ST MARY'S UNIVERSITY

SCHOOL OF POST GRADUATE STUDIES

EFFECTIVENESS OF MOBILE BANKING SERVICE: THE CASE OF DASHEN BANK S.C

BY

KANA BERHANU

A THESIS SUBMITED TO ST. MARY'S UNIVERSITY SCHOOL OF GRADUATE STUDIES INPARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS OF PROJECT MANAGEMENT

DATE: JULY, 2017

ADDIS ABABA, ETHIOPIA

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Acknowledgements

I would like to take the opportunity to acknowledge the support and help of all who have support me in this study. Without their contribution and advice, I would have never been able to progress with the work in the project. I am grateful to those who agreed to participate in this research by completing the interview, conducting the survey, data capturing, analysis and editing. Again, I would like to thank Dashen Bank E-Banking department staffs for their support in the process of collecting the necessary data.

Acronyms

ATM	Automatic teller machine
CIO	Chief Information officer
CTO	Chief technical officer
DB	Dashen bank
EBSD	Electronic banking service department
GPRS	General Packet radio service
IT	Information Technology
IMF	International monetary fund
M-commerce	Mobile commerce
M-banking	Mobile banking
NBE	National bank of Ethiopia
WAP	Wireless application protocol

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Abstract

Mobile banking is widely referred to as branchless banking, delivery of financial services outside conventional bank branches .Mobile banking allows banks to expand services in to areas where they do not have sufficient incentive or capacity to establish a formal branch, which is particularly true in rural and poor areas. The general objective of the study was to measure the effectiveness of applying mobile banking service in Dashen Bank. From this general objective, a descriptive research design was employed to conduct this study .For data analysis purpose both quantitative and qualitative research approach was used. Out of the total 83 population 51 samples were selected by using judgmental sampling method. Both primary and secondary qualitative data were collected for the purpose of this study from the E-banking and IT Departments of Dashen bank at the head office level and the bank's different branches respectively. The collected data was analyzed by using descriptive analysis such as tables and percentages. From the analysis of the collected data, the findings revealed that: cash transfer, bill payments, check balances and cash operations are some of the major practice of the Mobile – banking services in Dashen bank. Many different customers can access this service using their mobile phones. On the View point of the bank Cost reduction, reliability and service security are some of the benefits of using Mobile banking. Low level of internet penetration and poorly developed telecommunication infrastructure, lack of awareness are among the major challenges of Mobile-banking service of the bank Moreover, failure to address the service to customers as much as expected led the bank to experience inefficiency compared to other banking services it provides.

Key word: Mobile banking, E-banking, Effectiveness

CHAPTER ONE

INTRODUCTION

1.1 Back Ground of the Study

Effectiveness is the degree to which objectives are achieved and the extent to which targeted problems are solved. The effectiveness of mobile banking services is basically determined by reliability, security, responsiveness, ease of use, usefulness, cost effectiveness and awareness of the services (Venkatesh and Davis, 2000; Mattila, 2002; Venkatesh et al., 2003; Wang et al., 2006; Porteous, 2006; Khan, 2010; Safeena et al., 2011).

Since the explosion of the internet, more and more people are being part of the users due to the convenience of the service delivered through the internet. The internet has connected people around the world and subsequently enabled business to offer products and services around the globe without being present physically in front of consumers or potential customers (Gikandi and Bloor, 2010; Liaoa and Cheung, 2002).As time goes by the internet has become a part of the daily life, Which demands more and more applications being created and service being made available to make full use of infrastructure. Consequently, Mobile banking have become possible and are being implemented by many users.

Banks, like other business organizations are deploying innovative products and services to ensure their future survival and meet the changing expectations of their customers (Sohail&Shanmugham, 2003). In this intense globally competitive market , banks should strive to satisfy the needs of their customers through providing quality customer service and improve their customer relations management .According to Agrawl and Jain (2013) , while banks are striving to strengthen customer relationship and move towards ‘relationship banking” customers are increasingly moving away from the confines of traditional branch banking.

The mobile banking system has the potential to pay enormous long term financial and risk management benefits by reducing paper- based transactions. Mobile banking mainly saves time, a valuable resource in business world.

According to the World Bank, more than 2.5 billion people do not have a formal account at a financial institution worldwide (World Bank report 2015). Most remote households operate almost entirely in the cash economy, particularly in the developing world. This means they use cash and physical assets or informal providers to meet their financial needs. It is costly to serve

the unbanked with financial services, in part because most of their transactions are conducted in cash. Storing, transporting, and processing cash is expensive for banks.

Besides, those informal mechanisms tend to be insecure, expensive, and complicated to use. A growing body of evidence suggests that increasing unbanked people's access to better financial tools can help accelerate the rate at which they move out of poverty and help them hold on to economic gains(Sohail&Shanmugham, 2003). Governments are working on various strategies to have an efficient and inclusive financial system for purposes of resource mobilization and reach all those excluded (Bradley and Stewart 2003).

The global revolution in mobile communications and the worldwide market penetration of affordable cellular devices and growing network service diffusion makes a firm stand for mobile banking escalation (Saoji and Goel, 2013). An opportunity to connect remote households to affordable and reliable financial tools through mobile phones and other digital interfaces is worthwhile for Banking Services.

In recent years, Mobile banking has been adopted and implemented with varying degrees of success by a number of competing banks in Ethiopia. Now Mobile Banking model is quickly becoming recognized as a viable strategy in many Banks for extending formal financial services into remote and rural areas. Customers can also transfer money or pay bills using their mobile phone. Concerning the affordability, mobile banking charges nominal fees for transfers and cashing out, and saves the customer travel time.

This model also allows banks to expand services into areas where they do not have sufficient incentive or capacity to establish a formal branch, which is particularly true in rural and remote areas where a high percentage of people are unbanked.

With the continuously emerging wave of information driven economy, Dashen bank has inevitably found itself unable to resist technological indulgence. The need for convenient ways of accessing financial resources beyond the conventional norms has seen the recurrent expansion and modernization of banking patterns (dashen bank website)Until the infrastructure and customer base are well established, there is a need to involve a combination of mobile banking services that are accessible via cell phones.

Hence this paper is therefore deemed to evaluate how effectively the mobile banking service is being implemented and how far is it accessible by customers specially living in remote areas who cannot easily find braches around.

1.2 Statement of the problem

In Ethiopia there is a big gap between the banking service coverage and the banking service demand by the society (2008/2009 annual report of NBE) in today's world, there are many banking channels, bank branches, ATM, Internet, and mobile to avail banking services(annual report of NBE , 2014). However, all banking channels are not cost effective for developing countries due to high initial investment requirement.

Besides, those informal mechanisms tend to be insecure, expensive, and complicated to use. A growing body of evidence suggests that increasing unbanked people's access to better financial tools can help accelerate the rate at which they move out of poverty help them hold on to economic gains. 48.3% of the Ethiopian population has mobile handsets (Etho Telecom 2016) which make mobile the largest consumed electronic device in the country.

Ethiopia has a huge population in need of banking services. Due to infrastructural and other Problems an overwhelming size of population has no access to formal sources of banking. Some available data indicates that not more than 22% of Ethiopian having access and opened a formal bank account (IMF data 2016).

Through mobile banking Dashen Bank plans to provide services such as requests for stop payments, cheque details, cheque status and standing orders and many transaction services are planned to be provided (DB mobile & agent banking manual). However it is not clear if all these services are actually available and convenient for use. Due to factors such as, perceived credibility, facilitating conditions, promotion ability demographic factors and weakness of wireless infrastructures.

A number of studies have been conducted in Ethiopia on regard to mobile banking (SintayehuYitbarek, 2015, AbebeZeleke 2016 and Mattewos Knife, 2016. However most of these studies focused on challenges in adoption of mobile banking and their effect on customer satisfaction. Comprehensive research in the area of mobile banking service issues in the specific context of Dashen bank has been rather limited. As a result this study seeks to describe the effectiveness of mobile banking service implementation in Dashen bank.

1.3 Research Questions

1. What types of mobile banking services are accessible to customers?
2. What are the challenge facing the bank in implementing the mobile banking service?
3. Does the bank have well qualified experts in the area?
4. To what extent does the bank has reliability and responsiveness in giving m-banking service?
5. Is it cost effective to provide m-banking service.

1.4 Objective of the study

There are two types of objectives general and specific objectives.

General objective

The general objective of this study is to investigate the effectiveness of mobile banking service in Dashen bank.

Specific objectives

1. To point out what types of mobile banking services are provided by Dashen bank to the customer
2. To explore the challenges facing the implementation of mobile banking.
3. To find out if the bank has well qualified experts in the area.
4. To explore the bank's reliability and responsiveness towards M-banking service.
5. To determine m-banking service is cost effective.

1.5 Significance of the study

The finding of this research project have much significance for different bodies. This study attempts to identify effectiveness of mobile banking service in Dashen bank. In doing so the results of the assessment may help in pinpointing strategic issues that should be considered in implementing as well as managing mobile Banking project.

It may also give essential information for improvement areas for the E- banking department of the bank as well as similar organizations that have mobile Banking system in place.

The foundation of this research also help to shed light for further studies since every finding holds additional questions. Moreover, it use as reference for students who want to study on this

topic. In addition, to this it helps a researcher to get knowledge about mobile banking service and to conduct other researches in - depth.

1.6 Scope of the study

The scope of the study is limited to assess effectiveness of mobile banking service in the case of Dashen Bank Specially the study examine the accessibility of the service products to customers and identify the challenges associated with the utilization of mobile baking services and to determine the satisfaction of customers. The final findings or results recommended Dashen Bank in particular but it is advisable to use these researches for any bank sector throughout the country if they have related problem in general.

1.7 Limitation of the study

This research is limited by the fact that there were difficulty of getting the information as per the researcher's schedule. In addition, lack of secondary data or lack of up to date literatures in some particular areas of Ethiopian banking situation and negligence of some respondents to respond to the interview frankly and correctly were some of the limitation.

1.8 Organization of the study

The research report has been organized into five chapters: Chapter one focuses on the background of the study, problem statement, objectives and significance of the study. In chapter two, a range of literatures review capture there to gather relevant information concerning mobile banking. In chapter three, detail of methodology followed to achieve result outline. It is including the study design, sampling, sampling technique and data analysis. Chapter four contains results and discussion from the study supported with findings from other research works. Chapter five focuses on main findings, conclusions and recommendations of the study

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1Introduction

This chapter contains the literature review which begins with the introduction of mobile commerce which is narrowed down to mobile banking industry. The mobile banking market, mobile banking in Ethiopia and the mode of mobile banking operation are also discussed. It looks at the technology employed by banks in carrying out mobile banking services. The diffusion, adoption and development of mobile banking are also discussed. It goes further to explain the implementation of M-Banking and impact of mobile banking in Ethiopia. This will serve as a frame work for this research work.

2.2 Introduction to M-Commerce

Mobile commerce (M-Commerce) is an extension of M-Commerce, and these allow consumers to interact with one another or businesses in a wireless mode, any time and in anywhere. The use of mobile phone for buying and selling of goods and services is regarded as mobile commerce. M-Commerce is usually called mobile commerce, which allows customers, to make any kind of transaction including service enquiry, transferring of money, buying and selling of goods through internet service on the mobile phone. Mobile commerce has its own drawback, though it "s slowly, but definitely, portraying signs of strong recovery (Tiwari &Buse 2007). Mobile commerce has been used interchangeably, and this is sometimes misused and confused with mobile banking, this is therefore, important to put more clarity on m - commerce which is a subset of Mobile Business (Cronin 2004). Mobile business is activities carried out by organizations to sell goods and services such as those commercial and other processes; human resource management (HRM), customer relationship management (CRM), procurement and production while M-Commerce involves buying and services, and other activities which are associated with such transactions in the business segment and consumer segment. M-Commerce is been adopted just as E-Commerce though it is slower and the extent of progress are different in all part of the world (Deans 2002). Japan and Europe are taking the lead because of their decision to establish a single wireless standard (Dean 2002; Coursaries et al 2004).

The word 'mobile' is related to mobile businesses which connote the possibilities of having access to business activities anywhere and anytime in the world and which is managed by computer mediated network. The facility makes service availability to independent of user's geographically location as oppose to electronic (Stanoveska-Slabeva 2003). Mobile commerce

comprises of Mobile banking, innovation driven by the banking industry, and others such as mobile entertainment, mobile marketing and advertising, mobile information services, and mobile ticketing (Tiwari &Buse 2007). The mobile commerce has its unique features which give it an edge over other form of commercial transaction; these are instant connectivity, immediacy, localization, pro -active functionality, ubiquity and simple authentication procedures (Tsalgatidou&Pitoura 2001).

2.3 Mobile Banking: M-Commerce in the Banking sector

Mobile commerce is a broad term that encompasses all forms of interaction with a consumer through a mobile device, such as issuing electronic coupons, providing loyalty services, and creating dedicated websites that a specifically designed to facilitate mobile browsing (Alex 2010). In the banking industry, services that are finance-related which involves mobile telecommunication technologies is known as Mobile financial services. These services are therefore categorized into mobile payment and mobile banking. In regards to this research we will focus on mobile banking. Mobile Banking is a type of m-commerce service that allows consumers to perform banking services (i.e. alerts, banking transactions and balance enquiries) with the use of their mobile devices (Corbitt and Barnes 2003). It is very important to understand what banking business is all about. Banks are businesses that deal in money (Hammonds 2006:4) therefore banking involves any service given and received from the bank, people open accounts with banks to save money, other people go to the bank to borrow money (Sobczak 1997:6).

Mobile banking could be defined as a facility which provides banking services such as balance enquiry, funds transfer, bill payment, and transaction history via a user's mobile phone (Stair & Reynolds 2008). Kondabagil (2007:24) defines mobile banking as an occurrence, when customers access a bank's networks using cellular phones, pagers, personal digital assistants, or similar devices through telecommunication wireless networks. Mobile banking (m-banking) could also be defined as an application of mobile commerce that enables customers to bank virtually at any convenient time and place (Suoranta, 2003).

Tiwari et al (2006a:5) believes that a cornerstone of m-commerce is built by m-banking; many banks are taken advantage of this innovation in order to increase customer satisfaction, manage cost, increase profits and bring positive transformation of payment system in the

economy. In 2004, Finland-based Nordea bank experiences a high growth of 30% from the utilization of transaction based mobile financial services (Atkins 2005).

Mobile Banking as the term connotes is banking "on the move" with the aid of a mobile telecommunication device (Ciuci 2010) which can be used for a different purpose at anytime and anywhere. Mobile banking (M-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 et al 2004). From research 30 per cent of households in the United Kingdom use their mobile phones to perform banking operations (MMA 2009). Research also shows that, internet has only a penetration rate of 6 % in a population of 140 million in Nigeria but mobile technology is close to 50 per cent penetration with prospects for growth (Ciuci 2010). 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.

2.3.1 Mobile Banking Services

Mobile banking or m – banking entails the financial services delivered via mobile networks using mobile phones. Normally, such services include depositing, withdrawing, sending and receiving money as well as making payments (Banges and soderberg2008).according to Amin (2007) m-banking is defined as a form of banking transaction carried out via mobile phone.

The objective of mobile financial transaction is to improve the efficiency of microfinance by using mobile technology to make transactions faster cheaper and more secure (Gaffar2009), it involves account transactions, balance checks and payments. Accordingly, Premalatha and sundaram (2012) note that mobile phones technology has made it easier to conduct financial transactions. This is because mobile phone financial transactions save time and provides a safer means of handling money transfer. Additionally mobile technology can be used to reach more customers and facilitate exchange of information.

2.4 Trends in Mobile Banking

The advent of the Internet has revolutionized the way the financial services industry conducts business, empowering organizations with new business models and new ways to offer 24 hour accessibility to their customers. The ability to offer financial transactions online has also created

new players in the financial services industry, such as online banks, online brokers and wealth managers who offer personalized services, although such players still account for a tiny percentage of the industry. The banking industry in recent times has been undergoing radical change and this is taking place in all aspects of the banking sector. One of these new changes in the banking industry is the information technology system (IT) and is mainly used by banks to reduce turnaround time and improve business in general.

The introduction of mobile technology and its devices have indeed brought about efficiency in the manner in which commercial and business activities are been carried out (Tiwari and Buse, 2007; UNCTAD, 2007). Among this development is the introduction of mobile telephony. Mobile telephony serves as a platform for launching out innovative mobile phone applications and services (UNCTAD, 2007).The use of mobile technologies for commercial purpose has generated the concept of mobile commerce. Mobile banking is an application of mobile commerce which enables customers to bank virtually at any convenient time and place (Suoranta, 2003). There has been evidence of increase in the number of people subscribing for mobile phone in developed and developing countries (Boadi et al., 2007; UNCTAD, 2007). The fastest growing market in the world now is the mobile industry (UNCTAD, 2007).

2.5 Utility of Mobile Banking from Banks' Perspective

At this stage it would be relevant to understand the usefulness of Mobile Banking from the banks' perspective. It is therefore imperative to understand the business environment in which banks operate and to identify customer groups that the banks may seek to target via Mobile Banking. Intensified Competition in the Banking Sector products are of immaterial nature sold increasingly with the help of computer networks spanning across the globe. The global networks provide the customer with world-wide services, for instance the use of credit cards while abroad. The creation of an EU-wide single domestic market has led to intensification of competition in the EU in all business fields including in the banking sector. The ongoing Globalization has further intensified the competition. Technical developments coupled with the process of Globalization, have made it possible for banks to offer their services in far-flung areas without investing money to build branches and hire additional staff. This opportunity, of course, is a two-way street: On the one hand, a bank gets access to new markets. On the other hand it is faced with increased competition on its home turf. To master this combination of opportunities and challenges banks need – apart from business consolidation and cooperation

–organic growth. It is therefore necessary to retain the existing customer base while simultaneously acquiring new, economically prosperous customers. Seen in conjunction with the price-sensitivity of customers and the resultant low relevance of the brand name banks are compelled to introduce innovative services that potentially attract prospective customers while retaining others.

Even though the brand-name remains a critical factor on account of the need for trust in banking business, the globalization and the technological developments, however, have reduced entry barriers so that the number of available reputed brands has increased significantly; thereby intensifying the competition (Tiwari &Buse 2007).

2.5.1. Adapting to Requirements of Core Target Groups

Banks, today, are increasingly confronted with technology-savvy customers who are often on the move. As Wolfgang Klein, Private Customers Director at Post bank, a leading German bank, puts it: "Today's customers want to organize banking transactions while on the move, irrespective of opening hours". Banks are responding to this development by introducing mobile services. Core target groups of Mobile Banking are often divided in three categories, youngsters, young adults and business people.

2.5.2 Mobile Banking as Distribution Channel

Mobile Banking enhances the number of existing channels of distribution that a bank employs to Offer services. The efficiency of a distribution channel can be measured by its fulfillment of three major objectives, which are closely related to each other. (Porteous 2006

2.5.3 Increasing Sales Volume

One of the primary tasks of a distribution channel is to increase the volume of demand for products at profitable prices. This objective is arrived by increasing operational efficiency so that those losses are minimized that are caused by delays in catering to customer orders. Further, a favorable reputation of the firm's logistical capacities may help generate additional orders. (Atkins 2005).

2.5.4 Reducing Costs of Distribution

Due to increased competition a distribution channel must organize business processes efficiently so as to reduce distribution costs. This pressure can be coped with by rationalizing organizational structures to increase productivity. (Porteous, 2006; Anyasi&Otuba 2009).

2.5.5 Increasing Customer Satisfaction

Mobile Banking may help increase the customer satisfaction by streamlining of business processes to increase efficiency, more attention and better consulting for customers due to automation of routine processes and innovative "anywhere, anytime" services customized for individual preferences. The collected data can also be utilized to create customer profiles. Increased customer satisfaction can help reduce the customer attrition rate. (Ahonen 2002).

2.5.6 Mobile Banking as Source of Revenue

Mobile Banking can also serve as a source of revenue. Mobile services can be offered on a premium basis. The price, in this case, should be reasonable enough so that customers are willing to pay them but at the same time they should be from a financial point of view higher than the costs incurred by the bank. Additional revenues can be generated through offering innovative, premium services to existing customers and attracting new customers by offering innovative services. (Sobczak 1997:6).

2.5.7 Mobile Banking as Image Product

Finally, Mobile Banking can be also used as an image product to gain strategic advantages. A bank may hope to win or retain a positive image amongst technology-savvy sections of the society and strengthen the brand-reputation of being innovative and visionary. The image of being a technology leader can help the bank win customers looking for modern products and services and at the same time help it retain its own existing base of technology-savvy customers, some of whom otherwise might have switched to other banks while looking for such a product. Further, the bank can profit from an early-mover advantage by actively shaping technological standards that are based on one's own strengths. This is, of course, fraught with a substantial risk of incurring financial and image losses if the propagated technology fails to establish (Tiwari &Buse 2007).

2.6 Mobile Banking Business Models

A wide spectrum of Mobile/branchless banking models is evolving. However, no matter what business model, if mobile banking is being used to attract low-income populations in often rural locations, the business model will depend on banking agents, i.e. Retail or postal outlets that process financial transactions on behalf telecoms or banks. The banking agent is an important part of the mobile banking business model since customer care, service quality, and cash management will depend on them. Many telecoms will work through their local airtime resellers. However, banks in Colombia, Brazil, Peru, and other markets use pharmacies, bakeries, etc.

Three models have been identified and developed, and they are primarily different from one another based on who established the relationship (Banks or the Non-Bank/ Telecommunication Company) of account opening, deposit or withdrawer, borrowing, etc., with the customers. There are differences in the Bank-led model, Bank Focused model and Non-bank-led model (Porteous, 2006; Anyasi&Otuba 2009).

2.6.1 Bank -led model

This is when customers perform transaction with the use of their phones, which is different, from the branch-base with the help of a trade partners. This is an alternative to conventional branch based banking. This method could be created by joint venture between banks and telecommunication companies. This system allows customers account relationship to be established and managed by the bank.

2.6.2 Bank -focused model

The bank focus model is when a traditional banks decides to use the low-cost delivery channels, which is a non-traditional banking system to provide banking services to its customers such as the use of m-banking facilities, automatic teller machine (ATMs), internet banking, e.tc., The bank-focus model is additive in nature and is an extension of the conventional branch-based banking (Porteous 2006)

2.6.3 Non bank -led model

The non-bank-led does not get involve unless required to do so when the need arises as a safe keeper of surplus funds, and this allows the telecommunication company handle all the functions (Aguirre et al 2008). However, mobile banking services that are focused on low income earners of the population size which are regularly found in the rural area will need to reply on

retail outlets. A lot of telecommunications agents operate through their airtime resellers while banks muses bakeries, pharmacies, e.tc which can be found in some countries such as Colombia (ibid.).

2.7 Advantages of mobile banking to providers and consumers

The use of mobile phones has a positive and significant impact on a country's economic growth, and its impact may be as twice as large in developing countries as to developed countries (ITU 2005, Salzaman et al 2001). Mobile banking is fast growing and is moving at a fast rate. The fast development of information technology in the global world has paved way for the development of this sector. The banks were faced with different challenges as a result of the large increase in their customer base in the past few decades, and these has brought about many innovative products and services which could foster the rapid development of the banking sector. And one of such innovation is the mobile banking which is targeted at three different categories of people between the ages of 14 & 18 years; secondly the young adult and thirdly, the business people (Muller-Veerse 2000). Mobile banking has many benefits for both the banks and the customers.

2.7.1 Benefits to banks

The mobile banking is expected to increase customer satisfaction, reduce the cost of distribution, e.tc, but trust and credibility has been the greatest challenge of mobile banking from their provider (Oxford business Group 2008; Langendoerfer 2002). And many effort that are been made to increase customers awareness and confidence in online facilities for banking appears insufficient (Merry 2005). The higher the number of people using mobile banking, the higher the money saved. According to Robinson (2000:105) the cost of making electronic transaction is lower than the cost of making branch transaction. Mobile banking strengthens the relationship between the banks and the customers because it brings banking service directly to the people which eventually leads to customers loyalty.

2.7.2 Benefits for customers

Mobile banking provides more benefits to its users and has been a more secure means of accessing banking services compared to other forms of online banking (Herzberg 2003). Its services could be used anywhere and it could be used without a desktop or PC and at a reduced price, which makes it convenient for users compared to the traditional banking method

(ibid). M-banking usually supports time critical situation that requires prompt response from the customer due to its immediate feature (Kemper & wolf 2000). It also provides self-service and digital access which is more cost effective (Ahonen 2002).

2.8 Critical success factors for M-banking

Critical success factors (CSFs) has been defined in various ways, and this depends on the purpose for which they are been used for. If well understood, critical success factor (CSF) approach shows an accepted top-down methodology for corporate strategic planning in an organization, and has it identifies key success factors, it can show the key relevant information that is required by top management. When the key success factors are identified and they are controllable, the management of an organization should take the necessary step in ameliorate its potential for success Mobile banking has a lot of impact it can make on its provider (Banks). These are regarded as critical success factor and if well studied and implemented it can bring positive impact to the provider. There are several suggestions in the literature as to what constitute to the critical success factor of mobile commerce (inclusive of M-banking).

According to the findings of (Buellingen and Woerter (2002) from interview expert, they see data security, user-friendliness, personalization, and transmission rate as concern of people. And also the research survey carried in UK by Strong and Old (2000) it reveals that convenient and easiness to use internet facilities at any time and in any way is more paramount and will serve as a motivating factor to customers to use mobile banking services.

On the contrary, Green (2000) believes that user friendliness is a key factor for consumers and that; high complexity phones and the size of the screen can be a serious threat to the user.It is also argued that psychological issues such as security and privacy can serve as a serious drawback when compared with technological issues which is believed to have a lesser impact. It is also argued from a different view, Shuster (2001 cited by Shaw 2006) believes that, pricing will be a crucial issue to customers and that price must be reasonably adjusted and affordable to subscribers of mobile users.

2.9 Challenges for a mobile banking solution

Handset operability

There are a large number of different mobile phone devices and it is a big challenge for banks to offer mobile banking solution on any type of device. Some of these devices support Java ME and others support SIM Application Toolkit, a WAP browser, or only SMS. Initial interoperability issues however have been localized, with countries like India using portals like R -World to enable the limitations of low end java based phones, while focus on areas such as South Africa have defaulted to the USSD as a basis of communication achievable with any phone.

The desire for interoperability is largely dependent on the banks themselves, where installed applications (Java based or native) provide better security, are easier to use and allow development of more complex capabilities similar to those of internet banking while SMS can provide the basics but becomes difficult to operate with more complex transactions. There is a myth that there is a challenge of interoperability between mobile banking applications due to perceived lack of common technology standards for mobile banking. In practice it is too early in the service lifecycle for interoperability to be addressed within an individual country, as very few countries have more than one mobile banking service provider. (Tiwari et al, 2007).

Security

Security of financial transactions, being executed from some remote location and transmission of financial information over the air, are the most complicated challenges that need to be addressed jointly by mobile application developers, wireless network service providers and the banks' IT departments. The following aspects need to be addressed to offer a secure infrastructure for financial transaction over wireless network: (Buellingen and Woerter (2002)

(i) Physical part of the hand-held device. If the bank is offering smart-card based security, the physical security of the device is more important.

(ii) Security of any thick-client application running on the device. In case the device is stolen, the hacker should require at least an ID/Password to access the application.

(iii)Authentication of the device with service provider before initiating a transaction. This would ensure that unauthorized devices are not connected to perform financial transactions.

(iv)User ID / Password authentication of bank’s customer.

(v) Encryption of the data being transmitted over the air.

(vi) Encryption of the data that will be stored in device for later / off-line analysis by the customer. One-time passwords (OTPs) are the latest tool used by financial and banking service providers in the fight against cyber fraud. Instead of relying on traditional memorized passwords, OTPs are requested by consumers each time they want to perform transactions using the online or mobile banking interface. When the request is received the password is sent to the consumer's phone via SMS. The password is expired once it has been used or once its scheduled life-cycle has expired. Because of the concerns made explicit above, it is extremely important that SMS gateway providers can provide a decent quality of service for banks and financial institutions in regards to SMS services.

Therefore, the provision of service level agreements (SLAs) is a requirement for this industry; it is necessary to give the bank customer delivery guarantees of all messages, as well as measurements on the speed of delivery, throughput, etc. SLAs give the service parameters in which a messaging solution is guaranteed to perform (Boyd, C, & Jacob, K, 2007).

Scalability and reliability

Another challenge for the Chief Information Officers (CIOs) and Chief Technical Officers (CTOs) of the banks is to scale-up the mobile banking infrastructure to handle exponential growth of the customer base. With mobile banking, the customer may be sitting in any part of the world (true anytime, anywhere banking) and hence banks need to ensure that the systems are up and running in a true 24-7 fashion. As customers will find mobile banking more and more useful, their expectations from the solution will increase.

Banks unable to meet the performance and reliability expectations may lose customer confidence. There are systems such as Mobile Transaction Platform which allow quick and secure mobile enabling of various banking services. Recently in India there has been a phenomenal growth in the use of Mobile Banking applications, with leading banks adopting Mobile Transaction Platform and the Central Bank publishing guidelines for mobile banking operations (Boyd, C, & Jacob, K, 2007).

Application distribution

Due to the nature of the connectivity between bank and its customers, it would be impractical to expect customers to regularly visit banks or connect to a web site for regular upgrade of their mobile banking application. It will be expected that the mobile application itself check the upgrades and updates and download necessary patches (so called "Over the Air" updates). However, there could be many issues to implement this approach such as upgrade / synchronization of other dependent components.

Personalization

It would be expected from the mobile application to support personalization such as: Preferred Language, date /time format, amount format, default transactions, standard beneficiary list and alerts (Boyd, C, & Jacob, K, 2007)

2.10. Mobile Banking system in Ethiopia

Ethiopia is a country with an area of 1.1 million square km and about According to the 2008/2009 annual report of the National Bank of Ethiopia, the total number of bank branches across the country is 636 for all the thirteen Banks. This number may increase as four additional banks are being established and some of the existing banks are opening new branches after the report was released. As of writing this paper, there are seventeen banks, among which three are governmental and the rest are private. Most of bank branches are concentrated in the capital city, Addis Ababa and some regional cities.

However, comparing the population and the geographic area coverage, the people-to-bank ratio shows that Ethiopia remains as one of the under banked economies. Actually, this is a critical problem in African countries in which only 20% of African families have bank accounts. Currently, branch expansion is very limited in number and yet branches in different areas are not interconnected. As a result, a customer is obliged to appear in person in a specific branch where s/he has opened account(s) to get banking service. Cash is still the most dominant medium of exchange and electronic payment systems are at an embryonic stage.

The conventional banking service, which requires appearing in person at a branch, cannot fulfill the growing customer demand. In the future, the competition between banks will be towards reaching the unbanked through various electronic channels mainly through mobile. Mobile

banking service is promising to reach the unbanked. Mobile banking is a subset of e-banking in which customers' access a range of banking products like saving accounts and credit instruments via electronic channels. Recent reports show that mobile phone has better penetration than bank expansion.

It is estimated that 2.6 billion people in the world do not have access to formal financial services and yet one billion of them have mobile phones. Besides, prices of both handsets and air-time are decreasing from time to time. In addition, currently, there are other encouraging initiatives that support the introduction of mobile banking in Ethiopia. The "Payment and Settlement proclamation- proclamation No. 718/2011" includes provision for transaction originated from mobile devices, the establishment of a company called 78million population .EthSwitch to provide interbank transaction services, and NBE's enforcement for implementing standard core banking software are the major ones.

Therefore, to provide such innovative services, we need a mobile banking framework that is suitable for our country. However, associated with mobile banking, there are a number of challenges such as security and lack of comprehensive legal framework that governs the transaction, use of local language, and related issues.

2.10.1Mobile banking in Dashen Bank

The mobile banking operation in Dashen Bank is one of the core functional units of the Mobile and Agent Banking Division in E-Banking Services Department All the functions of the mobile banking are under the immediate supervision of the Head for Mobile and Agent Banking Division. According to (DB Agent and mobile banking manual) the main responsibilities of the Division includes but not limited to:

• Plans, organizes, coordinates and supervises all the activities of the Division.

• Assists and actively participates in the development of policies and procedures regarding Mobile Banking operations, drafts mobile banking contracts and formats as well as prepares annual work program and budget for the Mobile Banking activities.

• Formulates and implements Mobile Banking operational and marketing strategies.

• Develops and implements effective promotional activities to enhance customer awareness towards the business.

• Identifies and takes corrective measures on performance gaps on mobile banking business within the Country in order to ensure quality service.

• Ensures the timely reconciliation of customers or individual accounts

• Makes sure that customers fulfill the minimum requirements to get the mobile banking service.

• Keep secrecy and confidentiality of customer information.

• In collaboration with the Head, Customer Relation Division of Corporate Planning Department ensures that information, products, services offered and fee structure of the Mobile Banking is updated on the bank's website and other appropriate means once in a month.(Dashen Bank S.C, Operational Policy and Procedure Manual for Mobile Banking Services Page 6 of 32)

• The Marketing Officers are accountable to the Head-Mobile and Agent Banking Division and are generally responsible for designing and implementing marketing strategies which drive the business motive behind the Mobile Banking. The Operation Officers are accountable to the Head Mobile and Agent Banking Division and are generally responsible for any kind of recording and reconciliation of transactions related to the Mobile Banking operations.

• The Technical Officers are accountable to the Manager e-Banking Service Department and are generally responsible for providing technical related support to the Mobile Banking system and ensures the business continuity of the Mobile Banking operation

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter discusses the processes and techniques used in carrying out the study. It also gives a description of the respondents including information on the study population, the number of respondents and how they were selected. It also provides an outline of research design and the instruments for data collection. The methods adopted in the administration of the research instrument, data collection procedure, data analysis and measures used to ensure validity of the instrument used.

3.1 Study Area

The study was carried out in populations of the study are DB's clerical employees found at EBSD, IT Department, and four purposely selected DB Area Banks found in Addis Ababa namely main branch, kality, saris and kera branch. The focus on the two Departments is considering their technical knowledge & support in relation with the service as well as know-how developed through the process of the support, and that of selected Area Banks' of DB in Addis Ababa is based on the relative high M-banking service performance.

3.2 Research Design

Research design is usually a plan or blue print which specifies how data relating to a given problem should be collected and analyzed. I t provides the procedural outlines for the conduct of any investigation. In this study, the researcher adopted both quantitative and qualitative study approach the rational for combining both approaches is to better understand the research problem by combining both numeric value from quantitative research and the detail of qualitative research and to neutralize limitation of applying a single approach. In all, 51 questionnaires were administered to the respondents from the selected branches and departments to solicit

information concerning the M-banking. Part of the information was also gathered from reports in the bank concerning M-banking services. A descriptive research design was considered the most suitable approach in view of the nature of the problem being investigated. According to Hungler B.P(1999), descriptive research is conducted to describe and interpret trends of events, as it exists at present.

3.3 Target population

In research methods, population is the entire aggregation of items from which samples can be drawn. The populations of the present study consist of DB's clerical employees found at EBSD, IT Department, and four purposely selected DB Area Banks found in Addis Ababa namely Dasen bank main branch, kality, saris and kera branches. The focus on the two Departments is considering their technical knowledge & support in relation with the service as well as know- how developed through the process of the support, and that of selected Area Banks' of DB in Addis Ababa is based on the relative high M-banking service performance

3.4 Sampling method and Sample size

The total population of DB's clerical employees found at EBSD, IT Department, and four purposely selected DB branches found in Addis Ababa is eighty three (83). Among of them the researcher selected fifty one (51) using judgmental sampling method. The criteria to select the sample is based on their (respondent) experience, responsibility, position, activities, in addition to this the researcher selected respondents that have the expected good knowledge about the effectiveness of Mobile banking service in dashen bank. As far as the researcher is permitted to have complete freedom of selecting individual who can provide relevant data and by understanding who gives me important answer to solve my stated problem.

3.5 Source of Data

The study used both primary and secondary data. Primary sources of data include interview and questionnaire, whereas secondary sources of data are generated through a review of relevant documents and web pages.

Questionnaires were distributed to DB's selected clerical staff found at EBSD, IT Department and DB's clerical staff who have direct contact with customers up on delivering the service and found at purposely selected four Addis Ababa Area Banks. services at DB) were selected as respondents because they are deemed to be knowledgeable about the existing

opportunities Document reviews were conducted to understand the key facts about the subject under study. The documents were reviewed by referring most recent information from authorized documents of the Bank, annual bulletin, web site of the Bank and different publications & reports made by the Bank.

3.6. Data collection instruments

Primary data was obtained through questionnaires with closed and open ended questions. The questionnaires include structured and unstructured questions and were administered to the respondents. The closed - ended questions enabled the researcher to collect quantitative data while open-ended questions enabled the researcher to collect qualitative data. The respondents targeted were EBSD and IT departments and four purposely selected branches of the bank. The questionnaire began with an introductory statement, which specified the purpose of the research as purely academic. Respondents were encouraged to be objective in their responses since they were assured of confidentiality.

3.7. Data collection procedure

The consent of all respondents was sought before they were included in the study. At each staff category, judgmental sampling was used to select respondents for the study. Each respondent was made to answer each question and then the appropriate answer ticked. Where the researcher is not sure of an answer, the researcher probed until answer provided is consistent. This procedure was repeated for each junior and senior staff respondents. To clear any doubts in the minds of respondents the purpose of the study was made known to respondents.

3.8. Data Analysis

Data from the structured self-administered questionnaire was properly organized through data coding, cleaning and entering. Data processing was by statistical package for social sciences (SPSS). The relevant information was obtained in a standard form using tables, frequencies and percentages to analyze and interpret the information. The results were finally presented in tables. These were used to ensure easy understanding of the analysis.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter presents and discusses findings of the study received through data collected in the field. It gives answers to the research questions which were raised before the research was conducted. This study aimed at assessing the effectiveness of mobile banking service a case of Dashen bank. Collection of these data as one using questionnaires which was administered to respondents, questionnaire involved closed and open questions. All figures in the table are numbers of frequencies distribution presented in percentages (%).

4.2 Questionnaire Return Rate

The questionnaire was administered to 51 employees of the selected branches and departments all the 51 questionnaires were obtained but 46 were valid for the analysis while, five were invalid because of improper and double response. The valid questionnaires which formed the analysis, yielded 90.1% response rate. The questionnaire return rate results are shown in Table 4.1.

Table 4.1 Response Rate

Response	Frequency	Percentage
Responded	51	100
Not responded	0	0
Total	51	100

Table 4.2 Reliability Statistics

Cronbach's Alpha	N of Items
.815	21

In terms of reliability, the most important figure is the Alpha value. As shown above when the Cronbach Alpha greater than or equal to 0.7, it can be considered as an acceptable level of reliability in most social science research. If the Cronbach Alpha is less than 0.7, this means questions might be difficult for the respondent or the respondent did not understand the questionnaire (Cronbach, 1951). In our case, Cronbach's alpha is 0.815. This value is above 0.7, so the scale can be considered reliable with our sample. To investigate the effect as well as the relationship between mergers and acquisitions and employee commitment various cultural, leadership and human resource related data was collected through questionnaires. SPSS software (version 20) was used to verify the reliability of collected data. Besides, before distributing the questionnaires to the sample respondent, the validity and reliability of mediator variables and questionnaires was tested by experienced research advisor. This all confirmed the validity and the reliability of the data.

4.3. Characteristics of Respondents

Researcher was interested to know gender, age, education level of respondents in order to know the characteristics of the respondents.

Table 4.3 Summary of respondents Profile

Profile	Variable	Frequency	Percent	Valid percent	Cumulative percent
Gender	Male	27	52.9	52.9	52.9
	Female	24	47.1	47.1	100
	Total	51	100	100	
Age of respondents	20-30	17	33.3	33.3	33.3
	31-40	22	43.1	43.1	76.5
	41-50	9	17.6	17.6	94.1
	51-60	3	5.9	5.9	100
	Total	51	100	100	
Educational back ground	Diploma holder	7	13.7	13.7	13.7
	First degree	33	64.7	64.7	78.4
	Masters	11	21.6	21.6	100
	Total	51	100	100	
Work unit of respondents	E- banking	15	29.4	29.4	29.4
	IT	12	23.5	23.5	52.9
	Branch	24	47.1	47.1	100
	Total	51	100	100	
Work experience of respondents	1-3 years	2	3.9	3.9	
	3-5 years	8	15.6	15.6	

	5-10 years	29	56.8	56.8	
	10-15 years	12	23.6	23.6	
	Above 15 years				
	Total	51	100	100	

4.3.1 Gender of Respondents

Out of the 51 respondents, as clearly seen in table 4.1 below, respondent's distribution by gender shows that, majority of the respondents 52.9% are males whiles 47.1% were females. These findings justify that the involvement of male and female in the study area is almost proportional.

4.3.2 Age of Respondents

As shown in table 4.2 above, it was found that, staffs in the age of 31 – 40 years are more dominant in the Bank(43.1%).This is followed by those aged between 20 – 30 years (33.3%) and those aged between 41-50 years (17.6%).The age with least representation in the bank is between51 – 60years(5.9%). This means that most of the workers in the bank are young adults that are more productive, knowledgeable and who can cop up with any technological changes in the industry.

4.3.3 Education level of Respondent

The status of respondents with respect to the highest qualification attained was obtained and the findings are indicated in the table 4.3 above. According to table 4.3 above, about 64.7 % of the respondents have BA degree whereas about 21.3%of the respondents had a postgraduate qualification. Lastly about 13.7% of the respondents have diplomas. This implies that majority of the respondents have a higher educational level and are believed to have a well understanding to give a valid response for the questionnaires that were designed to study the effectiveness of the service.

4.3.4 Respondents work unit

The largest percentage of participants were selected from branches that form 47.1% of total followed by EBSD 29.4% and that of IT department 23.5.3%. This implies that majority of the respondents are from branches. As the bank's branches are the place where the m-banking service is practically operated and delivered to customers respondents in the area have exposures to all the service delivering process and they are believed to have a better and more accurate responses related to the service.

4.3.5 Total service year of respondents in the organization

In terms of service year in DB, 0 to 2 years 3.9%, 3 to 5 years 29.3%, 6 to 8 years 33.3%, 9 to 11 years 21.6%, and above 11 years indicate 11.8%. Hence the result indicates that most of the participants have more than two years of work experience and are expected to have adequate information needed for the study.

4.4 Types of services offered

Table 4.4

Mini-statements and checking of account history	**Frequency**	**Percent**	**Valid percent**	**Cumulative percent**
Low extent	31	60.8	60.8	60.8
Moderate extent	20	39.2	39.2	100.0
Access to loan statements				
Not at all	15	29.4	29.4	29.4
Low extent	36	70.6	70.6	100
Access to card statements				
Not at all	9	17.6	17.6	17.6
Low extent	34	66.7	66.7	84.3
Moderate extent	8	15.7	15.7	100.0
Status on cheque, stop payment on cheque				
Low extent	41	80.4	80.4	80.4
Moderate extent	10	19.6	19.6	100.0
Ordering cheque books				

Low extent	34	66.7	66.7	66.7
Moderate extent	17	33.3	33.3	100.0
Balance checking in the account				
Moderate extent	2	3.9	3.9	3.9
Large extent	25	49	49	52.9
Very large extent	24	47.1	47.1	100.0
PIN provision, Change of PIN and reminder over the Internet				
Low extent	1	2.0	2.0	2.0
Moderate extent	20	39.2	39.2	41.2
Large extent	30	58.8	58.8	100.0
Blocking of (lost, stolen) cards				
Low extent	46	90.2	90.2	90.2
Moderate extent	5	9.8	9.8	100.0
Domestic and international fund transfers				
Moderate extent	23	45.1	45.1	45.1
Large extent	28	54.9	54.9	100.0
Cash-in, cash-out transactions on an ATM				
Low extent	35	68.6	68.6	68.6
Moderate extent	16	31.4	31.4	100.0
Bill payment processing				
Not at all	15	29.4	29.4	29.4
Low extent	36	70.6	70.6	100.0

From the above listed eleven m-banking services, Balance checking is the most agreed up on M-banking services offered in dashen bank. The service falls between moderate extents, large extent and very large extent measures .among the 51 respondents 2 of them meaning 3.9% believe that the service is given in a moderate extent. 25 of the respondents 49% believe that the service is given in a large extent and the last 24 (47.1%) of them believe that the service is available in a very large extent.

According to the data the second best m-banking service offered by the bank is domestic and international fund transfers this is service is offered in a moderate and large extent 23(45.1%)of respondents agreed that the service is only moderately given while 28(54.9%) of the respondents believe that it is given in a large extent.

From the remaining nine m-banking services the third place is taken by pin provision, change of pin and reminder over the internet. This service lays in the range from low extent 2% moderate extent 39.2% and 58.8% large extent as shown in the above table.

However, according to the data the rest of the services listed are almost not accessible. This indicates that the bank is not effective in delivering most of mobile banking services expected from it. Even those services that respondents believed that they are available are not sufficiently given. This information is important that it could be used by management of the bank to determine whether the least used services add any value and the advantages of those that are not available to decide and start improving the number of the services.

4.5 Challenges encountered in implementing mobile banking service

Table 4.5

Inability to offer mobile banking solution on any type of device	**Frequency**	**Percent**	**Valid percent**	**Cumulative percent**
Low extent	6	11.8	11.8	11.8
Moderate extent	22	43.1	43.1	54.9
Large extent	23	45.1	45.1	100.0
Security of financial transactions				
Not at all	24	47.1	47.1	47.1
Low extent	27	52.9	52.9	100.0
Inability to meet the performance and reliability expectations				
Not at all	21	41.2	41.2	41.2
Low extent	26	51.0	51.0	92.2
Moderate extent	4	7.8	7.8	100.0
Lack of consumer's awareness of their ability to use their phones for banking purpose				
Moderate extent	7	13.7	13.7	13.7
Large extent	30	58.8	58.8	72.5
Very large extent	14	27.5	27.5	100.0
Poor Internet and network distribution				
Large extent	22	43.1	43.1	43.1
Very large extent	29	56.9	56.9	100.0

According to the above table there are challenges the bank faces on implementing m-banking services. Among the listed five challenges Lack of consumer's awareness of their ability to use their phones for banking purpose and poor internet and network distribution are the two mostly faced challenges by the bank.

While, security of financial transactions is the least faced challenge, inability to offer m-banking solution on any type of device and inability to meet the performance and reliability expectations are the two challenges that respondents think should be put next to the challenge mostly encountered.

Understanding the challenges faced by customers in mobile banking provides useful insight into reasons why customers may not be using or signing up for mobile banking Services as expected by the mobile banking service providers. Even though, problems like poor internet and network distribution are beyond the bank's capacity to solve, problems such as unavailability of the service in any type of device, failure to meet performance and reliability expectations and lack of consumer's awareness could be solved by the bank through different methods in order to minimize the challenges and deliver effective mobile banking service.

4.6 The bank have knowledgeable staff to solve any problem related to m-banking service.

Table 4.6

		Frequency	Percent	Valid Percent	Cumulative Percent
	YES	41	80.4	80.4	80.4
	NO	10	19.6	19.6	100.0
	Total	51	100.0	100.0	

The above table indicates that most of the respondents (80%) agree that the bank has knowledgeable staff to solve any problem related to m-banking service. Based on this it is possible to conclude that the bank may not face problems beyond the control of its employees working in the area.

4.7. Reliability and responsiveness of M-banking service

Table 4.7

links and programs are checked for accuracy and functionality	**Frequency**	**Percent**	**Valid percent**	**Cumulative percent**

YES	**21**	**41.2**	**41.2**	**41.2**
NO	**30**	**58.8**	**58.8**	**100.0**
Security measures are in place to prevent the website information from being altered				
YES	**32**	**62.7**	**62.7**	**62.7**
NO	**19**	**37.3**	**37.3**	**100.0**
The bank has procedures in place for when there is an interruption in service of m-banking for the customer				
YES	**31**	**60.8**	**60.8**	**60.8**
NO	**20**	**39.2**	**39.2**	**100.0**
Employees of the bank are always ready and willing to provide timely and prompt service to customers				
YES	**51**	**100**	**100**	**100.0**
NO	**0**	**0**	**0**	**0**

The above operational issues listed in the table related to m-banking service are discussed below:

As per the data collected 41.2% of the respondents agree that the bank checks its links and interactive programs periodically for its accuracy and functionality since this helps banks to take corrective measures as soon as an operational error happens in the system. However 58.8% disagree that the links are checked for any accuracy and functionality.

To prevent the web site information from being altered, 60.8% of respondents believe that security measures taken by the bank. Even though, it is not satisfactory to make use of their passbook and checkbook are the procedures in place for when there is an interruption in the service of m-banking for customers.

Providing basic and refreshment training to employees help banks to provide quick, up to date and secured services to the customer. With this regard, even if it is not sufficient as explained by the respondents during interview, the bank provides m-banking training to their employees to create employees that are ready and willing to provide timely and prompt service to customers.

Addressing banking activities beyond the traditional trade area is one among the different driving forces of delivering banking products to the customer through electronic channels. With this regard, the bank has policies and procedures in place to address this activity. Using internet and mobile as a channel of service delivery is the implication of this activity because these channels can able banks to provide service for the customer at any place rather than branch based traditional service. However according to the data obtained 39.2% of the respondents believe that this procedures are not in place.

4.8 cost effectiveness of the service

Table 4.8

M-banking reduce costs incurred due to branch expansion	**Frequency**	**Per cent**	**Valid percent**	**Cumulative percent**
Neutral	**20**	**39.2**	**39.2**	**39.2**
Agree	**23**	**45.1**	**45.1**	**84.3**
Strongly agree	**8**	**15.7**	**15.7**	**100.0**
Infrastructure and man power costs can be reduced through m-banking.				
Neutral	**9**	**17.6**	**17.6**	**17.6**
Agree	**28**	**54.9**	**54.9**	**72.5**
Strongly agree	**14**	**27.5**	**27.5**	**100**
It is less costly to provide M-banking service than other E-banking services.				
Strongly disagree	**18**	**35.3**	**35.3**	**35.3**
Disagree	**24**	**47.1**	**47.1**	**82.4**
Neutral	**9**	**17.6**	**17.6**	**100**
Transactions made using m-banking require less service charges than transactions made in branches.				
Disagree	**11**	**21.6**	**21.6**	**21.6**
Neutral	**15**	**29.4**	**29.4**	**51.0**
Agree	**25**	**49**	**49**	**100**

One of the benefits of delivering these banking product should be the cost effectiveness of the channel. Although Based on the data shown on table 4.12 most of the respondents agree that m-banking service is cost effective in a way that it reduces costs incurred due to branch expansion, man power and infrastructural costs and costs incurred by customers due to transaction service charges. Compared to other e-banking services that doesn't require the customer to have an internet connection most of the respondents 47.1% disagree that m-banking less costly. However From this we can conclude that offering the service is cost effective than any paper based banking

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1. Summary

This study aimed at assessing the effectiveness of mobile banking service in dashen bank. It explained all the five specific objectives which were first, identifying mobile banking services accessible by Dashen bank customers; secondly to assess challenges facing the bank in implementing m-banking service, to find out the availability of qualified experts on the area, to measure the reliability and responsiveness of the bank towards m-banking service and finally to assess the cost effectiveness of the service. These results showed generally that; the main mobile banking services accessible by Dashen bank customers are Balance checking, domestic and international fund transfers and pin provision, change of pin and reminder over the internet . Secondly the results found that among the challenges facing the bank Lack of consumer's awareness of their ability to use their phones for banking purpose and poor internet and network distribution are the most dominant ones .The study also found that there are qualified experts in place and also training and development programs are available to employees to enable them cope with the fast growth and complexity of the service. In relation to reliability of services and the responsiveness of the bank the study found that though it is not satisfactory the bank has reliability of services and responsiveness to any challenges including checking its links and interactive programs periodically for its accuracy and functionality and take corrective actions,

providing its employees training to refresh them and update their knowledge. Finally the cost effectiveness of the service was discussed according to the results it is possible to conclude that m-banking is cost effective in many ways that it reduces costs incurred due to branch expansions, infrastructural and man power costs and transactional costs.

5.2 Conclusions

From the research findings presented in chapter four and above summary of findings the study concludes that the mobile banking services in Dashen bank are not effective though the bank is generally most effective in acquiring experts ready to solve any problems related to the service, in its responsiveness to any challenges faced and reliable service giving ability and in its cost effectiveness. However there are some challenges facing the bank in delivering mobile banking services. The main challenges are inability to offer the expected m-banking services, lack of consumer awareness about the service poor internet and network distribution and inability to offer the service on any type of device. The mobile banking services offered by Dashen bank are very limited to certain services. Customers also have lack of awareness about how to use the technology. And also the services unavailability in any type of mobile phone limits the number of customers who can access the service.

Poor network and internet distribution in the country is one of the hindrances of m-banking service meaning even if the service is available it cannot be accessed properly without network connection.

Although the service attractive in some ways like its cost effectiveness and somehow reliability so much is expected from the bank to increase mobile banking service effectiveness in many other directions to satisfy customers and to share the benefit of offering m-banking service. And for that matter the bank and all stakeholders should work together to overcome all these challenges.

5.3 Recommendation

As per the findings from the analysis of the collected data; the following recommendations are forwarded in order to promote and develop viable Mobile-banking service in Dashen bank.

The bank should first try to increase the accessibility of the listed mobile services it is also essential to create awareness about the service to consumers; how they can easily use it through different methods such as promotions, preparing different manuals and brochures.

To increase the reliability of services the bank should work on checking the accuracy and functionality of services moreover, the bank should promptly respond to any interruption in the service.

In order to prevent or decrease problems related to poor internet and network distribution efforts by the Ethiopian telecommunication corporation to expand ICT infrastructure should be encouraged.

The only Directive which deal with E banking is a directive which is issued by the National bank of Ethiopia which is "Agent and Mobile banking service Directive # FIS/01/2012" Therefore the national bank of Ethiopia should come up with a better and advanced regulations and directives to facilitate the advancement of banking technology.

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Annex

Questionnaire

Effectiveness of Mobile Banking services in dashen bank

Dear respondent,

I am a student pursuing Master degree in project management at st.marryUniversity. I am conducting this research to study Effectiveness of Mobile Banking services offered in Dashen bank. Your response to these questions would remain anonymous. Taking part in this study is voluntary Thank you for your kind co-operation.

Section A: Demographic profile of respondents

1. Gender Male ☐ Female ☐
2. Age 20 – 30 ☐ 31 – 40 ☐ 41 – 50 ☐ 51 – 60 ☐
3. Educational level : Diploma holder ☐
   First degree ☐
   Second degree(Masters) ☐
   Above masters ☐
4. Work unit : EBSD ☐

IT ☐

Branch ☐

5. Total service year with the current organization _____

Section B: Mobile banking services

6. Please indicate in the table below the extent to which the following m-banking services are offered by your bank.

   Key: 5 -Very large extent, 4- Large extent, 3- Moderate extent, 2 – Low extent, 1- not at all

	5	4	3	2	1
Mini-statements and checking of account history					
Access to loan statements					
Access to card statements					
Status on cheque, stop payment on chequ					
Ordering cheque books					
Balance checking in the account					
PIN provision, Change of PIN and reminder over the Internet					
Blocking of (lost, stolen) cards					
Domestic and international fund transfers					
Cash-in, cash-out transactions on an ATM					
Bill payment processing					

Section C: Challenges encountered in implementing mobile banking service

7. To what extent do you agree that the following are challenges the bank encounters in implementing m-banking?

Key: 5 - Very large extent, 4- Large extent, 3- Moderate extent, 2 - Low extent, 1 –Not at all

	5	4	3	2	1
Inability to offer mobile banking solution on any type of device					
Security of financial transactions					
Inability to meet the performance and reliability expectations					
Lack of consumer's awareness of their ability to use their phones for banking purpose.					
Poor Internet and network distribution					

8. Kindly list some of the ways in which the bank used to deal with challenges encountered.

_____

_____

_____

_____

Section D: Experts on mobile banking service

9. Does your bank have knowledgeable staff to solve any problem related to M-banking service?

Yes ☐ No ☐

Section E: Reliability and responsiveness of M-banking service

10. Are links and programs checked for accuracy and functionality?

Yes ☐ No ☐

11. Is security measures in place to prevent the website information from being altered?

Yes ☐ No ☐

12. Does the bank has procedures in place for when there is an interruption in service of m-banking for the customer?

Yes ☐ No ☐

13. Employees of the bank are always ready and willing to provide timely and prompt service to customers.

Yes ☐ No ☐

Section F: cost effectiveness of the service

Please indicate the extent to which you agree or disagree with each of the following statements.

Key (1= strongly disagree 2= Disagree 3= Neutral 4= Agree 5= strongly agree)

Cost effectiveness	**SD**	**D**	**N**	**A**	**SA**
M-banking reduce costs incurred due to branch expansion.					
Infrastructure and man power costs can be reduced through m-banking.					
It is less costly to provide M-banking service than other E-banking services.					
Transactions made using m-banking require less service charges than transactions made in branches.					