Indo-Zambia Bank (Bank of Zambia, 2017). Banks are not only competing amongst themselves but with MNOs as well.

Mobile banking provides a secure and easy way of accessing and transferring funds, it provides means for access to savings products and services. Mobile banking gives the customer the zeal to bank as it enables one to carry out functions such as the following: account balance enquiry, intra-bank transfer, interbank transfer, airtime top up, bill payments, alerts, mini statements and account management. Mobile banking also gives the opportunity to banks to engage in SMS marketing which inexpensive compared to conventional marketing channels (stair and Reynolds, 2008).

In Zambia, mobile banking is offered through USSD which can be used on any basic phone, SIM Toolkit standard (STK) and Mobile App (Application) which can only be used on a Smartphone with internet connection. While app development is increasingly common, usage of mobile money apps remains low. According to the 2016 GSMA global survey results, apps were the second most common channel offered by mobile money service providers after USSD (Unstructured Supplementary Service Data) and more than 15% of total transaction volumes were processed through the app. Apps will become increasingly available as an option to reach customers and to capitalize on the opportunity that apps present, providers must continue to invest in a relevant and robust customer engagement strategy. In the context of this strategy, apps will be a powerful mechanism to interact with a growing and changing customer base (GSMA, 2016).

According to ZICTA 2015 report banks' mobile banking is not among the top five digital financial services accessed in Zambia. Zoona is the most accessed digital financial service provider having been accessed by 69 percent of the individuals that have used digital financial services before followed by Swiftcash at 28 percent. MTN Money is the most accessed mobile money financial service and third overall accounting for 17 percent of the total number of digital financial services users. Fourth is Shoprite Money Transfer which accounts for 14 percent while Airtel Money is firth and accounts for 13 percent of the total number of digital financial services users. Mobile money services are being used in Zambia for the following reasons (i) 75.1% sending or receiving money (ii) 27.1% buying airtime (iii) 25.2% paying bills and (iv) 22.6% store/save money (Fincope, 2015). It is important for banks to improve and maximize the adoption of mobile banking and meet the ever-changing needs of customers. Mobile banking providers in Zambia can learn from one success story that currently stands out in Africa: MPESA in Kenya, which managed to enroll above 50 percent of all adults in the country in less than four years to a mobile phone-based retail payment system (Klein & Mayer, 2011).

This research aims to examine the factors that influence mobile banking adoption among bank customers in Zambia with specific focus on Indo-Zambia Ltd and propose probable solutions to increase the adoption of mobile banking.

1.2 Statement of the Problem

Mobile banking is key for the delivery of financial services in Zambia it can provide benefits for both the mobile banking service provider (i.e. in this study banks) and the customer. In order for banks to maximize the adoption of mobile banking by their customer, there is a need for proper understanding of customer's behavior patterns. There are basic questions which need to be answered: Why do customers opt for mobile banking? Do they have sufficient knowledge about mobile banking service providers, services and products to utilize them? How does bank procedure affect mobile banking adoption by its customers?

Mobile money accounts have overtaken traditional bank accounts in Zambia, an indication that mobile banking is taking root in the country. Bank of Zambia (BOZ), which reported the statistics about mobile money accounts, also said that the number of users of mobile money services is expected to increase significantly over the next few years. The Zambian Central Bank 2016 statistics show that the country's mobile money accounts have reached 3.4 million compared to 2 million bank accounts. However, BOZ (2018) stated that the uptake and usage of digital financial products such as mobile banking is below expectation in Zambia and that there is need to popularize digital financial products. BOZ has since constituted a working group comprising BOZ officials and digital product services providers come up with strategies to popularizing digital financial services. BOZ further stated that the number of digital services are limited and there is need to introduce new services that meet the daily needs of an ordinary Zambian. The working group was also tasked with introducing new services in additional to popularizing digital financial products.

There is a problem in Indo-Zambia Bank when it comes to adoption of mobile banking. The uptake of mobile banking has been below expectation of top management. Despite the bank's effort to promote the adoption of mobile banking

services by its customers only 40,000 out of a possible 100,000 have so far enrolled for mobile banking since the service was introduced in 2014. Moreover, about 75,000 of customers already have their mobile numbers uploaded in the core banking system. The low uptake has negatively affected many customers because they have been deprived of the opportunity to adopt and use mobile banking. A possible cause of this problem is lack of awareness by the bank's customers. Perhaps a study which investigates adoption of mobile banking services by a pragmatic approach could contribute to finding solutions that may increase the uptake of mobile banking.

Research in the field of mobile banking and the analysis of variables connected, has mostly been done in the developed countries. However, in their analysis of innovation in developing countries, Hurley and Hult (1998) pointed out the need to investigate the concept of mobile banking adoption and consumer behavior in the developing countries such as Zambia. Therefore, a study in this area would be beneficial.

1.3 Aim and Objectives the Study

1.3.1 General Objective

The main objective of this study was to investigate the factors that influence the adoption of mobile banking in the banking industry in Zambia and suggest methods that may help to increase adoption of mobile banking services.

1.3.2 Specific Objectives

This research seeks to achieve the following:

i. To determine the level of customer's knowledge of mobile banking in Indo-Zambia Bank.
ii. To understand from point of view of customers the motive for adoption/non-adoption of mobile banking in Indo-Zambia Bank.
iii. To suggest possible methods that may be used to increase adoption of mobile banking in Indo-Zambia Bank.

1.3.3 Research Questions

The following questions were investigated:

1. What is the level of consumer's knowledge about mobile banking in Indo-Zambia Bank?
2. Why do customers opt to adopt mobile banking in the banking industry?
3. How can the bank increase adoption of mobile banking services by its customers?

1.3.4 Assumptions of the Study

1. The researcher assumes uniform impact of the identified factors influencing adoption of mobile banking.
2. The assumption is that customers who are yet to adopt mobile banking but are willing would benefit if the recommendations of the study are considered by the bank.

1.3.5 Ethics Statement

Approval to conduct this research in Indo-Zambia Bank Ltd has been obtained from the General Manager of the bank. Confidentiality of customers and staff members taking part in both the questionnaires and interviews was safeguarded. Moreover, there was open discussions and communication with staff members to ensure they did not reply to questions in a bias manner. Anonymity was key so that customers and staff members were able to answer freely, truthfully and without any fear of any repercussions for staff members. Furthermore, ethics clearance was obtained from UNZA HSSREC as required by the university.

1.4 Research Justification

The findings from this research work are expected to contribute to the banking industry, in that it brings an understanding of consumer behavior with regards to the

adoption of mobile banking. The findings from this research study can be used by banks to improve mobile banking facilities and to identify those factors that can either contribute to the failure or success of the mobile banking services and this could be further used for decision making. Banks could probably benefit from the outcome of this research since they are currently in stiff competition with other mobile banking providers like Mobile Network Operators. In addition, the research may help to bridge the gap that exists for Zambia by serving as a starting point for further research in mobile banking. To academia, the research may serve as a source of academic reference for further studies.

1.5 Scope of the Study

This research was conducted in all the branches of Indo-Zambia Bank across the country of Zambia. The survey was conducted on all eligible customers of Indo-Zambia Bank who had been accessing services of the bank during the six (6) months of the research. The research covered the following main constructs of adoption of mobile banking, that is, awareness, perceived usefulness and perceived ease of use. This research was based on the technology acceptance model (TAM) (Davis, 1989) as a research model.

1.6 Limitation of the Study

The limitations of this study are related to the nature of the research design. Since this is a case study, it has limited ability to generalize the results to other banks in Zambia. This is because Indo-Zambia Bank and its customers are not representative of the entire banking industry.

1.7 Organization of the Dissertation

This chapter introduced the study by outlining the background of the study, the statement of the problem, research objectives, questions and propositions, justification of the research and the scope of the study. The rest of this research paper is structured as follows.

Chapter Two – Literature Review: Reviews the theoretical and empirical literature behind mobile banking adoption, mobile banking in Zambian banking industry, theories and models of innovation adoption, drivers of mobile banking adoption and mobile banking technology solutions.

Chapter Three –Methods: gives an outline of the adopted research philosophy, design and tools that were used to obtain and analyse data for the study.

Chapter Four – Results and Discussion: presents the results in the form of tables and figures (charts and graphs) from the tests for the stated hypothesises. Discussions of Findings are also presented relating the results of the study to the reviewed literature.

Chapter Five – Conclusion and Recommendations: gives closure to the study by giving a summary of the research findings, give some concluding remarks, makes recommendations to the various stakeholders and suggest areas of further research.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter seeks to analyze relevant literature that is essential to improve the understanding of issues. This covers the theoretical literature and the empirical literature. The theoretical literature presents and tries to clarify theories that relate to the topic matter that's mobile banking adoption. The empirical literature describes what has been much ascertained and valid objectively in reference to the adoption of mobile banking.

2.2 Mobile Banking in the Zambian Banking Sector

Mobile Banking gives consumers the ability to perform banking services (i.e. alerts, transfers, and balance enquiries) through the use of their mobile devices (Barnes & Corbitt, 2003. According to Hammonds (2006), banks are business organizations that deal in money, thus banking consist of any service given and received from the bank, generally individuals open accounts with banks to save money and others attend the bank to borrow cash (Sobczak, 1997). Mobile banking might be described as a facility that provides banking services by means of a user's mobile phone (Stair & Reynolds, 2008).

Kondabagil (2007) defines mobile banking as an event "when customers access a bank's networks using cellular phones, pagers, personal digital assistants, or similar devices through telecommunication wireless networks". Mobile banking might even be defined as an application of mobile commerce that facilitates customers to bank virtually at any convenient time and place (Suoranta, 2007). Tiwari, Buse & Herstatt (2006a, 2006b) believes that "a cornerstone of m-commerce is built by m-banking"; many banks are making use of the opportunities presented by this innovation so as to enhance customer satisfaction, increase their bottom line, manage value and deliver positive transformation of payment system within the economy (Segan, 2011). In 2004, Finland-based Nordea bank experienced a high growth of 30% from the

utilization of transaction-based mobile financial services (Atkins, 2005). According to Ciuci (2010) mobile banking as the term connotes is banking "on the move" with the aid of a mobile telecommunication device and can be used for different purposes anywhere and at anytime. Mobile Banking allows customers to receive short message (SMS) through their phone, wireless application protocol (WAP) and Java enables phone support other banking activities using GPRS (General Packet Radio Service) such as direct payments confirmation and funds transfer (Mallat, Rossi & Tuunainen, 2004). From research 30 per cent of households in the United Kingdom use their mobile phones to perform banking operations (Mallat et al). Research in Zambia shows that, internet has only a penetration rate of 8.8 % in an estimated population of 15.5 million (2015 estimate) but access to mobile phones is close to 65 percent penetration with prospects for growth according to ZICTA (2015). Mobile devices show a promising way to the future which can reach larger population of customers irrespective of their location and this can lead to customer's loyalty. Many researchers have given proof of the benefits that may be derived from utilizing mobile banking services (Barnes & Corbitt), which consumers can derive when there is willingness to adopt the facility of the services.

The regulatory requirements for banks are more restrictive compared to mobile network providers. For example, the Zambian Financial Intelligence Centre (FIC) Act requires banks to verify the identities and residential addresses of customers opening a bank account, in order to reduce financial related crimes such as money laundering and fraud. To better understand the status of mobile banking in Zambia, examples of initiatives by various mobile banking service providers in particular banks are highlighted in the next subsections.

2.2.1 Indo-Zambia Bank (IZB) Mobile Banking

IZB mobile banking was introduced in 2014 and officially launched in February 2015 with the theme "Banking now at the touch of a button" (Indo-Zambia Bank, 2015). The service enables enrolled customers to perform their banking tasks from the palm of their hands from anywhere and at anytime. At the moment IZB Mobile Banking is only available to existing customers and they can only register for IZB Mobile

Banking by visiting the branch and filling in application form (Indo-Zambia Bank, 2017). Registered customers can access IZB Mobile Banking in two ways through USSD by dialing the bank's short code *232# using any phone and downloading IZB Mobile banking App from Google Playstore or Apple Store using a smart phone (Indo-Zambia Bank, 2017).

IZB Mobile Banking has the following features checking account balance, viewing account statement, own account money transfer, money transfer within the bank, money transfer to other banks, airtime topup across all networks, bill payment e.g. Zesco, DSTV, GoTV, Topstar, etc, View Forex Rates, Block Lost/Stolen ATM Card, Open/Close Fixed Deposit, Change PIN and other services (Indo-Zambia Bank 2017).

2.2.2 Zanaco's Xapit

Zanaco are the pioneers of mobile banking in Zambia, Xapit is the bank's mobile banking which was introduced in 2008. It is not only the first in the country but has proved to be the most popular. Xapit allows customers to bank as and when they please, 24/7 in the comfort of their home or Office. It can be accessed using any phone (Smart or Feature phone) by dialing the Bank's short code *444# or by downloading the Zanaco Mobile App from Google Playstore or Apple Store Zanaco, 2018).

The following are the necessary requirements to apply (Zanaco):

- Registration/Reset by visiting any Zanaco branch
- Registration/Reset via Zanaco's Contact Centre by calling 5000
- Self-Registration/Reset via the App or using the short code *444#

Xapit has the following features (Zanaco):

- Airtime purchases across all networks
- Bill payments for DSTV, GOTV, UNZA, CBU, Zambia Open University, Lusaka Water, Nkana Water, Lukanga Water, Mulonga Water, Kafubu Water & ZESCO Token Purchases.

- Banking services- Balance Enquiry, View Mini-statement, Block Card Functionality, FX Rates enquiries, Currency converter, Cheque Book Requests Full Statement Requests, Transfer to any valid mobile & Local as well as International Funds transfers.

2.2.3 Standard Chartered's Mobile Banking

Standard Chartered's Mobile Banking service gives customers access to their account direct from their mobile phone. Standard Chartered's mobile phone banking service can be accessed by dialing *424# or the bank's Mobile Banking App (standard Chartered Bank, 2017). The service is menu based and all functionalities available will be displayed after successful PIN verification. To register for Mobile Banking, someone must have a Standard Chartered bank account. The service has the following features funds transfer between accounts, bill payment, cheque book request, forex rates, airtime top up, check account statement, view mini-statement, etc (standard Chartered Bank).

2.2.4 Barclays Mobile Banking App

Barclays Bank mobile banking is an App based service, customers need to download the app on Apple Store on Apple device or Google Play on Android device (Barclays Bank, 2017). Login requires your existing Barclays Internet Banking information; which customers will receive once they register for online banking. Barclays Bank customers can use mobile banking to Access to their accounts at any time, Perform real-time transactions, View account balances, View Barclays statements and recent transactions, Transfer funds between Barclays accounts, Request a cheque book and Locate the nearest Barclays branch or ATM (Barclays Bank).

2.2.5 FNB Mobile Banking

At the moment, FNB Zambia, leads in the number of platform that can be used for Banking and Payments, with all operating systems covered for apps, online banking on web, mobi sites and cellphone banking via USSD (FNB Zambia, 2017).

- Buy prepaid Zesco units for yourself or some else
- Buy prepaid airtime for yourself or someone else
- Buy prepaid airtime for people roaming in other countries
- Pay for DSTV
- Pay for GOTV
- Send eWallet to any one on any network
- Check balances on one or all of your accounts
- Get a mini statement
- Transfer money between your own FNB accounts
- Make third party payments to pre-defined beneficiaries

2.3 Theoretical Literature

Many studies have focused on developed countries, innovation and adoption have attracted most attention in varied literatures, and this has generated several theories and models associated with the belief they influence the adoption of an innovation. These theories are utilized in several studies and is been utilized in developed countries. One among the innovations studied is mobile banking (Mattila, 2003). One of the innovations studied is mobile banking (Mattila, 2003). Such studies are very few in developing countries such as Zambia.

Many theories have been developed to study the framework of innovation adoption, however, with regards to present studies theories such as innovation diffusion theory, technology acceptance model (TAM), and theory of reasoned action (TRA) have been widely used.

2.3.4 Innovation Diffusion Theory

Diffusion research was initially done in the early twentieth century by Gabriel Trade, a French sociologist, who brought about the original S-shaped of diffusion curve which is of current importance (University of Twente, 2016). Diffusion is defined by Rodgers (1995) as the process of communicating an innovation or perceived new

technology through certain channels over a definite period of time among the group of a social system. He further described communication as a process by which people create and share information among one another to achieve a common understanding.

Rogers (1995) proposed and defined the five attributes influencing the rate of adoption of an innovation as follows:

- Relative advantage: which is the extent to which the innovation is perceived as better than the technology it replaces, including technical performance, risk, costs, or other attributes (Rogers);
- Compatibility: is the extent to which an innovation is perceived as being consistent with the existing values, past experiences and needs of potential users (Rogers);
- Observability: is the extent to which the results of a new technology can be observed or visible to others (Rogers);
- Complexity: is the level of difficulty in understanding and using the technology (Rogers);
- Trialability: is the ability to try or experiment with the performance of new technology on a limited basis (Rogers).

2.3.5 Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) was developed by Fred Davis in 1986 in his doctoral thesis at the MIT Sloan School of Management. Davis (1989) suggested that, users' motivation can be in three factors: perceived ease of use, perceived usefulness and attitude toward using the system. Davis proposed that the readiness of a user to use or not to use a new technology or information system is determined by his or her attitude, and this attitude is influenced by two beliefs which are perceived usefulness and perceived ease of use. TAM proposes that perceived usefulness and perceived ease of use are the two most important factors in explaining individual users' adoption intentions and actual usage (Davis). Perceived usefulness is defined by Davis as the degree to which a person believes that using a particular system will improve his or her job performance. In addition, Davis refers

to perceived ease of use as the degree to which the person believes that using the technology will be free of effort.

This model is the most widely used and widely accepted model among researchers due to its usefulness (Argarwal & Prasad,1998a, 1998b) and its usage has captured the attention of information system community attested by Mattieson, Peacock & Chin, 2011). Though the model has captured the attention of Information Systems community in predicting user's acceptance of technologies, Chin & Todd (1995) and Doll, Hendrickson & Deng (1998) believes that it has its weaknesses and cannot be fully used to understand factors that affect users' acceptance (Moon & Kim, 2001). Resulting from this, many other models of extension or modification have been suggested by Luarn & Lin (2005) and Mattila (2003). The constructs of perceived financial cost, perceived self-efficacy and perceived credibility have been adopted based on the literature, as an extension of Technological Acceptance Model (TAM) to investigate and understand the behavioral intention of users of mobile banking (Luarn & Lin, 2005).

2.3.6 Theory of Reasoned Action (TRA)

The Theory of Reasoned Action (TRA) was developed in 1900 by a French sociologist Gabriel Trade and was later revised by Ajzen & Fishbein (1980). Ajzen and Fishbein proposed that, a person's actual behavior are often determined by considering his formal intention together with the beliefs that the person would have for the given behavior. The intention that someone has before the particular behavior is remarked the behavioral intention of someone and this might be defined as a measure of one's intention to perform the behavior. Fishbein and Ajzen, additionally suggested that, a person's behavioral intention may well be determined by his attitude towards the actual behavior together with the subjective norm that is associated with the behavior. The TRA theories have been used to study human behavior and develop appropriate interventions in the 1980s.

2.4 Consumer Behavior towards Mobile Banking

Lamb, Hair & McDaniel (2000) define consumer behavior as the acts of decision-making which directly involve the obtaining and using need-satisfying products and services, which includes the decision-making process which precedes and determines these acts. According to Rice (1997), consumers are people who use products and services and who make payment for those things which are bought. There are two kinds of consumers according to Schiffman & Kanuk (2000); we have personal and business (organizational consumers). The buying of equipment, products, services, etc. just to facilitate their business is called business consumers while personal consumers are those individuals who buy goods and services for their own consumption. The act of obtaining and using economic goods and services is also referred to as consumer behavior according to Block & Roering (1979). Consumers involve in decision making process when they are making purchases either online or in store and banks can study these customers profile to have a better understanding of who their customers are, which will help them know the factors influence their purchasing behavior and the challenges face during an online transaction.

There are several predetermining factors that influence consumer attitude towards mobile banking and researchers have found out that motivation, demography and individual acceptance of new innovation or technology are some of the major causes. In developed countries, consumer's attitude may be influence by previous experience in related technology and it has help to increase the adoption rate due to previous experience but, this may be slightly different in the developing countries were technology is just taking its stand. According to Benamati & Serva (2007), many bank customers have to consider the issue of hacking, the integrity of the password been used, data encryption and personal protection of information when it comes to adoption of electronic banking. This and many more are the challenges faced by bank customers and this has either affected their decision positively or negatively.

2.5 Mobile Banking Technology solutions

Mobile banking services is currently used through three different channels namely SMS (Short Message Service) or messaging, client-based applications and browser-based (Tiwari & Buse, 2007).

On the SMS-based channel customers communicate with the bank through their mobile devices by sending an SMS to the bank. The SMS channel works in two ways, and it can be either a pull mode or a push mode. In the push mode, the mobile customer sends a text message to the bank which contains a service command with a predefined request code to the bank's specific number. The bank also replies with SMS containing the specific information requested from the bank while the pull mode is when the banks sends a text message to the customer to inform the customer about certain transaction that have just taken place over the account. An example of SMS-based channel is USSD, which is compatible with most mobile phones. This is the most popular channel used in Zambia by mobile banking customers and is available on all the bank's mobile banking platform.

The client-based method requires the customers to use software installation, and this will serve as a user interface that can allow customers to use the mobile device while offline to access transactions. An example of a client-based application is what is called the SIM Toolkit standard (STK). This client based application is particularly useful because it allows customers to stay offline while preparing transaction such as entry of account details and afterwards the transmission is made by sending out the data, this banking process conducted offline reduces online connection time and cost (Tiwari & Buse). In Zambia, Airtel Money and MTN Money are perfect examples of service providers offering SKT applications and they can be accessed entirely offline.

On the browser-based customer needs to be connected to the internet to use mobile banking. The interface is generated from the server which is transported to mobile device, and this allows the content to be displayed through the browser. The browser based requires a compatible mobile phone which is WAP-enabled. This method is extremely fast and efficient depending on the server that the customer is connected to

but one of its disadvantages is that, it requires the customer to stay online all through the transaction process and could lead to higher cost for the customers (Tiwari & Buse). An example of this method is the use of Mobile Apps.

2.6 Drivers of Mobile Banking Adoption

The research model is based on the main drivers of mobile banking adoption derived from Extended Technology Acceptance Model (TAM2). Three of discussed drivers of mobile banking adoption were used for research model as shown in Figure 2.1 below.

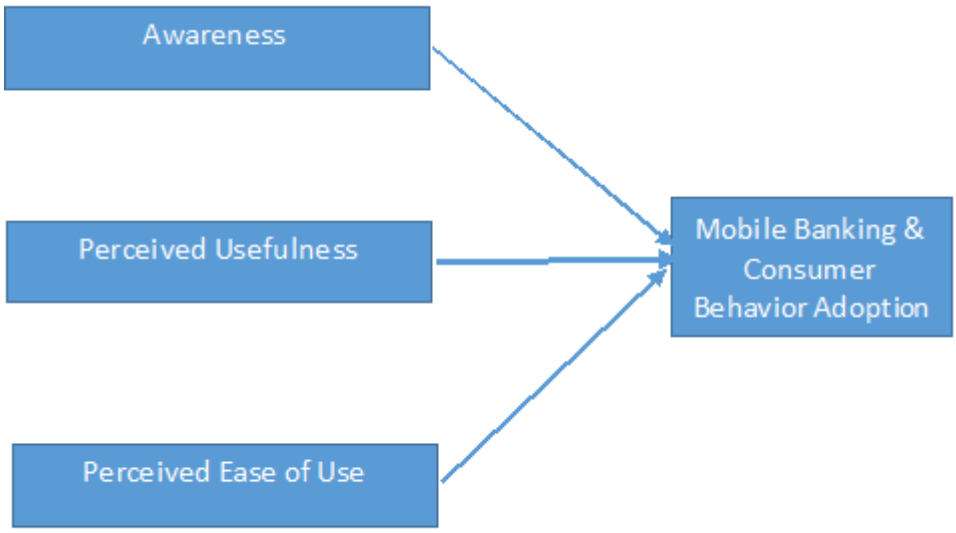

Figure 2.1 Proposed Research Framework

2.6.1 Awareness

The level of information consumers have on mobile banking is one of the major factors impacting the adoption and usage of online banking Sathye (1999). The adoption rate of an innovation could be determined by level of awareness of the customers Hurley & Hult (1998). The use of mobile banking services is new to many customers and banks need to create enough awareness to capture the attention of the customers.

2.6.2 Perceived Usefulness

Davis (1989) defines Perceived usefulness as the degree to which an individual believes that using a particular innovation would enhance his or her job performance. Therefore, it is believed that an innovation perceived to be useful is more likely to be accepted and customers will take advantage of the innovation such as mobile banking which they find useful to them (Luarn and Lin, 2005). As proposed by technology acceptance model, perceived usefulness is one of the two most important factors affecting the acceptance of new technologies or information system.

2.6.3 Perceived Ease of Use

Davis further defines perceived ease of use as the degree to which an individual believes that using a particular system or innovation would be free of physical and mental effort. It is believed that a customer will adopt an innovation or a particular system if it is easy to learn and use. An innovation perceived to be difficult to use by customers will be less adopted Rogers (1983). According to Cooper & Zmud (1997), ease of use of an innovation is one the most important characteristics for adoption of an innovation. Adoption of mobile banking is more likely to occur if the process of usage is easy for customers.

2.6.4 Compatibility

It is believed that the adoption of mobile banking service would be made possible if it's compatible with the customer's bank transaction needs (Mattila, 2003). Compatibility of an innovation is more likely to be adopted, if it is compatible with job responsibilities, customer's needs and value system according to Agarwal & Prasad (1998).

2.6.5 Social Influence

The adoption of mobile banking facilities would be possible if individual behavioral intention of a customer is influenced by what people around believe about it (Ajzen, 1991). Social influence such as the opinions of friends, parents, relatives is said to affect the customer's intention to adopt and use mobile facilities according to Rogers.

2.6.6 Perceived Credibility

The customer's intention to use an innovation or mobile device can be influenced by security and privacy (Luarn & Lin, 2005). According to Kondabagil security is a major problem facing customers whenever they make online transaction. In a similar study conducted on internet users by Cranor, Reagle, & Ackerman (2014), it was found that 81% of users are concerned about privacy when they are online. In a research conducted by Besavros (2000) it was found that, consumers are always reluctant to share their information online due to fear that their financial life will be open to the internet universe. Gaining the confidence of customers is of paramount important to service providers and if not well managed could discourage users and could encourage negative spread of information which could pullback intending customers.

2.6.7 Perceived Self-Efficacy

Self-efficacy is defined as the judgments of how well one can execute courses of action which is required in dealing with prospective situations. It is believed that there exists positive relationship between technological experience and the effects which it has on computer usage.

2.6.8 Perceived Financial Cost

This believes show that the cost of using mobile banking facilities could influence the intention to use mobile banking service. Innovation is always associated with many costs such as operation cost, utilization cost, investment cost (Rothwell & Gardiner,

1984). The cost of using an innovation is very important especially when it comes to the use of mobile device in mobile banking and the price of using such technology should be affordable by the customers (Min, Ji, & Qu, 2008). A study by Wu and Wang (2005) on mobile commerce adoption indicated that perceived cost had a significant effect on the adoption of mobile banking in Taiwan. By lowering the cost of using an innovation such as mobile banking, customers who are price conscious will be more likely to adopt the innovation.

2.7 Barriers to Mobile Banking Adoption

According to Finscope (2015) the major barrier to adoption of mobile phone based money transfer services in Zambia is awareness, 69% of adults interviewed indicated that they do not have/use mobile phone money transfer services because they do not know what it is/have not heard about it. Other barriers include 'not knowing how to get the service' (6.9%), 'not needing the service' (4.6%) and 'not understanding the service' (2.4%).

Koenig-Lewis et al. (2010) affirm that customer adoption remains the major barrier that hinders the development of m-banking. Understanding what prevents customers from using and adopting mobile banking is therefore important (Koenig-Lewis et al., 2010). People refrain from using mobile banking because it involves payments (Luarn and Lin, 2005), such as SMS fee (Crosman, 2011), security issues (Brown et al, 2003) and small keyboards and display screen of smart phone (Laukkanen, 2007b).

2.8 Empirical Literature

Mattila (2003) conducted a research in order to evaluate the factors influencing the adoption of mobile banking services in the innovation theory and, to also, formulate a model to describe the behavior pattern of users. Out of the 800 customers included in the study 710 responses were retrieved. Simple random sampling technique was adopted for the selection of customers included in the study. Results were analyzed by the use of SPSS and presented in the tables and charts. In this research, it was

found that access to internet facilities, perceived risk, compatibility issue, relative advantage, complexity, observability and interest to technological advancement all this affect the consumer adoption decision of mobile banking users.

Additionally, Laforet and Li (2005) carried out a research to examine the online mobile banking in China. Purposive sampling technique was adapted to a sample of five hundred (500) customers who transact their banking business online. Analysis was done quantitatively through a regression model. Based on this research it was established that lack of understanding and awareness of mobile banking benefits are the main factors hindering the adoption of mobile banking usage in China though perceived risk, culture and technological skills are also barriers to online banking in China.

Medhi, Ratan, & Toyama (2009) looked at the factors which are responsible for mobile banking adoption and its usage across different countries by focusing on low income earners and the low literate. The researcher adapted the purposive and convenience sampling technique. Using the SPSS to generate results, the research focused on non-bank model which uses the agents in its operation. It was observed that variations along parameters such household type, services adopted, frequency of usage, ease of use and pace of uptake. Factors which are responsible includes pricing, trust, reliability on informal channels, transaction turnaround time, interface design (mobile phone), needs, agent proximity, pricing, and level of human intervention (agent's support).

Luarn & Lin (2005) carried out a research in order to understand user's behavioral intention to use mobile banking service based on the extension of technology acceptance model (TAM). It was observed that the financial cost, perceived usefulness, self-efficacy, credibility and perceived ease of use were the factors influencing the behavioral intention to use mobile banking. In this finding, it was also observed that credibility was a major issue, which has a stronger influence on user's behavioral intention than the technology acceptance model (TAM) of perceived ease of use and perceived usefulness.

Amin, Hamid, Tanakinjal, & Lada (2006) carried out a research to analyze the adoption usage of mobile banking of the student willing to use mobile banking in the future. Questionnaires were administered to 250 respondents in two universities. The researcher used the quota sampling technique to select respondents. The researchers adopted both the qualitative and quantitative technique in analyzing results obtained from respondents. From the analysis, it was observed that attitude and expectation were the factors which are useful to predict the wiliness of the under graduate student to adopt mobile banking in the future.

In an empirical study conducted in Taiwan by Yang (2009) revealed the factors responsible for the hindrance and the adoption of mobile banking facilities among university students in Taiwan. Three hundred (300) students were selected for the study using the stratified sampling technique. Results were analyzed with the aid of SPSS specifically regression model. The research found out that, security and cost of connection to the internet was a hindrance to the adoption of mobile banking facilities among students in Taiwan.

Conducted by Zhou, Lu & Wang (2010) their study integrated the unified theory of use and acceptance of technology (UTAUT) and task technology fit (TTF) in explaining the adoption behavior of mobile banking user. Results obtained from the questionnaires administered for the study was analyzed using the regression model. From the investigation of the research, they found social influence, performance and task technology fit to be the factors which have a significant impact on the consumer adoption behavior of mobile banking.

A study conducted in Singapore by Riquelme & Rios (2010) examined the factors that could influence the adoption of mobile banking usage among the current users of internet banking facilities considering gender as a supporting variable. Respondents were selected purposively and analysis was done using the regression model. According to this research social risk, perceived usefulness and social influence are the most important factors that influence consumer intention to use and adopt mobile banking facilities among male and the influence on each factor also differs among male users.

2.9 Chapter Summary

The chapter analyzed relevant literature that is essential to improve the research. The theoretical literature attempted to explain theories related to mobile banking adoption including technological acceptance model and theory of reasoned action. The state of mobile banking in the Zambian banking industry was briefly outlined. The empirical literature highlighted what been practically observed and validated in the area of mobile banking adoption. Chapter three would deal with methodology and research design including population and sampling.

CHAPTER THREE - METHODOLOGY

3.1 Introduction

This chapter looks at the methods used to achieve the objectives of the study and it highlights research design, the sources of data and the methods that were used in the data collection for the research. It also identifies the target population for the study, the sample size and frame, sampling technique and how data obtained from the study would be analysed.

3.2 Research Design

In order to achieve the objectives of this study, the researcher adopted a pragmatic approach because as Teddlie and Tashakkori (2009,) pointed out that pragmatism is the "best paradigm" for mixed methods research. A pragmatic strategy gives not as much influence to philosophical assumptions for the carrying out of research methods. By adopting a pragmatic strategy, the researcher was less restricted in terms of how he could carry out this research. The researcher followed a mixed methods research design and a sequential design in which quantitative data collected first contributed to qualitative data collected next (Saunders, Lewis and Thornhill, 2009). The justification is that the use of a multi-methodology as Saunders, Lewis and Thornhill would like to call it, helps readers have a detailed picture of the real world. The researcher therefore desired to go beyond using a single (or, on occasions, more than one) methodology to generally combining several methodologies, in whole or in part, and possibly from different paradigms. Sequential paradigm crossing was used because the researcher wanted to overcome the deficits in the quantitative tool so that particular data in the qualitative phase could be used to enrich the research in an attempt to confirm or corroborate findings or cross validate findings (Tashakkori and Teddie, 2003). Quantitative research was used to provide numerical measurement and analysis of the mobile banking adoption dynamic. Survey questionnaires were used for standardisation purposes to allow for aggregation of the results. This research was conducted through a case study, qualitative research involved an in-depth investigation of the phenomenon of factors that influence adoption of mobile banking in the banking industry and how to increase uptake of mobile banking.

The investigation aimed to identify whether the independent variables are statistically significant factors in the adoption of mobile banking. The research established the effect of independent variables, which included awareness, perceived usefulness and perceived ease of use on dependent variables, i.e. the adoption of mobile banking.

3.3 Population and Sampling

3.3.1 Target Population

For the purposes of this study, the population was Indo-Zambia Bank Ltd customers who are eligible for mobile banking. The Bank currently has 32 outlets located in all ten provinces of Zambia and 100,000 customers eligible for mobile banking. The unit of analysis was an account holder of Indo-Zambia Bank who has a savings or current account and is eligible for mobile banking based on the bank's Mobile Banking Terms & Conditions.

3.3.2 Sampling

The basic idea of sampling is that by selecting some of the elements in a population, conclusions can be drawn about the entire population (Zikmund, 2003). In this study, by selecting samples of all customers eligible for mobile banking, a conclusion will be drawn about customers' behavior with regards to adoption of mobile banking in Indo-Zambia Bank.

3.4 Sampling Techniques

Random and purposive sampling was employed in this study. Random sampling was used for quantitative research to draw sample elements from a sampling frame that consists of all customers eligible for mobile banking. Purposive sampling was used to enrol only typical respondents who have adopted and those who have not adopted mobile banking. Purposive sampling enabled the researcher to select respondents that were willing to undergo interviews and best enabled the researcher answer research questions to meet research objectives.

3.5 Sample Size

According to Zikmund, sample size has a direct influence over the accuracy of the research findings. To determine a suitable sample size, it is necessary to specify the variation or standard deviation of the population, magnitude of acceptable error and confidence level. The sample size for quantitative assessment was 383 at 95% confidence level as determined by Saunders, Lewis and Thornhill. For qualitative assessment twenty (20) customers and six (6) members of staff were targeted to obtain rich information and learn a great deal about issues of central importance to the purpose of this study.

Approximately 450 questionnaires were prepared and circulated. A total of 412 responses were received. Of these, eight (8) responses had to be discarded due to invalid or incomplete data entries. Thus, the sample comprising of a total of 404 respondents was used for quantitative analysis. According to Saunders, Lewis and Thornhill, this exceeded the minimum required sample size to achieve a 95% confidence level for a population greater than 100,000.

3.6 Sample Frame

The sample frame for the study was all customers of Indo-Zambia Bank who are eligible for mobile banking and had been visiting the branch to access the services of the bank during the time of data collection.

3.7 Research Instruments

3.7.1 The Questionnaire

The survey questionnaire consisted of two parts. The first section focused on the respondent's demographic information and knowledge of mobile banking. The demographic variables included gender and type of account held with the bank. The respondents were also requested to indicate whether they currently use mobile banking. The

second section asked each of the respondent's perceptions of the statement based on the variables in the research model using the 5-point Likert scale from 1 ("strongly disagree") to 5 ("strongly agree"). The questionnaire aimed at identifying whether the independent variables were statistically significant factors influencing the adoption of mobile banking. The dependent variable has been defined as: the adoption of mobile banking, whereas the independent variables selected for this study (identified through the literature review) are: Awareness, perceived usefulness and perceived ease of use.

The survey was administered in all the thirty-two branches (32) of Indo-Zambia Bank with the help of Assistant Managers and Customer Service Officers who were the main administrators of the survey. Prior to the distribution of the survey to respondents, the researcher discussed with the administrators the whole survey for a better understanding of the methodology to be followed, the general mobile banking concept, questions or statements in the questionnaire and a possible explanation of the questionnaire in the vernacular. The administrators of the survey were able to assist the respondents, especially in rural areas, in completing the survey, translating the sentences to vernacular explaining the mobile concept for those who didn't understand.

3.7.2 The Interviews

The study also used personal interviews to collect primary data guided by interview consisting of open ended questions. The guide was developed in line with the objective of the study. There were two sets of interviews, the first set involved interviewing customers both adopters and non-adopters of mobile banking sampled from the survey. The interviews were conducted over the phone because of location of respondents since they were drawn from across the country. Respondents of the survey were asked to indicate their willingness to participate in the subsequent interviews and those who were willing provided their contact details. This interview focused on understanding customers' motives with regards to them adopting mobile banking. Customers were further asked to comment on the bank's awareness activities and the registration process and lastly to provide ways in which the bank can improve its awareness activities and mobile banking registration process.

The second set of interviews involved interviewing the bank's employees that are responsible for enrolling customers to mobile banking. This interview focussed on knowing employees' assessment of the bank's awareness activities, employees were also asked to give their view on why mobile banking is performing below expectation in comparison with other digital products. Employees were further asked to comment on the bank's mobile banking process and suggest ways in which the registration process can be improved.

3.8 Pre-Testing the Questionnaire

Before conducting the main survey, a pre-testing (pilot study) was conducted to validate the questionnaire. According to Zikmund, a pre-testing study provides an opportunity for the researcher to determine whether the respondents had any difficulty understanding the questionnaire. The pre-test affords an opportunity to check whether there are any ambiguous or biased questions (Zikmund).

The pre-testing study was sent to sixteen (16) respondents in two (2) batches, who were selected on a convenience basis. In the first batch, the respondents were asked to comment on the length of the instrument, the format, general understanding of the words used, and wording of the scales. All feedback was recorded and adjustments made to the questionnaire. The second batch was sent with all adjustments reflected, and an observation was made to judge the level at which the respondents interacted with the questionnaire. Once the pilot phase was completed, the survey was distributed to the intended population.

3.9 Data Collection Procedures

Recognising that the study employs sequential paradigm crossing, the researcher commenced collecting quantitative data using the survey questionnaire. Three key independent variables which determine the adoption of mobile banking as described in the theoretical framework which are awareness, perceived usefulness and perceived ease of use, were correlated with two possible outcomes which lead to the dependent variable customer adoption of mobile

banking. The lessons learnt from survey questionnaires were then used to frame questions for in-depth interviews with a few customers and staff members who handle mobile banking both at head office and at branch level.

Survey questionnaires and in-depth interviews were used to collect the required primary data. The mobile banking questionnaire was administered to all customers who were sampled and had met the inclusion criteria. Some customers and head office and branch staff members involved in enrolment to mobile banking were enlisted for in-depth interviews.

A paper based survey questionnaire was prepared and distributed to the intended population, in all thirty-two (32) branches of Indo-Zambia Bank. And in-depth interviews of selected respondents from first phase and relevant staff members later followed to conclude primary data collection.

Secondary sources of data collection were obtained for additional information. The study relied on both unpublished and published data such as, articles from journals and the internet which is related to the topic. Sources of all secondary data were duly acknowledged at the reference section of the research. Observations were also used as a secondary source of data.

3.10 Data Analysis

Since data was in two forms that is textual interview and quantitative uncoded data the analysis was different. For quantitative data, exploratory as well as analysis of variance were the main areas of analysis. The analysis of qualitative data involved aiming to uncover and/ or understand the big picture - by using the data to describe the phenomenon and what this means.

Descriptive statistic (such as mean and frequencies) analysis was conducted on the demographics data. Quantitative data was analysed using Microsoft Excel 2013 to generate descriptive data. The data was sorted to group questions according to applicable constructs under test. Statistical analysis was conducted on the data. According to Zikmund (2003), analysis of variance (ANOVA) is used when statistical differences in the means of at least two groups or population are to be compared. In this study the dependent variable is categorised into two groups; a group of adopters and non-adopters. A question within the

questionnaire was included to enable the categorisation of respondents into three groups: adopters (respondents who currently use mobile banking), potential adopters (respondents who intend to use mobile banking if useful, ease to use or other factors), and non-adopters (respondents who are not interested in using mobile banking), however, due to low number of respondents of 'not interested' group they were combined with potential adopters to form two groups. ANOVA was used to compare the means of the two groups to test for statistical significance at 0.05 level. ANOVA results would show if there is a difference in means, however, it won't pinpoint which means are different (Zikmund) thus the researcher further used Duncan's Multiple Range test (DMRT), a post hoc test, to measure specific differences between of means of the two groups of respondents . Duncan (1955) developed the DMRT approach to compare means, to apply the method, instead of comparing the difference between any two means with a constant least significant difference, each pair of means is compared against a different critical value which depends on the ranks of these means in the ordered array.

Qualitative data was analysed using qualitative content analysis. Content analysis involves coding and classifying data, also referred to as categorising and indexing and the aim of context analysis is to make sense of the data collected and to highlight the important messages, features or findings. The collected through interview will be in the form of qualitative data and the analysis of qualitative data will involve aiming to uncover and/ or understand the big picture - by using the data to describe the phenomenon and what this means. Qualitative data will be analyzed using qualitative content analysis. Content analysis involves coding and classifying data, also referred to as categorizing and indexing and the aim of context analysis is to make sense of the data collected and to highlight the important messages, features or findings. Qualitative content analysis does not restrict respondents on answers and has potential of generating information with much detail.

3.11 Hypotheses

The current study tested the determinants of the behavioral intention (BI) of mobile banking adoption. The main hypothesis is that the three constructs, which are awareness (Hurley and Hult, 1998; Sathye, 1999), perceived usefulness (Davis, 1989; Luarn and Lin, 2005) and perceived ease of use (Rogers, 1983; Cooper and Zmud, 1997), influence customers' behavioral intentions towards adoption of mobile banking. The conceptual model of constructs and behavioral intentions below is drawn from the extended Technology Acceptance Model (TAM2) (Luarn and Lin).

In the proposed research model;
Ad = function (Aw, PU, PEOU)
Where:
Ad is adoption of mobile banking a dependent variable.
Aw is awareness of mobile banking an independent variable.
PU is Perceived Usefulness an independent variable.
PEOU is perceived ease of use an independent variable

Drawing from the theoretical framework discussed in Chapter Two, the following null hypotheses were be tested:

- H1: Awareness does not influence the adoption of mobile banking.
- H2: Perceived usefulness does not influence the adoption of mobile banking.
- H3: Perceived ease of use does not influence the adoption of mobile banking.

3.12 Issues of Validity and Reliability

To ensure the validity and reliability of the questionnaire, a pre-testing of the questionnaire was undertaken within the study area to find out whether the instrument would meet the needed responses to ascertain it reliability. Additionally, all the three constructs were assessed using Cronbach’s alpha to measure the strength and reliability and validity.

Cronbach's alpha is a measure of internal consistency, that is to say, how closely related a set of items are as a group (Wu & Wang, 2005). It is considered to be a measure of scale reliability. Cronbach's alpha for the three constructs was generated using SPSS ver. 20.

3.13 Chapter Summary

The chapter outlined the method used to gather data, instruments used and the justification of using the instruments and the methods. Sampling methods used during the course of data gathering were presented. The chapter also highlighted the target population and the sample size, justification for its representation and its significance to the study. The selected methodology served the important purpose of restricting the study to investigating only relevant matters and maintains coherence in the study. Chapter four will deal with data analysis and presentation. Findings, conclusions and recommendations of this study would be presented in chapter five.

CHAPTER FOUR - DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The study was conducted in order to achieve two main objectives. The first objective was to determine the factors that influence the adoption of mobile banking in the banking industry in Zambia and the second objective was to establish measures that may help increasing adoption of mobile banking services. This chapter presents the findings of the study with regard to the said objectives and discussions of the same.

4.2 Sample size and response rate

Approximately 450 questionnaires were prepared and circulated. A total of 412 responses were received. Of these, eight (8) responses had to be discarded due to invalid or incomplete data entries. Thus the sample comprising of a total of 404 respondents was used for analysis. This exceeded the minimum required sample size of 383 to achieve a 95% confidence level for a population greater than 100,000 (Saunders, Lewis and Thornhill, 2009). The usable response rate amounted to 100%, which is satisfactory. From the received questionnaire feedback, some meaningful results were found and documented.

4.3 Reliability of Scale Results

The composite reliability was estimated to evaluate the internal consistency of the measurement model. Table 4.1 outlines the reliability of the measurement instrument. The composite reliabilities of the constructs included in the model ranged from 0.612 to 0.867 (see Table 4.1). All the main constructs have Cronbach's alpha above 0.60 which is acceptable; greater than the recommended benchmark of 0.60 (Wu & Wang, 2005). This shows that all measures had strong and adequate reliability and discriminate validity. Standard deviation tells the researcher how spread out the responses are, whether they concentrated around the mean, or scattered far & wide from the mean. Table 4.1 below shows that the responses for the awareness construct were nearer to the mean followed by perceived ease of use construct while perceived usefulness were to some extent spread out. Generally, a standard deviation is used purely as a descriptive statistic because it describes the distribution in relation to the mean.

Table 4.1: Assessment of construct reliability

Construct	Mean	Standard deviation	Cronbach's Alpha
Awareness	4.681	0.998	0.640
Perceived Usefulness	4.552	1.394	0.867
Perceived Ease of Use	4.322	1.171	0.612

4.4 Demographic Characteristics

This section outlines the findings on the demographic characteristics of the sample, which includes gender age, and type of bank account held with indo-Zambia Bank.

4.4.1 Demographics – Gender

Figure 4.1 below shows a fairly even split between male and female respondents, with males showing a slight edge in percentage (51%). Of the total 404 respondents, 206 were males whilst the females were 198.

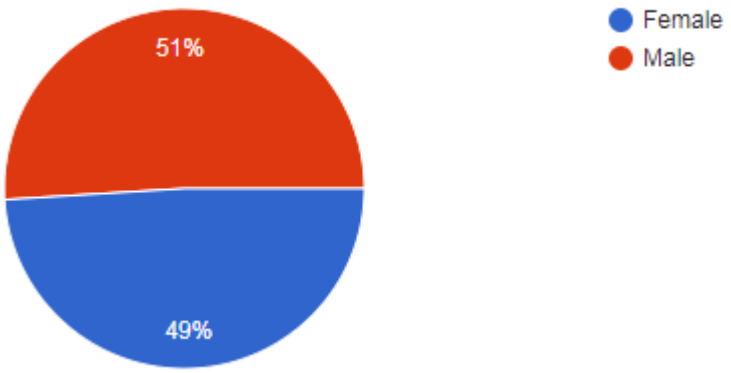

Figure 4.1 Demographics - Gender

4.4.2. Age Distribution of Respondents

Table 4.2 below unveiled the age groups of the respondents included in the study. About 1.98% (8) respondents fell within the lowest age group which was below 20 years while the

majority of the respondents 42.57% (172) were between the ages of 21 - 30, with 30.69% (124) respondents indicating 31 to 40 as their age group range. Another set of 20.05% (81) respondents fell within the age group between 41 to 50 and only 4.70% (19) of the respondents were over 51 age group. The study showed that, respondents between the ages of 21 - 30 were in the dominant group.

Table 4.2 Age of respondents

	Below 20 Years	21 - 30 Years	31 - 40 Years	41 - 50 Years	51 Years and above	Total
	8	172	124	81	19	404

4.4.3 Type of Bank Account Held

In Zambia an applicant needs to be 16 years old and hold national registration card to have a bank account without their parents' consent. To determine the type of bank held with Indo-Zambia Bank, the respondents were requested to indicate which type of bank account they held. On this question, 81.7% (330) of the respondents had a savings account, and the remaining 18.3% (74) respondents had current account (Figure 4.2). Table 4.3 further breaks down the account type into gender.

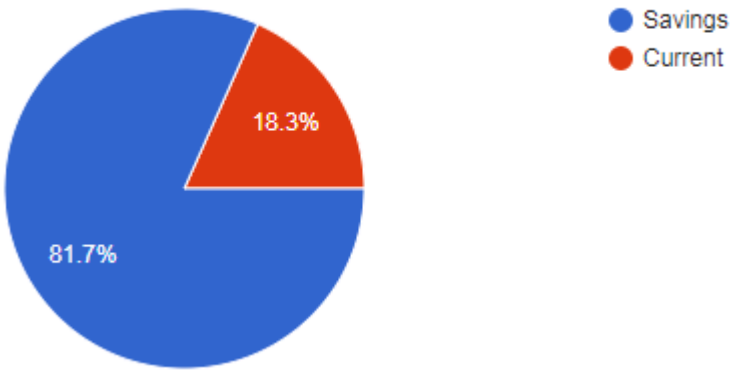

Figure 4.2 Type of account

Table 4.3: A cross-tabulation of gender & type of account

Gender	Respondents		Total
	Saving	Current	
Male	172	34	206
Female	158	40	198
Total	**330**	**74**	**404**

4.4.4 Awareness of Mobile banking, App, USSD, Services and Cost

To determine the level of customer's awareness of mobile banking in Indo-Zambia Bank Ltd, respondents were asked a series of questions about mobile banking. On the awareness of IZB Mobile Banking question, the majority 89.6% were aware of mobile banking facility, and the remaining 10.4% were not aware of the facility. Of those 362 that were aware 175 were female and 187 were male whilst of the 42 respondents that were unaware of IZB mobile banking 23 were female and 19 male. Table 4.4 below shows the breakdown of awareness of IZB mobile banking facility genderwise.

Table 4.4: A cross-tabulation of gender & mobile banking awareness

Gender	Respondents		Total
	Aware	Not aware	
Male	187	19	206
Female	175	23	198
Total	362	42	404

IZB Mobile banking facility is currently offered through two different channels namely Unstructured Supplementary Service Data (USSD) which is compatible with any mobile phone and browser-based application (Mobile App) where customer needs to be connected to the internet to use mobile banking. Respondents were requested to indicate whether they are aware of the two channels of accessing mobile banking. On awareness of USSD question, 318 (78.7%) indicated yes whilst 86 (21.3%) indicated no knowledge of the USSD channel

(Figure 4.4). And on the awareness of IZB Mobile Banking App question, 324 (80.2%) answered in the affirmative and 80 (19.8%) answered in the negative (Figure 4.3).

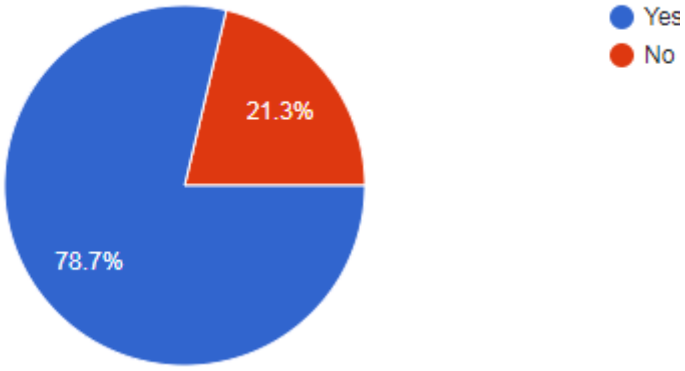

Figure 4.3 Awareness of USSD

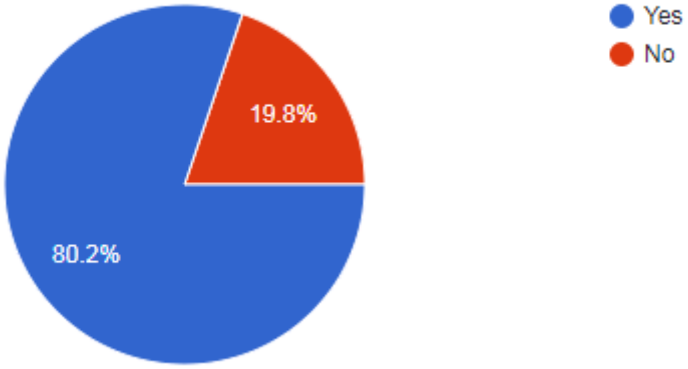

Figure 4.4 Awareness of Mobile App

Mobile banking facility enables customers to perform banking services such as balance enquiry, funds transfer, bill payment, and transaction history via a user's mobile phone (Stair & Reynolds, 2008). IZB Mobile Banking has a number of services and respondents were request to indicate which service they knew, 351 respondents had knowledge of atleast one service. Table 4.5 below shows that 'Check account balance' was the most known service with 85.1% of 404 respondents aware of this services followed by 'Airtime topup' (83.2%). On the other hand, 'Open/Close fixed deposit' (26.7%) was the least known followed by 'Block stolen/lost card' at 30.9%.

Table 4.5 Awareness of mobile banking services

Mobile Banking Service	Awareness Count
Check account balance	344 (85.1%)
View account statement	319 (79%)
Own accounts money transfer	297 (73.5%)
Money transfer within the bank	297 (73.5%)
Money transfer to other banks	266 (65.8%)
Airtime topup	336 (83.2%)
Bill payment	328 (81.2%)
View forex rates	213 (52.7%)
Block stolen/lost ATM Card	125 (30.9%)
Open/close fixed deposit account	108 (26.7%)
Change PIN	264 (65.2%)

According to a study by Wu and Wang (2005), perceived cost had a significant effect on the adoption of mobile banking. All IZB Mobile Banking services are currently free and in this study respondents were asked to indicate whether they were aware of this fact. Of the 404 respondents, 268 were aware that all services are currently free and 136 did not know (Figure 4.5). The cost of a financial service is very important and the bank under study needs to cease the opportunity and ensure that all customers who have adopted mobile banking are aware of that all services are free. One way of achieving this would be sending SMSs to all customer and remind them of the free services.

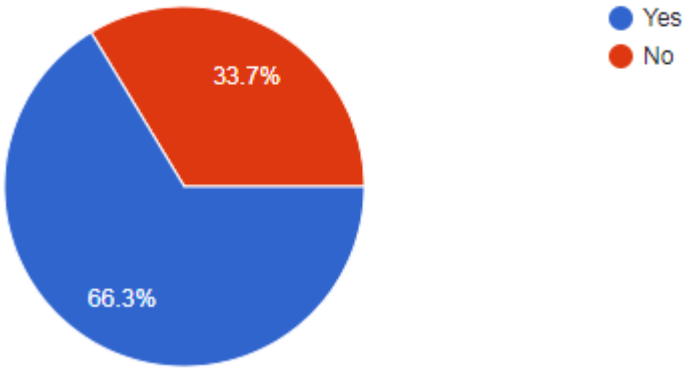

Figure 4.5 Awareness of IZB Mobile Banking costs

4.4.5 Reasons for non-adoption of mobile banking

To determine the reasons for not adopting mobile banking, the 86 respondents who had not adopted mobile banking were asked to indicate the reason for non-adoption of mobile banking. Four categories of answer options were available for the respondent to choose the applicable answer. The four options included, firstly 'I am not aware of mobile banking', secondly 'I do not need mobile banking,' thirdly 'I believe mobile banking is difficult to use', and fourthly 'Other reason'. The results (Figure 4.6) shows that awareness (48.8%) was the major reason for non-adoption followed by other reasons (22.1%), perceived ease of use (15.1%) was most reason and usefulness (14%) was last. It is worth noting that the 'Other reason' responses all related to the registration process perceived as cumbersome.

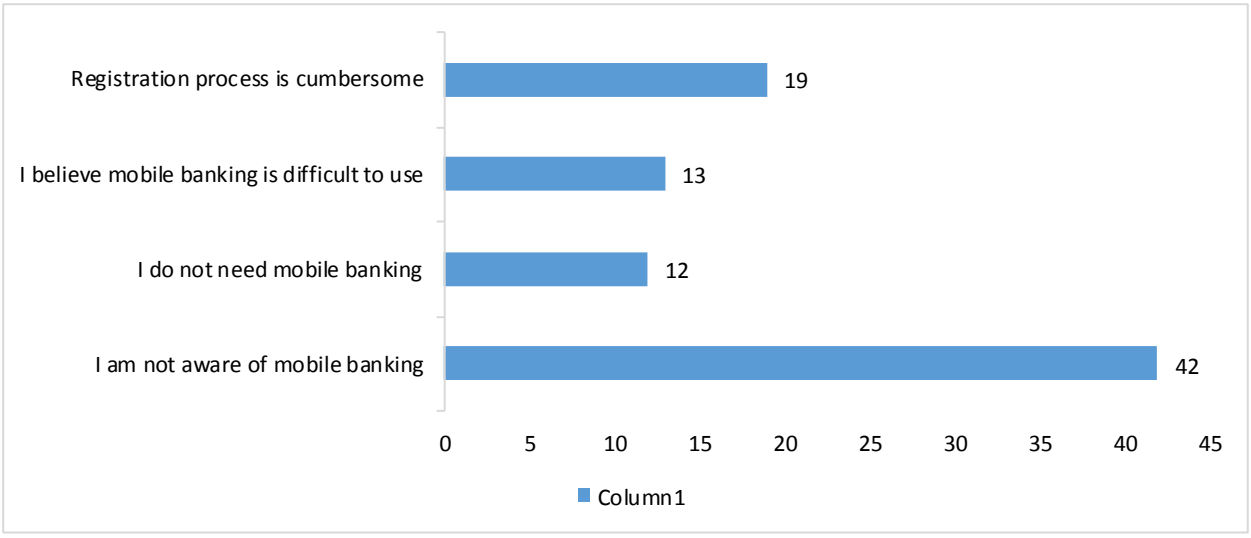

Figure 4.6 Reason for non-adoption of mobile banking

4.4.6 Customer Perception of Bank's Awareness Activities

To determine customers' perception of the bank's awareness activities, respondents were requested to indicate if they believed that the bank needed to create enough awareness about mobile banking. On this question, 65.6% (265) of respondents strongly agreed that the bank needs to create enough awareness to capture attention of customers (Figure 4.7). Further, 32.2% (130) agreed to the statement while 1.5% (6) strongly disagreed and 0.7% (3) were not sure (Figure 4.7).

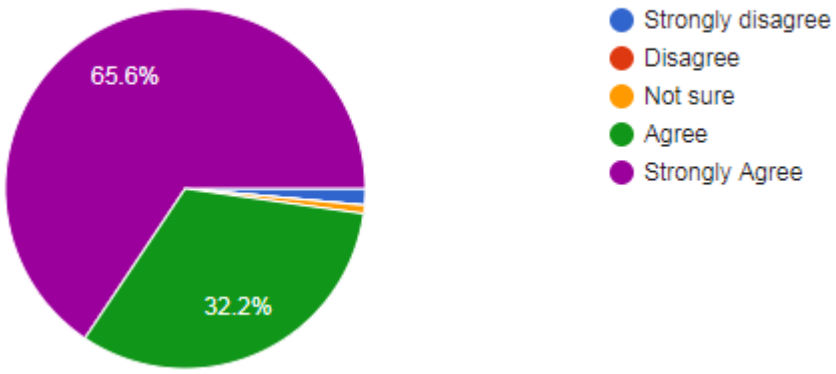

Figure 4.7 Perception of awareness activities

4.4.7 Factors that influence adoption of mobile banking

To determine the factors that influence adoption of mobile banking, respondents were asked questions related to the three independent variables that were being tested in this study. On the awareness as factor that influence adoption of mobile banking question, of the 404 respondents 77.2% strongly agreed to the statement, 22.3% agreed and only 0.5% strongly disagreed that awareness determines adoption of mobile banking facility (Figure 4.8).

On perceived usefulness as factor that influence adoption of mobile banking question, of the 404 respondents 67.3% strongly agreed to the statement, 25.2% agreed, 5% were not sure, 0.5% disagreed and 2% strongly disagreed that perceived usefulness determines adoption of mobile banking facility (Figure 4.9).

On perceived ease of use as factor that influence adoption of mobile banking question, of the 404 respondents 44.1% strongly agreed to the statement, 36.9% agreed, 14.4% were not sure, 1.4% disagreed and 3.2% strongly disagreed that perceived ease of use determines adoption of mobile banking facility (Figure 4.10).

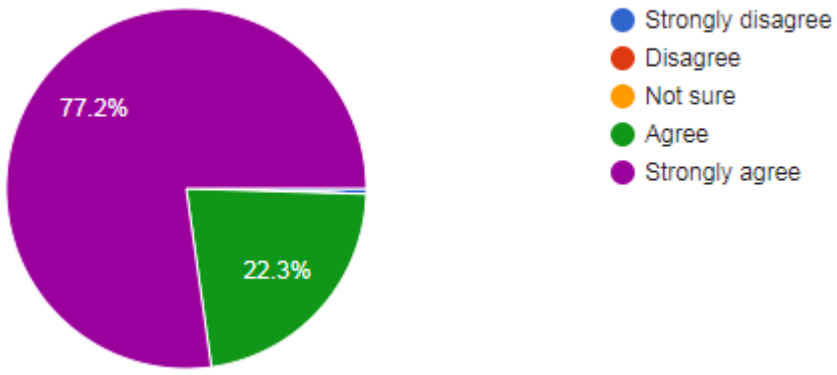

Figure 4.8 Awareness

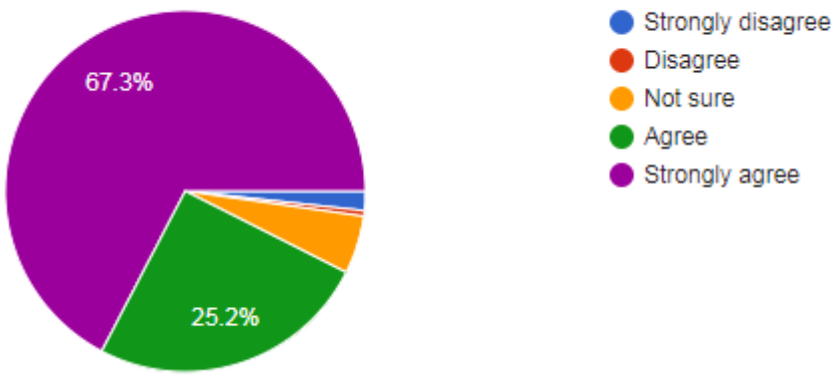

Figure 4.9 Perceived Usefulness

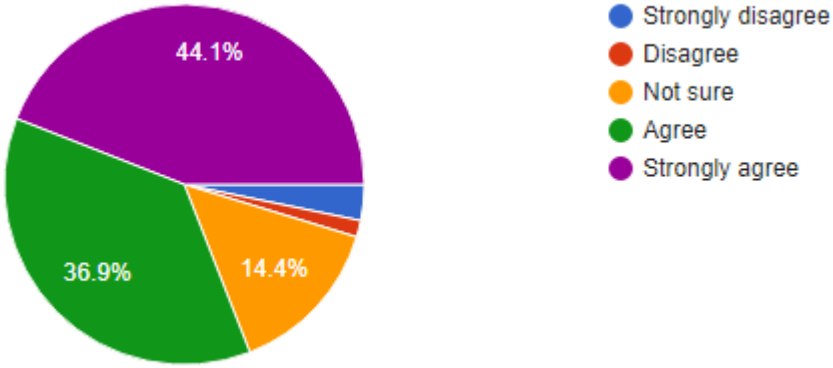

Figure 4.10 Perceived ease of use

4.4.8 IZB Mobile Banking Registration Process

To find out if the bank's registration process had an effect on adoption of mobile banking, respondents were requested to indicate how they agreed/disagreed with the statement 'mobile banking registration process is cumbersome'. On this issue, of the 404 respondents 15.3% strongly agreed to the statement, 15.1% agreed, 17.3% were not sure, 29.7% disagreed and 22.5% strongly disagreed that that the bank's mobile banking process is cumbersome as shown in Figure 4.11. It is interesting to note that most respondents who strongly agreed and agreed were those not currently on mobile banking but had previously applied for mobile banking and those that indicated not sure mostly comprised of those unaware of mobile banking.

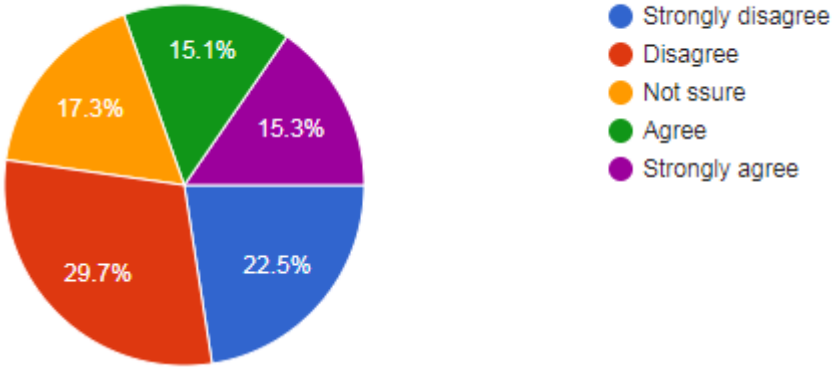

Figure 4.11 Registration Process

4.5 Descriptive Analysis Results

4.5.1 Current use or intention to use mobile banking services

To determine whether the respondents were currently using a mobile banking service, the respondents were asked to indicate whether they currently use or intend to use mobile banking. Three categories of answer options were available for the respondent to choose the applicable answer. The three options included, firstly 'Yes', secondly 'No, but interested in using, if useful, affordable and secure,' and thirdly 'No, not interested'. The respondents who answered 'Yes' were categorized as Adopters (Group A); those who answered 'No, but interested in using it in the future', were categorized as Potential Adopters (Group B); and those responded 'No, not interested' were categorized as Non-Adopters (Group C).

To examine the significant differences between the means of two groups when there is one variable, a simple ANOVA can be used (Salkind, 2008; Zikmund, 2003. For individual analysis of the various factors affecting the adoption of mobile banking, ANOVA was used.

In Figure 4.12, the results showed that 78.7% of the respondents had enrolled for mobile banking services (Group A), with 19.3% currently not enrolled the mobile banking service, but interested (Group B). The remaining 2% of the respondents indicated no interest in

adopting mobile banking services (Group C). Since Group C comprised of only 8 respondents it was combined with Group B when analyzing the data.

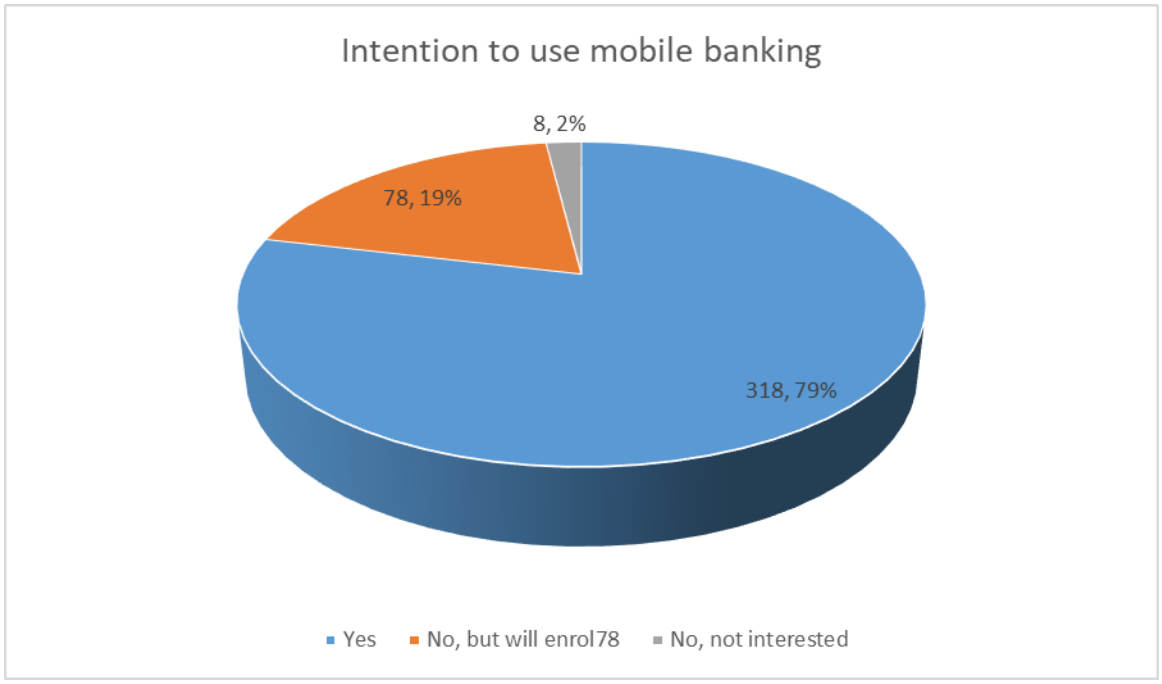

Figure 4.12 Intention to use mobile banking

4.5.2 Awareness

Table 4.6 shows that Group B (respondents not enrolled for IZB mobile banking) had slight higher Mean (4.76) on the Awareness construct, which means they mostly 'agreed' that awareness is an important factor in adopting mobile banking is useful. Group A (respondents currently enrolled to IZB mobile banking, but interested to use) also mostly 'agreed' that awareness is an important factor in adopting mobile banking (with a Mean of 4.66). The awareness of mobile banking was not based on actual utilization, but rather on whether they believed awareness played a role in them adopting or not adopting mobile banking. In this regard, the difference in means between the two groups was expected to be insignificant if the null hypothesis was to be rejected. The results of the Duncan's Multiple Range test showed that there is insignificant difference between the Means of the two groups (Group A and B).

Table 4.6: Duncan's Multiple Range Test: Awareness

Grouping	Number of sample	Mean	Standard Deviation
Adopted mobile banking	**318**	**4.66***	**0.62**
Yet to adopt mobile banking	**86**	**4.76***	**0.43**

Note: Mean with different superscript (*) means there is an insignificant difference between Means at 0.05 level.

4.5.3 Perceived usefulness (PU)

Table 4.7 shows that Group A (respondents currently enrolled to IZB mobile banking) had the higher Mean (4.67) on the PU construct, which means they mostly 'agreed' that mobile banking is useful. Group B (respondents not enrolled for IZB mobile banking) also 'agreed' that mobile banking is useful (with a Mean of 4.1). The perception of usefulness was not based on actual utilization, but rather on the behavioral intention of the respondents. On the PU construct the difference in means between the two groups was expected to be significant if the null hypothesis was to be rejected. The results of the Duncan's Multiple Range test showed that there is significant difference between the Means of the two groups (Group A and B).

Table 4.7: Duncan's Multiple Range Test: Perceived usefulness (PU)

Grouping	Number of sample	Mean	Standard Deviation
Adopted mobile banking	**318**	**4.67***	**0.70**
Yet to adopt mobile banking	**86**	**4.10^**	**0.71**

Note: Mean with different superscript (* and ^) means there is a significant difference between Means at 0.05 level.

4.5.4 Perceived ease of use (PEOU)

Table 4.8 shows that Group A (respondents currently enrolled to IZB mobile banking) had the higher Mean (4.44) on the PEOU construct, which means they mostly 'agreed' on the 'ease of use' of mobile banking. Group B (respondents not enrolled for IZB mobile banking) had a Mean of 3.87 which means they were between 'neutral' and 'agreed' on the 'ease of use' of mobile banking. The perception of ease of use was not based on actual utilization, but rather on the behavioral intention of the respondents. On the PEOU construct the difference in means between the two groups was expected to be insignificant if the null hypothesis was to be rejected. The results of the Duncan's Multiple Range test showed that there is significant difference between the Means of the two groups (Group A and B).

Table 4.8: Duncan's Multiple Range Test: Perceived ease of use (PEOU)

Grouping	Number of sample	Mean	Standard Deviation
Adopted mobile banking	**318**	**4.44***	**0.94**
Yet to adopt mobile banking	**86**	**3.87^**	**0.71**

Note: Mean with different superscript (* and ^) means there is a significant difference between Means at 0.05 level.

4.6 Analysis of variance Results

Table 4.9 below shows the ANOVA results of all the three constructs. The F value represents the obtained F value (F(1,402)), meaning the obtained F value with 1 degrees of freedom in the numerator and 402 degrees of freedom in the denominator. Pr is the probability of obtained F value greater than the critical value at the 0.05 level. When the Pr value is less than 0.05, it implies there is significant difference between the Means of the two groups as discussed in the previous section (Group A and B).

Table 4.9: Summary of ANOVA Results

Source (Independent Variable)	DF	DF2	Mean	F Value	Pr>F (at 0.05)
Awareness	1	402	4.680	4.177	0.0513
Perceived Usefulness	1	402	4.551	90.651	<0.0001
Perceived ease of use	1	402	4.322	55.463	<0.0001

Dependent Variable: Adoption of Mobile Banking

4.6.1 ANOVA Results: Awareness

The obtained F value of awareness is 4.177 and Pr is 0.0513 (Table 4.9). This means that there is insignificant difference between the Means at 5% level. This implies that there is a main effect for awareness for the adoption of mobile banking. Hence the research null hypothesis H1: Awareness does not influence the adoption of mobile bank; can be rejected and conclude that awareness is likely to influence the adoption of mobile banking.

4.6.2 ANOVA Results: Perceived usefulness

The obtained F value of perceived usefulness is 90.651 and Pr is <0.0001 (Table 4.9). This means that there is a significant difference between the Means at 5% level. This implies that there is a main effect for perceived usefulness for the adoption of mobile banking. Hence the research null hypothesis H2: Perceived usefulness (PU) does not influence the adoption of mobile banking; can be rejected and conclude that PU is likely to influence the adoption of mobile banking.

4.6.3 ANOVA Results: Perceived ease of use

The obtained F value of perceived ease of use is 55.463 and Pr is <0.0001 (Table 4.9). This means that there is a significant difference between Means at 5% level. This implies there is a main effect for perceived ease of use for adoption of mobile banking. Hence, the research null hypothesis H2: Perceived ease of use (PEOU) does not influence the adoption of mobile banking; can be rejected and conclude that PEOU is likely to influence the adoption of mobile banking.

4.7 Overall Quantitative Results

Table 4.10 shows awareness to have the highest Mean, and perceived ease of use to have the lowest Mean, as factors affecting the adoption of mobile banking.

Table 4.10 Variance between the factors

Importance of Factors	**Factors**	**Mean***	**Standard Deviation**
1	Awareness	4.680	0.998
2	Perceived usefulness	4.551	1.394
3	Perceived ease of use	4.322	1.546

Mean: where 1= disagree and 5= agree, to be a factor affect the adoption of mobile banking.*

Table 4.11 shows the summary of the overall results, as well as the outcome of the research hypotheses.

Table 4.11: Results Summary of Hypotheses

No	Hypotheses	Results	Reason
H1	Awareness does not influence the adoption of mobile banking.	Not supported	ANOVA results, F value 4.177,Pr=0.0513, Alpha=.05
H2	Perceived does not usefulness (PU) influence the adoption of mobile banking.	Not supported	ANOVA results, F value =90.651 ,Pr<0.0001, Alpha=.05
H3	Perceived ease of use (PEOU) does not influence the adoption of mobile banking.	Not supported	ANOVA results, F value =55.463 ,Pr<0.0001, Alpha=.05

4.8 Qualitative Results

Qualitative data was analysed using qualitative content analysis. Content analysis involves coding and classifying data, also referred to as categorising and indexing and the aim of context analysis was to make sense of the data collected and to highlight the important messages, features or findings. Qualitative data was collect through interviews in line with the objectives of this study and there were two sets of interviews. The approach to the interviews was semi structured. This was because although the same questions were asked to all respondents the questions were structured different for each respondent. The first set of in-depth personal interviews involved customers who have adopted mobile banking drawn from the survey and the second set was with member of staff involved in mobile banking. Twenty six (26) interviews were conducted comprising twenty (20) customers and six (6) members of staff from different branches.

4.8.1 Customers

The study established that awareness was the main factor for adoption of mobile banking in Indo-Zambia Bank. The qualitative findings corroborate the results from the survey that awareness is key in the adoption of mobile banking. This is also in line with the findings of the Finscope study carried out in 2015 which concluded that the major barrier for use of mobile money services was awareness (69%). The study identified that adequate information about mobile banking was not given to customers when they visited the bank. Even though the bank advertises its mobile banking facility, the right channels are not been utilized to reach the intended audience. Most respondents explained that the bank does not carry out enough awareness activities of mobile banking. The study identified that the bank needs to properly use the marketing mix in order to capture the attention of its customers and for competitors to notice. The bank has a good mobile banking facility but it is being sold in the wrong way. Among the suggestions from respondents included running mobile banking promotions where those registering for mobile banking in the promotion period have a chance to win several prizes e.g. mobile phone, data bundles, talktime, etc. It was further suggested that the bank needs to also advertise in some local languages with community radio stations whose wide audience mostly understand local languages and would feel appreciated if adverts were in the language they are comfortable with. Another suggestion from respondents was the conducting of roadshows to promote mobile banking facility.

The study established that the motives of customers for non-adoption of mobile banking facility was a lack of awareness and difficult experienced by some respondents in registering for mobile banking with the bank. Some respondents claimed that they have applied more than once yet are not registered for mobile banking and no explanation nor apology has been given to them by the bank. A number of respondents disclosed that they applied for mobile banking for almost a year but no feedback has being received. The study identified that while awareness was a major barrier for adoption of mobile banking, some who were aware of the service but faced difficulties to register for mobile banking.

The study found that of those who were not on mobile banking but were aware of mobile banking had the most dissatisfaction with the registration process of the bank. Some respondents called the registration process ‘complicated’ while others called it ‘not easy’,

‘not friendly and ‘takes long’. The study established that customer dissatisfaction emanated from lack of feedback from the bank which gives the impression that the registration process is ‘complicated’, ‘not easy’, ‘not friendly’ and ‘takes long’. Of course the registration process is not perfect and some improvements could benefit customers the biggest problem is a lack of feedback from the bank. Appropriate communication could change the perception of customers with regards to registration process. Those respondents who were not aware of mobile banking as expected were neutral on the satisfaction aspect of the study.

The respondents suggested a number of ways in which the bank could improve the uptake of its mobile banking facility by customers. The first suggestion was that the bank needs to improve its communication to customers, respondents were of the view that the bank does not carry out enough awareness activities to sensitize customers about mobile banking and how to apply for it. And at the time of application customers are not given adequate information about the service, some were of the view that some staff member who were dealing with customers in to mobile banking registration seemed not to have enough information on mobile banking. It was suggested by respondents that the bank needs to train some of its staff member in order to acquire adequate information about mobile banking and communicate effectively to customers who visit the branch.

The second suggestion was that the bank needs to improve the registration process of mobile banking. The bank’s mobile banking app has a provision for self-registration but is not enabled by the bank much to the frustration of customers, respondents were of the opinion that the needs to enable the self-registration function rather than the current procedure of completing the form physically at a branch. This they believed would tremendously increase the number of customers applying for mobile banking. Respondents further suggested that the time it takes to apply and receive the message of login credentials should be shortened to within hours compared to an average of one (1) day.

4.8.2 Staff members involved in mobile banking registration

On the bank’s awareness activities to promote adoption of mobile banking staff members were of the view that the bank does not carry out enough sensitization to create enthusiasm

among customers. They believed compared to how other banks like Zanaco are promoting their mobile banking, Indo-Zambia Bank is not doing enough. They were of the opinion that the bank needs to first of all sensitize all staff members to ensure that they all use mobile banking and become familiar with the facility. This they believed will give confidence to staff members to market the facility to customers and give them adequate information about the facility. They believe that the bank has a very good mobile banking facility.

With regards to why there is low uptake of mobile banking among the bank's customers and why mobile banking is performing below expectation in comparison to other digital products like Visa cards, respondents were of the view that lack of awareness is a major factor for low uptake of mobile banking. This corroborates the findings of the survey that awareness does indeed have an influence on the adoption of mobile banking. The study discovered that some staff members involved in the mobile banking registration process were not aware of certain services provided by IZB mobile banking and the fact that all services were currently free. The other major reason was that respondents were of the view that some customers perceived mobile banking was difficult to use, because of lack of awareness or no interaction with mobile banking some customers perceived it to be difficult to use and difficult to enroll.

There were a number of suggestion by respondents on how the bank can improve the uptake of mobile banking. The most popular suggestion was training of all staff members especially those involved in mobile banking registration and internal marketing because staff members are also customers when it comes to them adopting mobile banking. The respondents were of the belief that if they were properly trained they would be equipped with the necessary knowledge of mobile banking and would subsequently execute their duties confidently and efficiently to the satisfaction of most customers. Apart from training, they believed that internal marketing of mobile banking would really increase enthusiasm among staff members, feedback from internal marketing could be used as input when crafting external marketing activities. It was further suggested by respondents that the bank should desist from frequent rotation of staff members involved in enrolling customers to mobile banking this would ensure staff members gain much needed experience in dealing with mobile banking matters. Most respondents were of the view that new members of staff should not be given the task of enrolling customers to mobile banking because their mistakes could negatively affect the perception of customers towards the bank.

4.9 Discussion of results

The findings of this study on factors that influence the adoption of mobile banking are well aligned to previous studies (Laforet and Li, 2005; Finscope, 2015; Cudjoe, Anim and Nyanyofio 2015; Luarn and Lin, 2005) which confirms that awareness, perceived usefulness and perceived ease of use are major factors in the adoption of mobile banking. This section focuses on discussing the results and evaluating the research hypotheses as presented. The three hypotheses are supported by the ANOVA analysis. To reiterate, the ANOVA analysis compares the statistical differences in the means of at least two groups.

4.9.1 Awareness

The level of information consumers have on mobile banking is one of the major factors impacting the adoption use of mobile banking. Awareness is a determinant of behavioral intention (BI). For this study, BI is analogous to the adoption of mobile banking. It was therefore expected for awareness to have a significant effect on the user's adoption of mobile banking on IZB customers.

The ANOVA results (Table 4.7) showed that the awareness factor had a significant effect on the adoption of mobile banking IZB customers. Furthermore, the descriptive results (Table 4.4) showed that the mean of both groups felt that awareness is an important factor in the adoption of mobile banking. The literature therefore reinforces the findings of the analysis, and the hypothesis that awareness does not influence the adoption of mobile banking by IZB customers is rejected with supporting ANOVA results.

4.9.2 Perceived usefulness (PU)

Davis (1989) defines PU as the degree to which a person believes that using a particular system will enhance his or her job performance. Mobile banking gives a user convenience; an opportunity to conduct banking transactions anywhere at any time. According to Venkatesh et al. (2003), PU is a determinant of behavioral intention (BI). For this study, BI is analogous

to the adoption of mobile banking. It was therefore expected for PU to have a significant effect on the user's adoption of mobile banking on IZB customers.

The ANOVA results (Table 4.7) showed that the PU factor had a significant effect on the adoption of mobile banking by IZB customers. Furthermore, the descriptive results (Table 4.5) showed that the mean of current users felt that mobile banking is useful. The literature therefore reinforces the findings of the analysis, and the hypothesis that PU does not influence the adoption of mobile banking by IZB customers is rejected with supporting ANOVA results.

4.9.3 Perceived ease of use (PEOU)

Venkatesh et al. (2003) confirmed that PEOU is a determinant of the adoption of mobile banking. The functionality of the mobile phone, screen size and type of keypad (keyboard) can be considered to be contributing factors to ease of use (Kim et al., 2009; Walker, 2003). The use of mobile phones with small keypads for mobile banking can lead to typing errors during transactions, affecting the ease of use. Small screens on a mobile phone can inhibit viewing of all information, and may also contribute to the use of relatively small font which might be uncomfortable for some users.

The ANOVA results (4.7) showed that the PEOU factor had a significant effect on the adoption of mobile banking by IZB customers. Furthermore, the descriptive results (Table 4.6) showed that the mean of current users felt that mobile banking is easy to use. The literature therefore reinforces the findings of the analysis and the hypothesis that PEOU does not influence the adoption of mobile banking by IZB customers is rejected with supporting ANOVA results.

4.9.4 IZB Mobile Banking Registration Process

The majority of non-adopters respondents who were aware of IZB Mobile Banking felt that mobile banking process was cumbersome. Adoption of mobile banking is likely to occur if the process of usage is ease for customers. The mobile banking registration process of the bank has been identified as an obstacle to some non-adopters. It is suggested that the bank

make improvements to the current registration process. The bank's mobile banking app has a provision for self-registration but is not currently enabled by the bank, the researcher suggests that self-registration should be enabled for those customers whose mobile numbers are already in the core banking system. This will speed up the registration process for most customers since over 75,000 customers' accounts already have their mobile numbers in the bank system. It is a win-win for the bank and customers because only those few customers whose mobile number are not in the system will be required to fill in an application form.

4.9.5 The interviews

The interviews were conducted in order to enrich the research in an attempt to confirm or corroborate findings or cross validate findings of the survey. The study established that awareness was the major factor influencing the adoption of mobile banking in Indo-Zambia Bank and that perceived usefulness and perceived ease of use also influenced the adoption of mobile banking. Therefore, qualitative results corroborated or validated the findings of the survey, all the three hypothesis outcomes were verified by results of the interviews.

The study established that Indo-Zambia Bank needs to create enough awareness about its mobile banking facility. Increasing and improving the level of awareness may help the bank to persuade customers to enrol for mobile banking. There is a need to change the customer's perception through a well-structured advertisement and staff interaction in order to make them realize that the service is useful and ease to use. The customers need to know the advantages associated with mobile banking and that IZB Mobile Banking service is free i.e. there are no costs connected to the adoption and usage of the facility.

The study established that some staff members involved in mobile banking registration process lacked commitment while others lacked sufficient knowledge about mobile banking to persuade customers to adopt mobile banking. To counter this the bank should carry out periodic staff training on mobile banking and customer service to ensure that all staff members involved in mobile banking registration process have adequate knowledge about the service. This will also help in ensuring that staff member are highly motivated and committed to serve customers. Good customer service could also boost the adoption of mobile banking.

Staff members who still show lack of commitment even after training should be moved to other duties to make sure that only committed employees are dealing with customers.

A high percentage of current users of IZB mobile banking felt that mobile banking is useful. Mobile banking is a technology and technology is rapidly changing, new innovations are been developed on a daily basis making some existing technologies obsolete. The study established that IZB Mobile Banking has only been updated once in the last three years. It is imperative that the bank consider making regular (at least twice in a year) software updates to its mobile banking facility to ensure the service remains useful to its customers and the industry at large. A software update can include, but is not limited to facility stability improvements, bug fixes, new and/or enhanced features and improvements to performance. An improved and updated mobile banking service will make the service competitive and ensure the bank's customers continue to value the service. Examples of updates to mobile banking include those that would make the service more user friendly (ease to use), more useful, more secure and more appealing to the market.

The IZB Mobile Banking App has a provision for the bank to register non-account holders but currently only account holders are eligible for mobile banking. The bank may use this feature to reach beyond its current customers and acquire individuals who do not maintain any bank account. The potential is huge as there are more people without bank accounts in Zambia, this will also enhance the bank's role to promote financial inclusion in Zambia. The bank can set limits for non-account holders to ensure regulatory requirements are complied with, a limit of up to K25,000.00 would be sufficient for non-account holders.

This research revealed that awareness, usefulness and ease of use is critical when introducing mobile banking services. Therefore, banks need to consider these factors when crafting their mobile banking strategy. The marketing drive should focus on demonstrating the simplicity, usefulness, cost benefit of using mobile banking and awareness of the services offered in mobile banking.

4.10 Chapter Summary

This chapter has presented the findings and discussion of the findings of the study with the aid of research design and objectives of the study. The next chapter will presents the conclusions and recommendations of the study

CHAPTER FIVE - SUMMARY, CONCLUSION AND RECOMMENDATION

4.1 Introduction

In this chapter, the findings of the researcher are summarized and conclusion drawn. The chapter also includes recommendations and suggestions for further research.

5.2 Summary

This study aimed to investigate the factors that influence the adoption of mobile banking in the banking industry in Zambia and suggest methods that may help increasing adoption of mobile banking services. The study focused on the effect of the following factors:

- Awareness of mobile banking services;
- Perceived usefulness of mobile banking service;
- Perceived ease of use of the mobile banking service;

The results were able to show that awareness has a significant impact on the adoption of mobile banking by IZB customers. IZB customers will adopt mobile banking services when they are aware of mobile banking. The current users of IZB mobile banking services adopted the service because they were aware of IZB providing mobile banking and most of the non-adopters did not use mobile banking because they were not aware of the service.

The results show that perceived usefulness is a significant factor influencing the adoption of mobile banking by IZB customers. IZB customers will adopt mobile banking services when the value and benefit of mobile banking is evident. The current users of mobile banking services perceived mobile banking as useful.

The results show that IZB customers will adopt mobile banking when it is perceived to be easy to use. The current users of mobile banking services perceived mobile banking to be easy to use. Hence, it is of paramount importance to develop

mobile banking services with valuable functionality, as well as mobile devices with visible screens and usable keypads.

The results from the interview corroborate the above mentioned finds that awareness, perceived usefulness and perceived ease of use are significant factors influencing the adoption of mobile banking by IZB customers.

5.3 Conclusion

The research questions that were proposed were answered by the evidence gathered through the data collected and analysed. From the study it can be concluded that, when it comes to the factors that can influence the adoption and usage of mobile banking services, majority of the respondents included in the study attested to the findings that all three the factors as reviewed from the analysis which are awareness, perceived usefulness and perceived ease of use of mobile banking service can have an influence on their adoption and usage of the service.

Therefore, it is the expectation of the researcher the recommendations made should be considered for implementation by IZB and other banks to increase the uptake of mobile banking and compete effectively with other players in the mobile banking space.

5.4 Recommendation

The researcher considers the results of the study to be highly relevant to banks offering mobile banking service and to Indo-Zambia Bank in particular. This study can be used by banks to realize the benefits that could be derived if the innovation is well managed by the banks as well as taking steps to address the barriers to growth of mobile banking.

The level of awareness of IZB mobile banking is reasonable but it is recommended, nonetheless, that the bank endeavour to improve further the level of awareness if the mobile banking customer base is to be increased to desired numbers. The bank needs to build the

confidence of their customers which may lead to more adoption. The results of this study show that awareness is a key factor impacting the adoption of mobile banking, hence, the bank should engage into promotional activities to bolster mobile banking uptake and usage. Persuasive advertising campaigns can therefore be undertaken to show customers the benefits of mobile banking.

The study recommends IZB to carry out regular training to employees involved in enrolling customers to mobile banking facility in order to equip them with latest knowledge on mobile banking and enable them to make customers aware of all the services available in mobile banking facility.

The study established that perceived ease of use had in effect on customers' intention to adopt mobile banking, therefore, the study recommends that updates to mobile banking facility be considered to enhance perceived ease of use of the facility. The facility is currently relatively easy to use but there is definitely room for improvement and that may attract more customers especially who delay in adopting new innovations like mobile banking.

The study revealed that perceived usefulness has significant influence on a customer's intention to adopt and use mobile banking. It was observed that banks in Zambia provide similar and limited mobile banking services, it is therefore necessary for banks to widen the scope of services offered via mobile banking in order to meet the daily needs of customers. Examples of new services recommended include payment of bus/taxi fares using mobile banking, payment of school fees, payment of goods at small shops and mobile banking solution for Farmer Input Support Programme (FISP). Additionally, banks should fully integrate with each other their mobile banking platforms in order to make the facility more useful. This will result in instant transfers and payments among different banks making the facility useful.

The results showed that 22% of the respondents were not using mobile banking. Since the questionnaires were administered to customers visiting the bank there is a great marketing opportunity for bank to reach these customers and persuade them to enrol for mobile banking. The bank can craft its strategy by targeting these people to increase the number of mobile banking users.

The increased use of mobile banking services will be beneficial to both the bank and the users. The bank will be able to reduce expenditure in establishing more banking branches and employing of more staff members. The people will benefit in terms of reducing costs on travelling and effectively utilizing time for other productive opportunities.

The use of mobile phones in Zambia is continuing to grow and the major banks are offering mobile banking services; this is a great opportunity for banks to reach the low income market by allowing non-bank account holders to enroll for mobile banking which will greatly help banks to fight off competition from MNOs. However, there still a great number of people who are less informed about the concept of mobile banking and related benefits. Therefore, banks needs to direct more effort on educating communities, including potential customers especially low income sector, about the functionality, safety and benefits of mobile banking. Banks may corroborate through Bankers Association of Zambia or through the Central Bank to carry out roadshows to educate communities and popularize mobile banking adoption and usage.

5.5 Suggestions for Further Research

There is need to carry out research on other aspects of mobile banking such as financial inclusion, usage, impact on customer service in the banking industry among other areas.

A replication of this study would be ideal after a certain period of time to find out whether there have been any improvements on adoption of mobile banking in Indo-Zambia Bank. It may be useful to undertake a comparative study in another commercial bank in Zambia where mobile banking is relatively new.

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APPENDIX I: INTRODUCTION LETTER

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Tel/Fax: +260 211 290863

Graduate School of Business
P.O Box 32379
Lusaka, Zambia

15th February, 2018

TO WHOM IT MAY CONCERN

RE: LETTER OF INRODUCTION

My name is Christopher Piliwe (GSB150728) a postgraduate student at the University of Zambia – Graduate School of Business (UNZA-GBS). I am in the final stage (dissertation) of the Masters of Business Administration (MBA) Management Strategy.

I am undertaking a research tilted **"Maximazing Mobile Banking Adoption in the Banking Industry: A Case of Indo-Zambia Bank"**. I am therefore requesting your indulgence to complete the questionnaire below, which I am using to collect primary data. The purpose of the research is **to devise and suggest strategies that can be used to increase uptake of mobile banking by customers.**

Your responses would be used solely for the purpose of the research.

Yours faithfully,

Christopher Piliwe (GSB150728)

Appendix II: Consent Letter

THE UNIVERSITY OF ZAMBIA

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Graduate School of Business
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Lusaka, Zambia

15th February, 2018

TO WHOM IT MAY CONCERN

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Your responses would be used solely for the purpose of the research.

Yours faithfully,

Christopher Piliwe (GSB150728)

APPENDIX III: SURVEY QUESTIONNAIRE

Please answer the following questions

Q1	What is your gender?	Male	
		Female	
Q2	What type of account do you maintain with IZB?	Savings	
		Current	
Q3	What is your age?	Below 20 years	
		21-30 years	
		31-40 years	
		41-50 years	
		51 years & above	
Q3	Are you aware of Indo-Zambia Bank mobile banking?	Yes	
		No	
Q4	Are you aware of IZB mobile banking App for android, apple and tablet, which is free to download on your mobile device? Note: the app can only be used on an internet enabled mobile device.	Yes	
		No	
Q5	Are you aware of IZB mobile banking USSD code *232#, which can be used without internet?	Yes	
		No	
Q6	Are you aware that all IZB mobile banking services are currently free?	Yes	
		No	
Q7	Are you currently on IZB mobile banking?	Yes	
		No, but will enrol if it is useful, ease to use, etc.	
		No, not interested	
Q8	Which IZB mobile banking services are you aware of? (Please tick all that apply)	Check account balance	
		View account statement	
		Own accounts money transfer	
		Money transfer within the bank	
		Money transfer to other banks	
		Airtime topup	
		Bill payment	
		View forex rates	
		Block stolen/lost ATM Card	
		Open/close fixed deposit account	
		Change PIN	
Q9	If you are not on IZB mobile banking, what are the reasons for not taking up mobile banking? (Please tick all that apply)	I am not aware of mobile banking	
		I do not need mobile banking	
		I believe mobile banking is difficult to use	
		Other reasons	

Please complete the following section on a scale of 1 to 5. 1-strongly disagree and 5-strongly agree

		Strongly disagree	Disagree	Not Sure	Agree	Strongly agree
Q10	I believe the bank needs to create enough awareness to capture the attention of the customers.	1	2	3	4	5
Q11	I believe that awareness is very important factor in the use of mobile banking.	1	2	3	4	5
Q12	I adopted/not adopted mobile banking because I was aware/not aware of the service.	1	2	3	4	5
Q13	I think that using mobile banking would make it easier for me to carry out my tasks.	1	2	3	4	5
Q14	I think that mobile banking is useful.	1	2	3	4	5
Q15	I think that learning to use mobile banking would be easy.	1	2	3	4	5
Q16	I think that it is easy to use mobile banking to accomplish my banking tasks.	1	2	3	4	5
Q17	I think that the bank's mobile banking registration process is cumbersome.	1	2	3	4	5

Thank you for completing this questionnaire and assisting me in my research.

Warm Regards

APPENDIX IV - IN-DEPTH INTERVIEWS

1. Customers only excluding staff members

I. How do you view the bank's awareness activities of its mobile banking facility? Do you have any suggestions on how it may improve in this regard?
II. Why did you opt to enrol for mobile banking services?
III. If you are on mobile banking, which services are you aware of? Please list them.
IV. How useful is mobile banking to you?
V. How easy is mobile banking to use or learning how to use it?
VI. How satisfied are you with the mobile banking registration process?
VII. What suggestions would you give that may help the bank improve on the provision of mobile banking services?
VIII. Please give any other comment you may have regarding the subject of research?

2. Staff members involved in the registration process

I. Does the bank carry out enough sensitizing of its mobile banking services?
II. Why do you think customers opt to adopt mobile banking?
III. Why do you think there is low uptake of mobile banking among the bank's customers?
IV. Is mobile banking useful to customers?
V. Is mobile banking difficult to use for customers?

IX. In your opinion, is the current mobile banking registration process a hindrance to adoption? Please suggest ways in which the process could improvement.
X. Please give any other comment you may have regarding the subject of research?