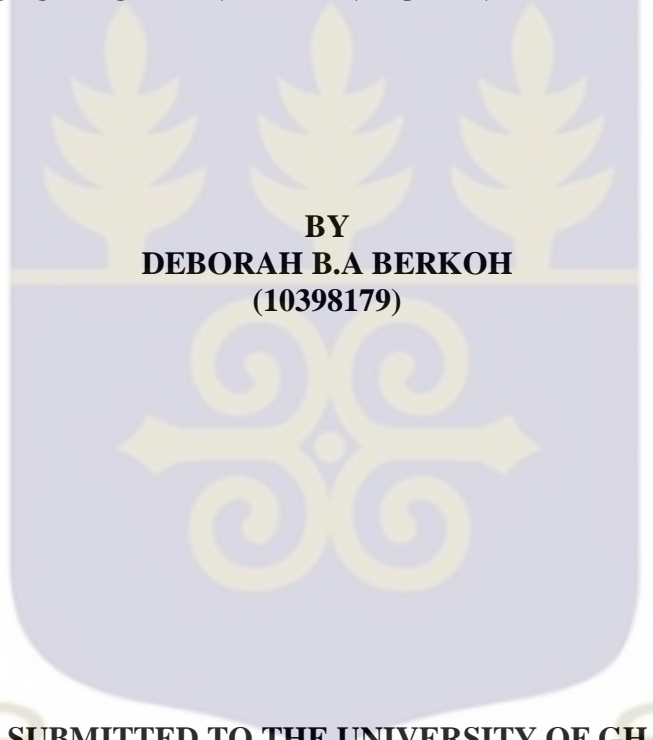


**UNIVERSITY OF GHANA
UNIVERSITY OF GHANA BUSINESS SCHOOL**

**DIGITAL FINANCIAL SERVICES-A FINANCIAL INCLUSION ENABLER: A CASE
STUDY OF ZENITH BANK GHANA LIMITED**

The image features a large, faint watermark of the University of Ghana crest in the background. The crest is a shield-shaped emblem with a light blue background and gold-colored details. It is divided into two horizontal sections. The upper section contains three stylized, leaf-like motifs. The lower section contains a central, ornate, symmetrical design with curved lines and a central cross-like element. Below the shield, there is a banner with the Latin motto "INTEGRI PROCEDAMUS".

**BY
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**THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN
PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MSC
DEVELOPMENT FINANCE DEGREE**

JULY 2019

DECLARATION

I hereby declare that this work is the result of my own research and has not been presented by anyone for any academic award in this or any university. All references used in the work have been fully acknowledged.

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DATE

(STUDENT)

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.....

PROF. A. OSEI

DATE

(SUPERVISOR)

DEDICATION

I dedicate this to my parents the late Mr. John Berkoh and Mrs. Lysbeth Berkoh and Prof. A. Osei for their immense support through the course of this work. God bless them for their constant motivation.

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I thank the Almighty God for seeing me through this research work successfully.

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LIST OF ABBREVIATIONS

AFI	Alliance for Financial Inclusion
AML	Anti-money Laundering
ATM	Automated Teller Machine
CGAP	Consultative Group to Assist the Poor
FINTECH	Financial Technology
FIDWG	Financial Inclusion Data Working Group
GRI	Gender-related Development Index
HRI	Human Development Index
ICRIER	Indian Council for Research on International Economic Relations
ICT	Information and Communication Technology
IFI	Index of Financial Inclusion
IMF	International Monetary Fund
MNO	Mobile Network Operation
MOMO	Mobile Money
NCA	National Communication Authority
NFIS	National Financial Inclusion Strategy

SMS	Short Message Service
STK	Sim Application Tool Kit
USSD	Unstructured Supplementary Service Data
WAP	Wireless Application Protocol

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ABSTRACT

There is an increased growth of the use digital financial services in the world. Many banks, financial institutions, savings and loans companies are establishing and implementing the use of these services to bridge financial inclusion.

A study was conducted at Zenith Bank Ghana Limited to see the benefit of digital financial services among their clients and its contribution to financial inclusion. This study was done to determine the relationship between financial inclusion and digital financial services. It sought to quantitatively test the notion that mobile money, the use of ATM's and other E-services in most cases leads to financial inclusion.

The study used primary data through the use of questionnaires. Using Regression analysis, the study determined how variables such as ATM's and E-banking services aside MOMO also affected financial inclusion.

The findings of the study showed that there was a positive relationship between digital financial services (mobile money, ATM's, E-banking services) and financial inclusion.

One suggestion for further studies recommends that banks should pursue more synergistic operating models that facilitate information and experience sharing in order to develop a wider range of bank services. A major limitation however was time constraint used to conduct this research.

CHAPTER ONE

INTRODUCTION

This chapter outlines the background of the study, the problem statement and the objectives of the study, the research questions and the significance of the study. It goes on to discuss the scope, limitations and chapter organization of the study.

1.1 Background to the Study

It is expedient to note that theories and empirical evidence have inspired the notion that financial inclusion promotes development and economic growth. Different works and Scholarly literature have proved that financial inclusion has positively influenced countries that have embraced it.

Mbutor and Uba (2013) analyzed budgetary consideration as systems went for expanding the quantity of individuals with records in banks and other formal money related establishments investment funds, current and credit. It likewise advances the utilization of formal installment media, including checks, ATM cards, web installments, versatile installments and others. Furthermore, financial inclusion was referred to as a banking sector that allows access to their use by firms and households and also gives access to banking services. (Beck et al. 2006). Claessesns (2006) defined the dimensions to ‘Access’ in banking services which includes quality of financial services offered, availability of financial service and type and cost of access and range. The study explained that ‘Access’ is not the same as use since “economic agents might

decide not to use accessible financial service, either for socio-economic reasons, or because opportunity costs are too high” (Beck et al., 2006).

The definition of financial inclusion covers the formal financial system; hence it may be expected to contribute to the development of a financial system. This is achieved by ensuring the ease of access, availability, and usage of formal financial system for all members of an economy (Shankar, 2013; Sarma, 2008). According to Visco (2007) “financial inclusion is a form of financial deepening as a result of its role in increasing the size of financial system, growing diversification of firms’ and households’ portfolios and developing the financial markets”.

Financial inclusion has numerous benefits for State development. Studies have revealed that female empowerment, general savings, consumption and productive investment are experience by communities with availability of savings instrument communities (Aportela, 1998; Ashraf, Karlan, & Yin, 2010). It also helps in poverty reduction, ensuring income equity and enhanced private investment (Allen, Demirgüç-Kunt, Klapper, & Martinez Peria, 2012; Beck, Demirguc-Kunt, & Peria, 2007). “Financial inclusion improves the fascination of remittances and eases the relocation of funds from overseas” (Demirgüç-Kunt, Córdova, Pería, & Woodruff, 2011).

Again, financial inclusion also enables effective distribution of productive resources, implicitly advances the daily running of finances and guarantees a complete financial structure that can aid diminish the progress of unauthorised avenues of accessing credit which time and again have had a tendency to be manipulation (Sarma, 2012).

Over the years, there has been widespread adoption of Technology in daily life activities. . This has prompted the developing of various frameworks utilized for paying and getting of money and non-money things in Ghana. The utilization of cell phones in executing business in Ghana and

the world can't be overemphasized. Because of the ever progressively far reaching of cell phones among shoppers, generally in developing markets, versatile cash utilization has turned into an extraordinary wonder. Orozco et.al (2007) place that the presentation of prepaid cards and the decrease in cost of cell phone gadgets have made it more affordable and simpler for individuals to possess and work cell phones. The various open doors that accompany the utilization of cell phones separated from voice calls and messages have been investigated, thusly.

Hughes and Lonie (2007) found that the quantity of individuals on the planet who claims and utilize cell phones totalled over 2billion. This figure surpasses the complete number of monetarily comprehensive individuals in developing economies, of which Ghana is no special case. In March 2013, the National Communication Authority (NCA) of Ghana showed that there are over 25.6 million. In 2007, it recorded that the all-out portable information membership in Ghana was 22,865,821 with an entrance rate of 79.94%. These figures obviously demonstrate the degree to which Ghanaians have acknowledged cell phones gadgets and its accompanying service.

FINTECH, a term mostly used in the financial cycle to describe the technology aspect of financial services, has gained much acceptance in recent years. One of the pivots around which the advent of FINTECH revolves around is digital banking. Digital banking service is a phase of a broader concept that has risen in the electronic payment and banking industries. Despite there is no clear cut definition of digital banking in literature, Tobbin (2010) abridged it to include all the various “initiatives, long distance remittance, micro-payments and formal air-time battery scheme” that is aimed at bringing together financial services to the unbanked through the use of technology, mostly mobile phones and computers. With the well-known use of digital gadgets

coupled with the initiative of digital services in the banking industry and the necessity for Ghanaians to be banked, it is vital to institute whether or not the emergence of digital financial services which have impacted financial inclusion among the clients of Zenith Bank Ghana Limited.

1.2 Problem Statement

Financial inclusion, unarguably, has proven to have immense positive impacts on economies and there exists widespread literature on how financial inclusion influences investment, growth, microenterprises, health, poverty and many others. Unfortunately, many Africa countries, of which Ghana is not an exception, have majority of its citizens unbanked hence denying these countries the numerous benefits that comes along with financial inclusion. The presentation of banking in Ghana originates before autonomy from British colony, the formal financial industry has not have the option to bank the enormous number of the unbanked. This can be followed to the way that, customary banks have little respect for low worth exchanges (Smith 2015). Their inclination lies in the high-recurrence exchange based business which they esteem as financially savvy. The conventional financial balance holders are about twice as prone to have a functioning ledger that has not been utilized over the most recent three months than portable wallet holders (Zertterli, 2015). Subsequently, Mobile Network Operators (MNO) in Ghana have recognized a reasonable business opportunity in offering portable innovation based monetary exchange benefits that incorporate installment/move, credit and protection administrations to their clients.

The mobile technology based financial transactions in Ghana reached GH\$30 billion in the first half of 2016. The annual transaction shot up from GH\$400,000 per annum in 2011 to GH\$35

billion in 2015 and to GH\$51.4 billion in 2016, according to Ghana Chamber of Telecoms (Adjei, 2016). This is reflective in more than 80,000 jobs opportunities created by 2016 along the value chain of operations in the mobile technology-based financial sector as almost 27 million people are being served (Bank of Ghana, 2016).

In its quest to make sure Ghana fully benefits from the benefits of financial inclusion, by any means possible, whether through the Telecoms or formal financial institutions, the government of Ghana intends to launch a National Financial Inclusion Strategy (NFIS) which will aim at 17 percentage increment from 2017 to 2020 in the availability of formal financial services for the adult population, primarily considering the relatively excluded group. This increment will contribute to the reduction of poverty and promote all inclusive development in the country by creating economic opportunities.

The Ghana Living Standard Survey 6 (GLSS 6) data indicates that 48.6% of the Ghanaian populations who are above seven years are migrants. The internal and international movement of Ghanaians usually results in the paying and receiving of remittances to and from household members both home and abroad. The survey established that larger proportion of remittances occur internally. This is mostly through both formal and informal means (GLSS 6). Mobile money has been seemingly accepted by majority of Ghanaians, both literates and illiterates, as one of the most preferred means of transferring money.

The ever increase in the rise of the use of technology in the world is a new phenomenon. Digital banking is one of the newest delivery channels which are established by retail and microfinance institutions in many advanced and emerging countries. Diniz, Porto de Albuquerque and Cernev (2011) indicated that digital banking system plays significant roles in two different dimensions;

namely demand and supply. The system found that digital banking functions on the demand side by offering financial services to the unbanked and it opens up options for financial institutions to provide different services at a low cost.

In Ghana, many financial institutions provide digital banking services as part of their universal services. Clients are able to make withdrawals and transfers using their ATM cards and other banking facilities. Donovan, K. (2012) postulates that digital banking provides financial services to over a billion peoples. Demirgüç-Kunt and Klapper (2012) found that digital banking has enabled the rather unbanked to enjoy similar banking services such as paying of bills, transfer and receipt of funds at a relatively cheaper cost, securely and reliably in some selected Sub-Saharan Africa countries.

There has been an increasing attempt by banks to favour digital-led models in their quest to enhance financial institutions. There is therefore a very obvious tendency of digital banking influencing financial inclusion in Ghana positively. This study finds it expedient to examine the extent to which digital banking has impacted financial inclusion among clients of Zenith Bank Ghana with focus on customers in four (4) branches in Accra.

1.3 Research Purpose

The purpose of the research is to examine how digital financial services, after its introduction in Zenith Bank, has influenced financial inclusion among the clients.

1.4 Objectives of the Study

1. To find out the impact of mobile banking on financial inclusion
2. To assess the impact of digital financial services on customers' decision to request for loans from Zenith Bank.
3. To determine the factors that influences the adoption of digital financial services among the respondents.

1.5 Research Questions

The following research questions were designed to enable the fulfillment of the requirements of the study. The questions include:

1. Does mobile banking have a significant impact on financial inclusion?
2. What are the main factors that influence the adoption of digital financial services by the unbanked or the low-income customers?
3. Does digital financial services influence loan request?

1.6 Significance of the Study

Researchers, practitioners and policymakers will find this study relevant. It will contribute to existing research on financial inclusion and specifically the influence of mobile money on financial inclusion in Ghana. This study seeks to find the relationship between mobile money operation and financial inclusion in Ghana.

Again, if these findings are well executed to capitalise on the increasing mobile money patronage by the playmakers in finances such as the Telecoms which now provide mobile money services to

clients, the government and the financial institution, the 75% target financial inclusive growth by the government of Ghana will come into realization.

Moreover, the findings of this study will be useful for policymaking concerning financial development and financial inclusion in Ghana.

1.7 Scope of the Study

The study exclusively focuses on the link between financial inclusion and digital banking or financial services in Ghana by employing data gathered from respondents, clients and staff of four branches of Zenith Bank Ghana.

1.8 Limitation of the Study

The study is limited to Zenith Bank. The findings may therefore not be enough to make a generalisation of how digital banking has impacted financial inclusion in the banking sector as a whole.

Time constraint was also a limiting factor. The study was carried out in specific period according to the university academic. However, this has little or no effect on the outcome of the study.

1.9 Organisation of the Study

The entire study is organized into five distinct chapters in order to enhance clarity of presentation, facilitate reading and ensure understanding.

The chapter one of this study enumerates the background to the study, the problem statement, the research objectives, the research questions, significance of the study, the scope of the study, the various limitations of the study and finally, the organization of the study.

The second chapter consists of review of related literature from books, articles, related research work and internet resources which helped the researcher in extracting relevant literature on corporate governance and its related issues in Ghana and the world at large. It consists of both theoretical and empirical literature pertaining to corporate governance issues.

The third chapter of the study focuses on the source of data and detailed methodology. It consists of the study design, the research instrument used, data analysis and esthetical consideration of the study.

The chapter four presents the analyzed data together with its interpretations and finally presents the research findings and thorough discusses them.

The chapter five, which happens to be the final chapter of this study, featured recommendations based on the findings, summarizes the study and draws useful conclusion.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

A considerable number of publications and scholarly articles have been done on the effect of financial inclusion on the different regions of economies. This study aims at exploring the extent and the influence of mobile money and other e-banking services on financial inclusion. This is a gap in literature that has to be filled with regards to the study on financial inclusion and mobile money in Ghana. Publications of articles relevant to this study from researchers and scholars are reviewed.

Particularly this review seeks to investigate and examine Sub-Saharan African's financial inclusion and other continents as a whole.

2.1 The Concept of Financial Inclusion and Exclusion

Financial inclusion fundamentally brings the unbanked masses snared onto the authority budgetary frameworks and subsequently they can get the opportunity to get to monetary administrations like investment funds, installments, and moves to credit and protection establishments. Financial inclusion does not propose that everybody must utilize formal banking services, or that providers should disregard dangers and extra costs when intending to give administrations. Then again, conscious rejection and antagonistic hazard return highlights may avert a family unit or a minor firm, despite uncontrolled access, from utilizing one or additional administrations. Such results don't basically allow strategy association. Generally, a game-plan

resourceful activities should target and address showcase frustrations and evacuate non-advertise obstructions to access a broad assortment of money related administrations (Demirguc-Kunt et al, 2008). Budgetary consideration can make money related administrations increasingly available to all including poor people, by guaranteeing that there is a vigorous monetary market which is a component for financial development.

2.1.1 Definition of Financial Inclusion

Many analyst compare financial inclusion to financial exclusion to draw the relation between them. For instance, Legshon (1995) defines it as “exclusion of some entities and humans from having admission to official financial systems”, whereas Sinclair (2001) underscores “failure to have access to needed financial services in a suitable system”. Amidžić, Massara, and Mialou (2014) define financial inclusion as “economic behavior where individuals and businesses are not denied access to basic financial services”. A flat out financial system has various advantages. An inclusive financial framework empowers the powerful organization of beneficial assets and can lessen the expense of capital. Additionally, admission to acceptable financial services can consciously propel the regular organization of funds. Exhaustive financial frameworks can help in disappointing the advancement of casual wellsprings of acknowledge, (for example, moneylenders), which every now and again end up being costly.

The essentialness of a financial system is notable in the approach circle and recently monetary incorporation has ended up being a strategy apparatus in a few countries. Openings for money related incorporation have exuded from the budgetary controllers, the systems and the financial business. Administrative achievements have been cultivated in specific economies. For example,

in the United States of America, the Community Reinvestment Act (1997) requests banks to give credit all over their outright broadness of activity and disallows them from influencing just the well-to-do territories. In France, the law on rejection (1998) requests an individual's entitlement to have a financial balance. In the United Kingdom, a Financial Inclusion Task Force was embraced in 2005 of every a change in accordance with shorten the development of money related incorporation.

World Bank Global Financial Report (2014) describes financial inclusion as “the arrangement of bodies and firms that use financial services”. The report add-on that socio-cultural practice, religious faith and some other factors such as cost and market failures hinders the use and but not access to financial services. Hence nonexistence of use do not mean financial services inaccessibility (World Bank, 2014).The study depict Sarma (2008) who believes “financial inclusion is a process that guarantees easy access, availability, and use of financial services for all participants in an economy” (Sarma, 2008).

2.2 Measurement of Financial Inclusion

In spite of the fact that the hugeness of a far reaching, financial system is commonly acknowledged by strategy creators, banks, and instructive social orders far and wide, “empirical literature on financial inclusion do not have comprehensive standard measure that can be utilized to assess the degree of financial inclusion from one economy to the next” (Sarma, 2007 and 2008). The author recognizes various markers that have been utilized to indicate the degree of financial inclusion by various specialists. Those authors utilize indicators that incorporate “substantial deposits accounts (current and saving) seized as a share of grown-up population”

“(Sarma, 2008), “number of loan account as a part of the grown-up population” (Samantaray, 2007), just as “the number of bank branches per million people, the number of ATMs per million people, amount of bank credit and amount of bank deposit” (Sarma, 2007).

Sarma (2007 and 2008) found that indicators when utilized independently offer just fragmentary proof on the extensiveness of the financial system of a nation. The creator keeps up those solitary digit measure licenses cross-country evaluations, patterns to think about and survey a country's improvement of arrangement creativities, and reacting to scholastic issues, for example, connections between monetary advancement and money related consideration.

Sarma (2007 and 2008) set up a solid and comprehensive proportion of financial inclusion that incorporates data on a serious number of measurements of money related considerations. The measure is called “Index of Financial Inclusion (IFI)” which is practically identical to a portion of the UNDP appraisals for computing settled files, for example, the “Human Development Index (HDI) and the Gender-related Development Index (GDI)”. The IFI joins three fundamental elements of financial inclusion in its figuring's to be specific profundity, accessibility, and use. The rest of the indices include the Euro barometer Survey 60.2 (European Commission 2008) and the Patrick Honohan's Index of access to finance. These lists are fixated on the component of access.

2.3 Benefits of Financial Inclusion

Financial inclusion has created as a technique and primary worry in a few nations (Sarma, 2008). The fame of the significance of a all-inclusive financial system was controlled by the finding the significant job of fund as one of the genuine highlights for growth and advancement.

An exhaustive financial system empowers successful dispersion of valuable assets and this can diminish the expense of capital (Sarma, 2008). Financial inclusion gives an open door for the poor to save and invests in accredited financial institutions. Moreover, the enormous amount of deposits of small charges enables commercial banks to diminish their dependence on unpackaged deposits and help the commercial banks to advance and achieved both in liquidity risks and asset liability differences.

Financial Inclusion can help to bring down the advancement of unceremonious channels of credits, for example, cash loan specialists which are on numerous occasions seen to be out of line (Sarma, 2008). In financial inclusion the less-privilege is protected from illegal money lenders

Investment in the formal financial structure can extensively progress regular overseeing of funds (Sarma, 2008). In economies that advance cashless economy for example, Western Europe and North America, just as those in development, the non-presence of admission to work a financial balance could demonstrate the change among obligation and success. People who do not have records find it hard to attempt distinct responsibilities, similar to the paying of bills. They therefore, tend to rely upon an unsafe cash focused exchange that renders such people prone to robbery and vulnerability.

Independently from the individual aids given by financial inclusion, gives advantages to monetary associations and the national bank.

By and large, this is upheld by various theoretical and test examination thinks about that demonstrates the genuine job that better access to bank has in empowering quicker and fair-minded development just as sinking salary difference (Beck &Demirguc-Kunt, 2008; Honohan, 2004). This is on the grounds that a well-manufactured financial system raises less-privileged people into the financial framework and enables such people take an interest all the more vivaciously towards their own financial advancement.

2.4 Definition of Financial Exclusion

Financial exclusion has a definite environment of a bigger event of societal discrimination of some groups of folks from the authorized banking organization. Leyshon and Thrift (1995) elucidate that “banking exclusions is any process that seeks to stop individuals, social groups and bodies from admission to the official banking system”. Carbo et al. (2005) explain financial exclusion as formal services which are largely inaccessible for some individuals or group of people. Also, Conroy (2005), suggest that financial exclusion is when countries deny their less-privilege and needy citizens to the right and organize financial systems. Mohan (2006) defines financial exclusion as “the non-existence of admission by some sections of society to appropriate, less expensive, reasonable and harmless financial packages and services from accepted suppliers”. The World Bank (2014) argues that in situation whereby cultural and religious believes influence the decision of some group of people in the society not to utilize

financial services is termed as intentional exclusion, while in a situation where individuals are face with challenges such as insufficient income, selective market failures, imperfection and high risk profile is known to be unintentional exclusion.

2.4.1 Dimensions of Financial Inclusion

The need for financial inclusiveness agenda in the financial sector is now being promoted by the various financial institutions such as “the World Bank, Asia Developmental Bank, African Development Bank and the International Monetary Fund (IMF) and also government of some Sub-Saharan Africa countries as policymakers and the Consultative Group to Assist the Poor (CGAP)” are ensuring and propagating the financial inclusion agenda. Factors such as availability, utilization and services of finance advantages in an economy which are well admitted by recognized instrument primarily determine the degree of financial inclusion. To eradicate financial inclusion obstacle by developing structured policies and plans it is imperative for policymakers to get a reliable verifications about the level of current inclusiveness of respective country. The Alliance for Financial Inclusion (2012) suggests that financial inclusion is a “multi-dimensional” which consists of divisions made up of different individuals and enterprises. Three key ambits in financial inclusion, “access, usage, quality” have been established by the Financial Inclusion Data Working Group (FIDWG) of the Alliance for Financial Inclusion (AFI) for the purpose of outlining more absolute abstraction of attachment. The group claims that “the accepting of a broader and multidimensional definition of financial inclusion is basic to modifying the notion accepting that inclusion will unavoidably be accomplished through the offering of sufficient access points”.

Financial inclusion ambit are full sets whereby indicators can be classified, with no limitation. In developing robust strategies the ambit modestly gives a policy framework that reflects the “multi-dimensional” attribute of financial inclusion. This structure gives policymakers opportunity to structure sets of indicators that are acceptable and suits the necessities and level of asset of respective countries. The World Bank Report (2012) considers the ambit and also a “fourth dimension which is the impact on firms and household of financial inclusion”. A comprehensive dialogue is detailed below:

Access: the availability and opportunity to utilize packages and complete financial services from accredited and official institutions. Charges, customer care and nearness of service point example, “branches and ATMs” of banks are factors that impede attaining and using bank account.

The percentage of accessibility can be obtained by counting the number of people that opens and holds account through financial institutions.

Quality: is the management of attainable product which involves consumer captivation and standard outlook. Quality in its appropriate level will be adjusted to ad measurement the features and assimilation of financial service supplier section of the link and the end user, consequences of consumer stages indulgent and attainable selections.

Usage: Duration of time, occurrences and consistency are the element considered when defining usage, which centers on additional perpetuity and integration of financial product and utilization.

Fact gathered from the demand-side survey helps in determining usage level.

Impact: service of financial usage adjusted to the lives of the consumers by barometer variations gives serious practical test to the design survey. The demand side which includes the individuals and households, financial institution level constituting the supply side can help achieve this advice.

2.5 Channels of Remittances

Interestingly flow of remittances flow and transfers of funds have emerged to be the most researched areas among scholars, researchers and policymakers in this contemporary world. Irving, Mohapatra and Ratha (2010) indicated that remittances has the potential to eradicate poverty and help solve other UN Millennium development Goals, this is because remittances from migrant to households is known to have the most tangible and good relationship between migrations and developments. It is imperative to identify the remittance means of transfer to ensure the enhancement of transparency and accountability.

Remittances may be in two forms formal and informal. The channel which includes transfers of monies is based establishment of personal relationships through corporate people or done by courier companies, families or individually constitutes the formal remittances. The international standard sector on Anti-Money Laundering and Combating the Financing of Terrorism (AML/CFT), FATF generally labels “Formal” systems of transfer of funds as “a system included in the regulated financial system, leaving all other method of Informal category”. In Hernández-Coss’s (2005) also termed “formal institutions” that services in remittances transfers as “institutions that are supervised by government agencies and laws that determine their creation, characteristics, operations and closure”.

On the contrary, the “informal channel” is defined as “all types of remittances transfer services that do not involve formal contracts”, and therefore unlikely to be recorded in national accounts (Freund & Spatafora, 2005), thus consisting “10% to 50% of the total remittances” (Ratha, 2003). Maimbo and Ratha (2005) indicated that “informal channels charge fees under 1% of how much is been charged at the formal channel”. The informal channel cost in Bangladesh, constitutes “about 45% of the formal channel” Siddiqui (2003). Freund and Spatafora (2008) also suggested that migrants’ decision to opt for the informal channel type remittance is chiefly cause by the “negative impact cost of transaction in most cases”. Hernández-Coss (2005) establish elements that impact the choice of the informal channel which include “relatively higher cost of sending money through the formal system, intention to evade taxes, strict government regulations”. High cost is the most challenging and obstructing factor that impedes migrant from using or utilizing the formal channel mode of remittances, this was revealed in a survey conduct in 176 remittance receiving and remittance sourcing countries across the globe, Irving, Mohapatra and Ratha (2010). Additional factors mentioned by respondents included “mistrust of or lack of information about financial systems, products, and channels”. Irving et.al (2010) recognizes socio-culture and cost factors “to be some of the important factors that influence the use of informal channels”. Solidification of social bond between friends and families is assumed when remittances is sent with co-ethics. The paper settled that “high cost of transfers, dual exchange rate for money transfers, and lack of legal documentation for formal transaction by remittance-sender migrants” are measured as the key reasons why migrants prefer the use “informal channel”. Freund and Spatafora (2008) observed that the stock of migrants and cost of transaction in regards of remittances is greatly influence by recorded remittance. High cost of money transfer causes

reduction in amount of money sent by migrants. Hence the informal channel is seen as the best option for migrants.

2.6 Conceptual background on Mobile Technology-based payment

Digital mobility technologies used to carry out and provide financial services have certain configurations, objectives and features and hence transaction payment and banking uses combinations that depicts digital mobility technologies is term as mobile payment and banking respectively. Finally, the concept of money transaction which imitates mobile technologies having digitalized features is termed as mobile money (Diniz, Porto de Albuquerque & Cernev, 2011).

2.6.1 Mobile Payment Technologies

There are several mobile payment technologies in existence today and so it is worth mentioning some of such technologies in this section. As cited in the earlier section, there are two categories of mobile payments and under these categories there are a number of technologies that are deployed. Remote payments usually deploy technologies such as “short message service (SMS), Unstructured Supplementary Service Data (USSD), SIM application Tool Kit (STK), Wireless Application Protocol (WAP), or a mobile application”, while proximity payments make use of technology such as “bar codes, a contactless interface and chip-enabled payment technology, such as NFC technology” (ITU, 2013).

2.6.2 Mobile Telephony Technology

Teheng (2007), Andrianaivo and Kpodar (2011) defined mobile telephony technology in terms of “Information and Communication Technology (ICT) characteristics”. While, Teheng (2007), defines ICT development “an increasingly considered a factor in economic growth rather than a consequence of it”. In Gates notes, mobile telephony technology was defined as “a simple digital device that allows individuals not only to communicate but transact/ access basic financial services without much difficulty” (Bill and Melinda Gates Foundation, 2015). According to Iddi (2015), “mobile telephony technology serves as device(s) for the purposes of communication, storage, reminders, calendars, identifications and now increasingly used for banking transaction”. IGI Global (2017) defined it as “services that enable phones to move freely than stay fixed in a location, in offering range of benefits for the user”. Bussiness and activities mode in developing countries have been chiefly influence by mobile telephony (Deloitte, 2012).

From the above discussion the approach used in defining mobile telephony in relation with mobile banking failed to identify how financial inclusion correlate with mobile telephony technology. All definitions and suggestions made were more related to the benefit and influence the mobile technology on growth of the economy rather than financial inclusion.

2.6.3 Evolution of mobile money as a Digital Payment System

Mobile money services are among the most encouraging portable applications in the growing nations. It is assessed that “at least 110 mobile money systems are currently in operation with over 40 million users” (Donovan, 2012). The M-PESA, one of the commonest and available mobile money operating system was initiated in March 2007 by Safaricom one of the biggest

network operator in Kenya. Its point was to give an inventive method for making financial services accessible to the unbanked. The name Pesa originates from a Swahili word meaning money and the M means cash. Hughes and Lonie (2007) established that “M-PESA registered more than 20,000 clients within the month of operation, far exceeding their target business plan”.

“The system was designed to give privilege to customers who do not have formal bank accounts to enjoy certain banking services and the M-PESA customer has to register with Safaricom to be able to receive and pay money in an easy and secured way” (Hughes and Lonie, 2007). The system has been replicated by many African countries since 2007 for instance, “South Africa’s WIZZIT managed to attract 250,000 customers in its four years of operation while Tanzania’s M-PESA has attracted 100,000 registered clients” (Mas & Morawczynski, 2009). In Ghana, mobile money is being activated by almost all the telecommunication providers.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter gives a detailed discussion of all the techniques, tools and processes in regard to the study. In principle, this chapter labels the data used in the research, the source of the data, the methodology that was utilized on the data and the justification for the choice of the method. The chapter begins with the estimation technique (methodology) that is employed on the data and justifies the choice of the method, the specification of the model, and then goes ahead to define the various variables used in the model.

3.1 Estimation Technique

The outcome of dependent variable, thus response variable and independent variable, thus explanatory variable can be predicted by using the Regression technique. The dependent variables in this study data are dichotomous hence logistic regression technique. Generally, “describing and testing hypothesis to establish the relationship between two or more outcomes that are mostly dichotomous or categorical and one or more categorical or continuous predictor variables, logistic regression is best used” (Peng et al. 2002).

This research seeks to establish the possibility impact of mobile money on Ghana’s financial inclusion empirically. The studies done by Anzoategui, Demirgüç-Kunt, and MartínezPería (2011) with independent variable “education, gender and certain human characteristics” on financial inclusion and remittances was adopted and modified by this study.

The elements of financial inclusion, as used in this study, comprise Bank Accounts Opening, loan request and ATM (and other E-Banking services). The dependent variable is represented by Y and x denotes the explanatory variable(s). In the linear regression it is assumed that this mean may be stated as an equation linear in x, such as:

$$Y_i = \begin{cases} 1 & \text{if the household is financial inclusive} \\ 0 & \text{otherwise} \end{cases}$$

The probability of a household being financially inclusive can therefore be written as $\pi_i = P(Y_i = 1) = P(Y_i^* > \theta)$ with Y_i^* the latent response.

The model can therefore be written as $Y_i^* = x\beta + \varepsilon$

3.2 Model Specification

Generally, the model can be specified as:

Financial Inclusion_i

$$= \beta_0 + \beta_1 MoMo + \beta_2 Male_i + \beta_3 Females_i + \beta_4 SHS_i + \beta_5 Ter_i + \beta_6 Salaries_i + u_i \dots \dots \dots (b)$$

Model 1

$$\begin{aligned} \text{Bank Account}_i &= \\ &= \beta_0 + \beta_1 \text{MoMo} + \beta_2 \text{Male}_i + \beta_3 \text{Females}_i + \beta_4 \text{SHS}_i + \beta_5 \text{Ter}_i + \beta_6 \text{Salaries}_i \\ &+ u_i \end{aligned}$$

Model 2

$$\begin{aligned} \text{Loan Request}_i &= \\ &= \beta_0 + \beta_1 \text{MoMo} + \beta_2 \text{Male}_i + \beta_3 \text{Females}_i + \beta_4 \text{SHS}_i + \beta_5 \text{Ter}_i + \beta_6 \text{Salaries}_i \\ &+ u_i \end{aligned}$$

Model 3

$$\begin{aligned} \text{ATM and other E - Services}_i &= \\ &= \beta_0 + \beta_1 \text{MoMo} + \beta_2 \text{Male}_i + \beta_3 \text{Females}_i + \beta_4 \text{SHS}_i + \beta_5 \text{Ter}_i + \beta_6 \text{Salaries}_i \\ &+ u_i \end{aligned}$$

3.3 Definition of the variables

Financial Inclusion speaks to the likelihood that the respondents under thought who reacted to inquiries on mobile money are probably going to account at the bank, demand for credits from financial institution and finally, regardless of whether respondents are probably going to demand for and use “ATM and E-Banking service”.

Bank account opening is a “proxy for savings, investment account and current account that the respondents have opened with financial institutions”. “Financial inclusion is an attempt to bank the unbanked” (Demirguc-Kunt, Klapper., Singer & Hess 2018). The provision and

delivery of these services by financial institution and organization in Ghana by a long-way potentially affects individuals who might not customarily patronage banking services. From the earlier, there is a propensity that the consolidation of services of mobile money into the official financial operations thus banking, will impact the opening of bank account by respondent who are subscribers. It is in this way very important to evaluate whether the development of services of mobile money poses any effect on the possibility to have bank account among respondents' families.

Loan Request. It is a dummy variable that speaks to whether services of mobile money have the inclination to impact users' choice to demand for credits and loans support from financial institution and this can be as an overdraft facility. In crafted by Hughes and Lonie (2007) it was discovered that “mobile money added to the inclination of individuals mentioning for overdraft facility from banks in Kenya” and banks permit “customers who have synchronized their mobile money wallet with their bank account to withdraw money more than what they have in their bank account when the need arises”. Operators of mobile money, particularly MTN, additionally give loans to customers contingent upon the level of patronage and loyalty and it is done in relation to selected particular banks. The study will build up whether mobile money subscribers tend to demand for loans more than non-mobile money subscribers.

ATM and other E-Services: For the past years, BoG has tried to synchronize the exercises of financial organizations and service operators of mobile money. The ongoing activity which is “mobile money interoperability” takes into account, directness exchange of transactions with banks by means of mobile money, through electronic services, for example, ATMs. An observations made by Sarma and Pais (2011) demonstrated that “ATM and E-Banking services structure gives the availability facet of financial inclusion”.

MoMo, represents the patronage in mobile money services given to respondent by the different organization of telecommunications particularly MTN. From the earlier, the study anticipates that mobile money usage should significantly affect the opening of bank account. Nonetheless, the study is doubtful on the effect of patronage in services of mobile money have on loan demand yet mobile money is reckoned to have an impact on users' choice to ask for and utilize ATM and additional services.

Males male speak to the mass of 18 years or more male respondents. This sets of individuals is frequently viewed as regular workers and henceforth getting wages and transacting other activities requires services of banks. Once more, to be qualified for holding account in banks, demand for loans and numerous other financial services at the banks it is required to demonstrate one's qualification by giving out certain particulars of interest of which individuals of 18 years or more are expected to have. It is therefore said that 18 years or more male respondents will be financially inclusive.

A female is the masses of 18 years or more female respondents; females over 18 years are probably going to earn incomes and may in this way patronize formal financial banking services to execute business, pay bills and others. "Females are regard as highly risk averse and hence financial institution finds it more expedient to grant loans to them upon request than their male counterparts" (Jianakoplos&Bernasek, 1998). This study along this line reckons loan solicitation to be decidedly associated with 18 years and above female as utilized in this model.

A salary signifies respondents' possibilities to get month to month pay. It is deserving of incorporating this variable in the model to analyze how respondents who get monthly pay, in-respect of gender differences forms part of financial inclusion.

Education is an intermediary for Tertiary and SHS respondents. MembersSHS is the masses of SHS trainees. MembersTertiary is the masses of tertiary education graduate. Individuals with these two educational backgrounds are inclined to be financially inclusive. Fundamentally, these individuals are respected at the tip top in social class and must be properly educated regarding the advantages of financial inclusiveness. Once more, the study foresees a huge and constructive connection amongst training and the solicitation and additionally utilization of “ATMs and E-Banking” services in light of the fact that, relatively individuals with good state of education can work it effortlessly in contrast to people who do not have any formal education.

3.4 Data Description and Source

This quantitative study will employ quantitative deductive research approach; descriptive research design. In this study, the paper adopts a survey research design which is suitable to ascertain the extent to which services in mobile money have influenced financial inclusion using questionnaire instrument. In a survey research, “a large sample/data is essential for accurate and reliable findings” (Saunders, Lewis & Thornhill, 2003), hence generalizing findings and using large sample is allowed.

The study will use non probability simple random sampling to select a total of one hundred respondents from the company. These respondents include the clients of the bank and employees of MTN, Vodafone and Airtel-Tigo. Hair, Anderson, Babin and Black (2010) posit that “for a sample to be representative, it should be preferably one hundred (100)”.

Questionnaire will be used to collect primary data from the respondents. The questionnaire was rated on a five-point Likert scale ranging from (5=Strongly Agree), (4=Agree), (3=Uncertain) (2 = Disagree) and (1= Strongly Disagree). The measurement items (questions) were developed based on literature reviewed by the researcher. Respondents were assured of strict confidentiality and their identity will be protected by using codes. The study used descriptive statistics to analyse the reactions from the field in order to address the research objectives.

CHAPTER FOUR

ANALYSIS AND DISCUSSION

4.0 Introduction

This chapter, the fourth chapter of this study, presents the data sources for the study, data description, descriptive statistics, analyses and uses scientific methods and procedures for its discussions. The chapter is based on the research questions as provided in chapter one to provide detailed discussions and empirical findings in the form of tables to establish answers to the research problem. The chapter provides the findings for the study in tabula form for clarity and to enhance understanding. The chapter further analyses and discusses, in details, the findings. In essence, this chapter answers to the entire research questions base on theoretical and empirical opinions.

4.1 Data Description and Data Source

This study primarily uses primary data. The data for this study was derived from customers and other stakeholders of Zenith Bank with the aim of soliciting their views in relation to the impact of digital media on financial inclusion. Questionnaires for the study were issued to 150 respondents in all within Greater Accra Region, which is a proxy for nationwide survey in Ghana, out of which 100 respondents were successfully enumerated. The survey was conducted within one (1) month period from 11th January, 2019 to 11th February, 2019. The survey contained detailed demographic characteristics of respondents' level of Education, Sex, number of years of patronizing bank's services and many others.

Table 4.1: Descriptive Statistics of the Dependent variables and some independent variables

Variables	Yes		No		Total	
	Freq.	Per.	Freq.	Per.	Freq.	Per.
Loan Application	36	78	10	22	46	100
Bank Account	95	95	5	5	100	100
Mobile banking	73	73	27	27	100	100
Salaries	46	46	54	54	100	100

Source: Author’s calculations based on survey data

Table 4.1 briefly describes some of the independent variables and all the independent variables (Loan Application, Bank Account) used in the study. The purpose of this description is to provide a summary statistics of the binary response (YES/NO) obtained from the data. Table 4.1 shows the frequency and percentage of the respondents who responded either Yes or No to questions relating to Loan Application, Bank Account opening, Mobile Banking and Salaries.

From table 4.1, it is observed that a larger percentage of the respondents (95%) have opened official account with Zenith bank, largely because of the introduction of mobile banking which have the tendency of making banking services available and easily accessible.

73% of the respondents indicated that they employ the use of one mobile banking services or the other. Another variable of interest used in the model is salaries. This is a proxy for all the respondents who receive wages and salaries through Zenith Bank and by extension every

salaried worker. It is observed from Table 4.1 46 out of the 100 respondents are salaried workers. 54% of the respondents indicated that they do not receive monthly salaries and hence may not be eligible for loan application.

Further question was asked in relation to the number of salaried workers who apply for loans from Zenith Bank. This is to establish whether the advent of mobile banking and its accompanying digital nature has played any role in customers' decision to request for loans. It is observed that 36 out of 46 respondents who indicated that they are salaried workers, representing 78%, requested for loans from Zenith Bank.

Table 4.2: Descriptive Statistics of the independent variables

Variables	Description	Obs.	Mean	Sd.
Size	Total number of respondents	100	2.21	1.671
MalesAbove18	Number of male respondents who are 18 years and above	59	2.09	1.643
FemalesAbove18	Number of female respondents in who are 18 years and above	41	2.22	1.723
MembersSHS	Number of respondents who have attained SHS level of education	73	0.27	0.583
MembersTer	Number of respondents who have attained Tertiary level of education	27	0.18	0.509

Source: Author's calculations based on survey data

Table 4.2, just like table 4.1, provides a summary of the independent variables in the model of the study. It shows the observation, mean and the standard deviation of some of the independent variables. The independent variables statistically summarized in table 4.2 include the total number of respondents (Size), number of males and females who are above 18 years in the 100 respondents under consideration and lastly, the number of respondents with Senior High and Tertiary level of education.

4.2 Findings and Discussions

The findings provide answers to the research questions and indicate the fulfillment of the research objectives in chapter one of the study. Variables that are significant to the study in the findings are critically examined and justified.

Justification of the findings is based on theoretical and empirical grounds. The study uses asterisks to indicate variables that are significant to the study and the extent of their significance. Variables that are not significant do not have any asterisks and are therefore not discussed in the analysis section.

The Pseudo R^2 , which explains the likely percentage of the variation in the dependent variables which are explained by the independent variables, the Omnibus test which signifies the extent to which the independent variables help to improve upon the model and the Hosmer and Lemeshow test which depicts the level of best fit of the model are also presented in the findings to show the results for the study are presented in tables 4.3 and 4.4.

Objective 1: To assess the impact of mobile banking on opening of bank account

The first objective of the study is to critically examine the impact of mobile banking on bank account opening. The result is presented in tabular form for clarity.

Table 4.3: Logistic Regression results showing how Mobile Banking influences Bank Account Opening

		Bank Account Opening		
		coefficient	Sig.	Exp(B)
	Mobile Banking use	0.822**	0.002	2.083
	Size	-0.003	0.951	0.997
	MalesAbove18	0.03	0.75	1.031
	FemalesAbove18	0.071	0.106	1.074
	MembersSHS	-0.144	0.173	0.866
	MembersTer	0.313**	0.004	1.368
	Salaries	0.53**	0.003	2.452
	Constant	-1.439	0.000	0.237
Pseudo R ²	Cox & Snell R Square	0.26		
	Nagelkerke R Square	0.39		

Omnibus Test	43.491***	.000
Hosmer and Lemshow Test	14.325	.074

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Author's calculations based on survey data

Table 4.3 shows the factors that interplayed in influencing respondents that use mobile banking services' decision to request for loans. The focus of this test is to find out how mobile banking usage influences the probability that the 46 respondents who are salaried workers and hence deemed eligible for loans will request for loans from financial institutions. It is observed that use mobile banking services ($Exp(B) = 2.083$, $p = 0.002$), respondents with tertiary level education ($Exp(B) = 1.368$, $p = 0.004$) and salaries ($Exp(B) = 2.452$, $p = 0.003$) are the factors that are significant and positively influence respondents' loan request.

From Table 4.3, it can be deduced that respondents that have subscribed to use mobile banking service are twice more likely to request loan from a bank than respondents who do not use mobile banking services provided by Zenith Bank Ghana. The results is consistent with the findings of Bradley and Stewart (2003) who argued that mobile banking services have more than twice increased the probability that clients of banks will request for loan since its inception. The reason being that customers may not need to go through long and rigid loan application when using mobile banking as compared to the traditional means of making request for loans. This has therefore made loan application process friendlier than before.

Again, respondents with tertiary education also had 1.368 chances of requesting for loans from financial than households that do not have members with tertiary education. This makes a lot of sense because people who are educated are well enlightened on the need to have a bank account. It is not surprising that respondents who have attained tertiary level of education are almost two times likely to open bank account. Studies have shown that many people who have attained tertiary education are likely to be gainfully employed and may be receiving wages and salaries mostly through financial institutions and hence the need to open a bank account. Others are likely to be engaged in business activities that might require the regular transfer and receipt of funds and may have to open a formal account (Lee et al, 2007).

Finally, it is observed that respondents who receive salaries are twice more likely to open an account with Zenith Bank than respondents who do not receive salaries. In essence, it can be deduced that mobile banking has a high tendency of influencing the decision of salaried workers to open a formal account with financial institutions, specifically Zenith Bank. This can be inferred from the fact that the advent of mobile banking allows clients to enjoy financial services from outside the banking premises. People are motivated to open account with Zenith Bank because of the possibility to enjoy financial services that are provided by the banks that gives that the privilege to enjoy financial services without necessarily having to visit the banking hall.

The table observed that gender and secondary education have no impact on the probability of influencing the decision of respondents to open a formal account. This is, in essence, means gender and secondary education play no role in influencing respondents decision on whether or not to open a bank account.

Objective 2: To assess the impact of mobile banking on Loan Request

Table 4.4: Logistic Regression results showing how mobile banking patronage influence Loan Request

		Loan Request		
		coefficient	Sig.	Exp(B)
	Mobile Banking	0.766**	0.008	1.262
	Size	-0.112	0.521	0.894
	MalesAbove18	-0.024	0.580	0.976
	FemalesAbove18	0.031**	0.004	1.031
	MembersSHS	-0.014	0.762	0.986
	MembersTer	0.081*	0.023	2.085
	Salaries	0.458***	0.000	1.001
	Constant	-2.060***	0.000	0.127
Pseudo R ² :	Cox & Snell R Square	0.06		
	Nagelkerke R Square	0.11		

Omnibus Test	81.298***	0.000
Hosmer and Lemeshow Test	13.475	0.097

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Author's calculations based on survey data

The second objective of the study is to critically examine the impact of mobile banking on respondents' decision to request for loans from Zenith Bank. It is worthy of notice that finding concentrates on only salaried workers who are eligible for loans. The result is presented in tabular form for clarity.

The findings in Table 4.4 shows that respondents that patronize mobile banking service are likely to make a request for loans. There is the high tendency to request for loans due to the fact that certain financial institutions, of which Zenith Bank is no exception, allow clients to enjoy some overdraft services and make a loan request via mobile banking services. It is worthy of notice that loans are granted mostly to salaried workers. The finding therefore implies that salaried workers who are eligible for loans and have subscribed for mobile banking services are more likely to place a formal request for loans that salaried workers who have not subscribed for mobile banking services. It is therefore fair to conclude that mobile banking patronage has positive impact on the likelihood that salaried workers will place a request for loans. The finding is consistent with the study of Jack and Suri (2011) and Mbiti and Weil (2011).

Again, Table 4.4 shows that female respondents who are salaried workers are more likely to request for loans from Zenith Bank. It has been established that financial institutions are more

willing to grant loans to female clients than their male counterparts. This is because females are risk averse who are more likely to engage in less risky ventures and hence are able to pay back loans (Duncombe, 2009). The result in the table in relation to females and loan requests justifies the study by Duncombe (2009) and therefore not surprising that females are more likely to make request loans since they are likely to be granted same upon request.

Other variables such as respondents with tertiary education and respondents who receive monthly salaries and wages are also likely to make a loan request. Education has positive correlation with loan request since people who are educated have high tendency of receiving salaries and wages through financial institutions and hence may be eligible for loans. This is because financial institutions, specifically Zenith Bank, take into consideration various requirements of which the flow of funds with some level of certainty is paramount. There is therefore the motivation for salaried workers to place a loan request. This stemmed from the fact that Zenith Bank limits loan grants to salaried workers whose income flow can be predicted with some level of certainty.

Table 4.4 also shows that members with tertiary education are twice likely to request for loans than other respondents that have not had tertiary education. This makes a lot of sense because higher education is believed to create awareness about the benefits of financial inclusion and so people with high levels of education are more likely to request for loans. Other reason is because members with tertiary education are likely to be gainfully employed and may be eligible for loans.

Objective 3: To determine the factors that influences the adoption of mobile banking among clients

This section aims at finding the main factors the clients of Zenith Bank consider relevant in their decision to adopt mobile banking services or not. This is in lieu of the third objective of this study. The result is presented in Table 4.5 for clarity.

Table 4.5: factors that influences the adoption of mobile banking among clients

Responses	Respondent	Percentage
Convenience	98	98
Cost Savings	93	93
Improvement in Profitability	79	79
Time Saving	100	100
Increased in market Access	73	73
Increased in Market Share	75	75

Source: field data from the researcher's survey

In relation to the third objective of this study, the researcher delved into the possible factord that respondents consider expedient in their decision to use mobile banking services. The result is presented in table 4.5. From the table, it is observed that all the 100 customers who responded to the questionnaire believe that Mobile Banking saves time. This in support of earlier findings by Singhal and Padhmanabhan (2008) who found a positive and significant correlation between

Mobile Banking and time saving among customer. It is therefore not surprising that all the customers hold the view that Mobile Banking has a high potential of saving time needed to visit the banking hall.

The least of the factors that respondents believe influence their decision to either use or not to use Mobile Banking patronage is the possibility of mobile banking increasing market share. The reason likely to have caused this is because of the high illiteracy rate in Ghana and most developing countries. People hardly patronize E-Commerce and E-Banking and hence the inability to be able to successfully enhance the market shares of its patrons.

The table again found that Mobile Banking has a high tendency of reducing cost of business. Though it comes with some extra charges, patrons of Mobile Banking presume the benefits far outweighs the accompanying cost as found in the research work of González, Mueller and Mack (2008). This is depicted in the number of respondents who holds the view that Mobile Banking reduces cost of doing business and hence this factor is deemed as one of the significant reasons for the choice of mobile banking services.

Lastly, from the table, 79% of the respondents believe that Mobile Banking has a very significant impact on the profit potential of their businesses. This is true because once it has the tendency of reducing cost, there is the possibility that Mobile Banking will have a rippling effect on the profit of the patrons in both the short and the long run and hence this the ability of mobile banking to increase profitability is regarded as one of the major factors in opting for mobile banking services than the orthodox means.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

Recommendations and conclusions are highlighted in this chapter. The first section of this chapter presents the summary of the study while the second considers the key findings of the research and conclusions and recommendations are accounted in the third sections.

5.1 Summary

In the course of the most recent decade, financial inclusion has advanced into the middle phase of improvement approach and has been each government's objective in the growing economies. Most nations are now dealing with different strategies and administrative systems to guarantee the achievement of reaching to each one of those financially excluded. For ideal assets and resources mobilization and social economic balance and equity, government and policymakers across the globe centre is to have a productive and financial inclusive framework with the end goal of value in asset and resource mobilization. With private and business organizations endeavours to adjust different mechanical developments, the government of Ghana is attempting to investigate and actualize inventive models that will extend Ghana's financial sector to help reserve funds, exchanges and investments development. This study utilized logistics regression on primary information obtained from three branches of Zenith Bank Ghana workplaces inside Greater Accra Region to analyse how mobile banking (internet banking) has affected financial inclusion in Ghana.

The study found that mobile banking services given banks and other financial institution have beneficial outcome on financial inclusion in Ghana.

5.2 Major Findings

The results from the study showed that respondents that have subscribed to mobile banking service provided by Zenith Bank, that is enabled by mobile network operators, have a higher tendency of opening bank accounts, perhaps additional accounts if they already have an account with Zenith Bank, than respondents that have not subscribed to mobile bankingservices. The likely reason for the finding is because of the alliance banks and telecommunication agencies have had over the years in Ghana.

It was also found that respondents that have subscribed to mobile bankingservices who are salaried workers are more likely to request for loans, usually in the form of overdraft facilities, from financial institutions. This makes a lot of sense in real world situation because clients of various banks who subscribe to the use of mobile banking services are more often abreast of services provided by banks, in this case loan facility services. This is therefore likely to inform their decision to request for some loans facility that ordinarily these clients may not be aware had it not been the mobile banking services that they enjoy. It is worthy to note that this finding is limited to respondents who are salaried workers.

Finally, in lure of the third objective of the research, the study found it expedient to examine the factors that necessitate the adoption of digital banking services among the respondents under consideration. The study observed that factors such as cost and time savings, convenience with

the use of digital banking, improvement in profitability and the potential of digital banking to increase the market shares of the respondents played a pivotal role in their decision to adopt and use digital banking services.

5.3 Conclusion

Digital banking services are on track to accomplish more prominent incorporation in the money related activities for the populace in most growing nations around the globe. Financial institution in nations, for example, Mali, Ghana, Kenya and numerous others have, to a high degree, embrace E-banking in their provision of service. For this reason, digital banking systems are assuming a significant job in financial inclusion. In addition, this study demonstrate that digital means of banking is used not only for the purposes of facilitating savings among subscribers but also has the propensity to influence people's decision to open bank accounts and also increase the chances of salaried workers placing formal request for loans. This issue of loan request was restricted to salaried workers in this study because they are the class of clients that are eligible for loans.

Larger part of Ghanaians, even the elites, until the development and rise of digital banking service were unbanked. This is a direct result of the difficulties and the entanglements of dealing with banking firms. This has throughout the years precluded Ghana from securing the various advantages that go with financial inclusion. In any case, as this advancement of digital banking extends in progressively developed markets, it has been seen that Ghanaians, throughout the years, are progressively ending up more financially inclusive.

5.4 Recommendations

This study suggests that banks should seek after increasingly synergistic working models that encourage data and experience partaking so as to build up a more extensive scope of bank benefits that can be stretched out to clients, who for certain reasons, cannot utilize digital banking services. Financial operators, especially microfinance establishments, which appear to be inadequately represented in the mobile financial sector, must also sign for such working models. Microfinance has assumed a significant job in the expansion of money related activities and bank accessibility, particularly through leading savings service and their experience and culture of closeness can have a utilizing impact in the mobile finance sector.

This study again suggests that there should be partnerships between banks, financial institutions, microfinance institutions and the mobile industry players should be sought out and encouraged. In order to sustain the growth of these mobile banking success stories, there is a need to support a single integrated framework (between financial institutions and the mobile industry) to cut costs, in order to provide consumers with the convenience of banking from home, the farm or other remote areas.

Lastly, telecommunication companies and other network providers should endeavour to upgrade their technology to be able to adopt the new mobile banking emerging technology and should seek solutions that are user-friendly and easy to implement. The increased access to cell phones and computers by the unbanked Ghanaians would be the most cost-effective and economically efficient method of providing financial services to a wide segment of the Ghanaian population in the very near future.

5.5 Recommendation for Further Studies

Digital banking causes reductions in financial transaction cost, making business activities affordable and easy, hence leading to the enhancement and improvement in the private and commercial business through domestic savings and it is therefore very crucial to study how secured digital banking services can be in conducting local and international transactions

Again, future studies should look at how obvious challenges associated with digital banking services such as illiteracy and poor network from network providers which are key obstacles to the use of certain mobile banking services can be addressed by the authorities through policy reforms and scaling up investment in the ICT sector.

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APPENDIX

QUESTIONNAIRE

This research questionnaire is to assist in a study on the topic DIGITAL FINANCIAL SERVICES-A FINANCIAL INCLUSION ENABLER: A CASE STUDY OF ZENITH BANK GHANA LIMITED. The research forms part of the requirement for the award of MSc. Development Finance, a programme the researcher is currently pursuing at the University of Ghana Business School, Legon. The findings of this research are solely for academic purposes; respondents are therefore assured of complete confidentiality regarding any information given in this questionnaire. Thank you for your co-operation.

PART A

Demographic Characteristics of Respondents

1. Gender: Male () Female ()
2. Marital status: Single (); Married () Divorced () Widowed ()
3. Educational level: WASSCE () Degree () Post Graduate () Other (specific)
4. Occupation: Peasant () Private Sector Employee () Business owner () MMS
5. Do you have an account with Zenith Bank Ghana Limited? Yes () No ()
6. if Yes, state the type of Account you hold with Zenith Bank Ghana Limited.....
7. How many years have you held the account?
 - a. Less than 1 year ()
 - b. 1– 5 ()
 - c. 6 – 10 ()
 - d. 10+ ()

Section B

9. Indicate the extent to which you utilise Mobile Money Services

Details	Never Used	Rarely	Not Sure	Often	Very Often
1. Depositing cash					
2. With drawing cash					
3. Funds transfer					
4. Savings					
5. Access to credit					
6. Handle international remittances					
7. Bill payments					
8. Airtime purchase					

10. Outline any other services you employ the use of mobile money for

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Part C

Strategies for strengthening Mobile Money Services to enhance financial inclusion Among Zenith Bank Customers

11. Indicate the extent to which you agree with the following as effectiveness strategies for strengthening the utilization of Mobile Money towards enhancing financial inclusion among clients of Zenith Bank Ghana Limited.

Details	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1. Collaboration between mobile telephone network providers through interoperability.					
2. Collaboration with other financial services providers					
3. Improve MNO network quality					
4. Stronger regulation by financial regulators					
5. Enhance availability of other e-banking platforms mainly POS devices					
6. Community education on MMS for financial inclusion					
7. Integration of MMS for financial settlements					

12. Suggest other means Mobile Money services can be utilized to enhance financial inclusion among customers of Zenith Bank Ghana Limited

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Part D

13. Challenges Associated with the use of Mobile Money Service to enhance financial inclusion among customers of Zenith Bank and Banks in general

Details	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1. MMS access point					
2. Insufficient funds at MMS points					
3. Complexity in operating MMS					
4. Network breakdown					
5. Lack of interoperability					
6. High transaction costs					
7. Insecurity to operate MMS					
8. Fraud					

14. Indicate any other challenge that bedevils money services and financial inclusion

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