



**ST. MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES**

**OPPORTUNITIES AND CHALLENGES OF MOBILE BANKING SERVICE IN THE
CASE OF DASHEN BANK S.C**



BY: SAMSON NEGASH

ADVISOR :HABTAMU ABEBAW (PHD)

MAY, 2022

ADDIS ABABA,ETHIOPIA

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CASE OF DASHEN BANK S.C**

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APPROVED BY BOARD OF EXAMINERS

Dean, Graduate Studies

Signature & Date

Advisor

Signature & Date



External Examiner

Signature & Date

Internal Examiner

Signature & Date

DECLARATION

The undersigned, declare that this thesis is my original work, prepared under the guidance of **HABTAMU ABEBAW (PHD)**, all sources of materials used for the thesis have been duly acknowledged, I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

Student Name: SAMSON NEGASH

Advisor Name: **HABTAMU ABEBAW (PHD)**



Signature-----

Signature-----

ENDORSEMENT

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a university advisor.



Advisor

Signature & Date

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LIST OF ACRONYMS/ABBREVIATIONS

ADC	Alternative Delivery Channel
AJIC	African journal of information and communication
ATM	Automated teller machine
CBE	commercial bank of Ethiopia
CSA	central statistical agency
DB	Dashen bank
E-PAYMENT	Electronic payment
E-banking	Electronic banking
ETC	Ethiopia Telecommunication Corporation
GSMA	Group Special Mobile Association
ICT	Information communication technology
M-banking	Mobile banking
MQA	Mobile Quality Assurance
NBE	National bank of Ethiopia
POS	Point of sale
SMS	Short Message Service
SPSS	Statistical Package for Social Science
TAM	Technology Acceptance Model
UMTS	Universal Mobile Telecommunications System
WAP	Wireless Application Protocol

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ABSTRACT

The purpose of this study is to assess the practice of mobile and internet banking services, opportunity and challenges in the case of Dashen bank. A quantitative and qualitative mixed research approach was used to explore the practice in depth. Primary data was collected using questionnaire and document review was used for collecting secondary data from the literatures. The data collection instrument was developed from a synthesis of literatures that are relevant to meet objective of this study. The survey questionnaire was administered to purposively and conveniently selected Dashen bank employees and active mobile banking users of Dashen bank. The Data was analyzed through descriptive statics (percentage, frequency, mean and standard deviation) using SPSS version 20 software data analysis tool.

The research findings revealed that Dashen banks mobile banking offers services like Fund transfer, balance inquiry, bill payment, mini statement, checking account history, merchant payment, account information, alerts on account activity, check book request, status and payment, deposit and withdrawal by using short messaging and client based channels. From this services the majorities of customers use services like deposit, withdrawal, money transfer and checking account information. are the main benefits the bank realized and time saving, 24 hr access and physical security are the main benefits on the customers side. The main challenges that Dashen bank face when using the technology according to the finding are Network availability, security challenge, customer's literacy and language problem, menu navigation, understanding and hardness of making payment are challenges on the customers side.

The existing opportunities for the service of mobile banking are high penetration of mobile phone, widening network coverage, Commitment of the government to strengthen the banking industry, the level of technology, country development, etc. Furthermore, it is recommended for DB to intensify its marketing communication activities and introduce more services.

Key words: Mobile Banking ,Challenges , Opportunities,Practice,

CHAPTER ONE:

1.INTRODUCTION

1.1.Background Of The Study

The rapidly growing information and communication technology (ICT) is knocking the frontdoor of every organization in the world, where ethiopian banks would never be exceptional. in the face of rapid expansion of electronic payment (E-PAYMENT) systems throughout the developed and the developing world, ethiopian's financial sector cannot remain an exception in expanding the use of the system (Gardachew 2010, p.2).

But still the usage of mobile banking is a debatable issue among the educated persons and professional body because of the risk involved in such transactions. though many of such people argue that internet and other technology based transaction is not safe, not practical and would lead to fraud, a lot of people think it safer, flexible in time and can be done anywhere and anytime (Chowdhury and Ahmmad,2011). even though E-banking has a lot of benefit in delivering service to customers, in Ethiopia customers were missed to enjoy with the technological advancement in banking sector which has been entertained elsewhere in Africa and the rest of the world. this is due to lack of awareness or competition among banking industries. the modern E-banking methods like atms, debit cards, credit cards, tele banking, internet banking, mobile banking and others are new to the Ethiopian banking sectors. E-banking which refers to the use of modern technology that allows customers to access banking services electronically whether it is to withdraw cash, transfer funds, and to pay bills, or to obtain commercial information and advices are not well known in Ethiopia (Ayana, 2014).

According to bayoush 2018 mobile banking eliminates the time as well as space shortcomings from banking operations like, balance inquire and fund transfer from one account to another account without visiting bank branches Mishra and Sahoo, (2013).

According to Briky G.Giorgis(2017) mobile banking also means performing banking activities which primarily consist of opening and maintaining mobile/regular accounts and accepting deposits; furthermore, it includes performing fund transfer or cash-in and cash-out services using mobile devices (NBE Directive, Fis-01-2012).

in the broader sense mobile banking enables the execution of financial services in the course of which – within an electronic procedure – the customer uses mobile communication techniques in conjunction with mobile devices (Pousttchi and Schurig 2004 As Cited In Singh 2011).

The electronic banking service was ushered into the Ethiopian market in 2001 when the largest state owned, Commercial Bank Of Ethiopia (CBE) introduced ATM to deliver service to the local users (Gardachew, 2010). after this the electronic banking service scope was further expanded to mobile banking when dashen bank signed an agreement with ivery, a South African E-payment technology company, for the introduction of mobile commerce in April 21, 2009. this would make Dashen Bank the first private bank in Ethiopia to acquire E-commerce and mobile merchant transactions (Amanyehun, 2011).

However, mobile banking came into full practice after several years of trials and errors as well as wait-and-see attitude by customers. since then, mobile banking has shown a gradual growth across many various parts of Ethiopia. and also, despite the advantages and benefits of mobile and internet banking for both the bank and its customers, the use of mobile banking services in Ethiopia is much lower than expected mobile phones and its applications are still highly under-utilized. stressed that the market of mobile banking still remains very small when compared to other electronic banking counterparts. furthermore, it is noted that the widespread and large usage of mobile telephones did not reflect on the large usage of mobile banking service. besides, despite the advantages and benefits of mobile and internet banking for both the bank and its customers, the use of mobile banking services in Ethiopia is much lower than expected

Therefore, the study mainly tries to identify and discuss the challenges faced and the opportunities realized by the bank in usage of mobile banking service. finally, the study is expected to answer the following research questions; how does the current practices of mobile banking in Dashen Bank looks like?, , what are the challenges faced realized by the bank in the usage of mobile banking and what are the existing opportunities for services?. finally, this study would attempt to discuss and analyze these objectives and go further to make recommendations based on its findings.

1.2. Statement Of The Problem

Technology is making a tremendous impact upon service companies in general and the financial services sector is no exception. the application of information and communication technology concepts, techniques, policies and implementation strategies to banking services has become a subject of fundamentals importance and concerns to all banks and indeed a prerequisite for local and Global competitiveness in banking industry. as a result of this technological improvement business environment in financial sector is extremely dynamic and experience rapid changes and demands banks to serve their customer electronically. the evolution of M banking started from the use of Automatic Teller Machine (ATM) and finland is the first country in the world to have taken a lead in E-banking (Worku & Tafa, 2016). Currently, the number of banks still remained 23, of which 21 are private and 2 are state-owned. In 2017/18, banks opened 500 new branches, raising the total number of branches to 4757 from 4257. The Total population is 96,503,000 according to central statistical agency (CSA) estimation for 2018; As a result, bank branch to population ratio stood at 1:20,286.5 people in 2017/18. About 35.3 percent of the total bank branches were located in Addis Ababa. Although one can observe a strong growth and revival of the private sector since liberalization in the 1990s; yet, the state-owned banks seem to dominate the industry. As of the year 2017/18, the state owned banks account for 65% of total deposits and 55% of outstanding loans and advances and 60.1 percent of the capital. More specifically, the state-owned Commercial Bank of Ethiopia (CBE) - the largest bank in Ethiopia alone controls about 28.8% of the branch networks, nearly 51.1% of the capital , about 46% of the outstanding loans and advances, and about 58 % of the deposits of the commercial banks (Mesele Shiferaw,2019). even though customers regard quality of service as the most important aspect of their banking experience, they also value relevant, competitively priced and innovative products, and effective delivery channels. the challenge for banks, therefore, is to keep abreast of developments in these two areas. despite the advent of ATMS, kiosks, plastic cards, telephone banking, online banking and now mobile banking, many customers still regard the branch as an important channel even the most important channel for interacting with their bank (Michael & Gary, 2012). according to African business central (ABC) report in april 16, 2015, top seven African countries for mobile money/mobile payment use by countries are:- kenya 61%, Uganda 42%, Tanzania 39%, Senegal 29%, Ghana 18%, South Africa 15%, and Nigeria 15%. it indicates that even though our country Ethiopia 10%

starts to use the mobile banking service in recent, the development is not as expected as compared to the cited countries.

in Ethiopia the number of mobile phone subscribers has now reached more than 38 million in Ethiopia as of July 07, 2015 as per annual performance report of Ethio telecom. However, the mobile banking development in Ethiopia is at its starting stage.

The mobile banking development in Ethiopia is not full-fledged in terms of exhaustively utilizing all the mobile services one can get. Currently, of all the types of mobile banking services, most customers of the bank use notification or alarm inquiry (Asfaw, 2015). By December 2020, over 2 million customers have been registered on the platform, representing a significant boost of Dashen's digital customer base, there are very insignificant number of mobile banking customers in all of the branches as per Dashen Bank quarterly activity report.

As, compared to other African countries like Kenya where the mobile banking services accessibility reach higher level, the level of using mobile banking in Ethiopia is very low. For instance Commercial Bank of Ethiopia the pioneer bank in mobile banking subscribers has very low users (167,000) as of March 31, 2015 (CBE, 2015). According to the Communications Authority of Kenya's (CA's) quarterly sector statistics report, M-Pesa's share of mobile money subscriptions was 98.8%, whereas Airtel Money and T-Kash recorded negligible market shares of 1.1% and 0.05% respectively for the quarter ended March 31, 2020.

During the quarter, the number of active registered mobile money subscriptions in Kenya stood at 29.1 million while the country had just over 202,100 active mobile money agents, of which over 173,000 were M-Pesa agents.

M-pesa started operating in Kenya in 2007, and has taken the lead in terms of innovation for providing more inclusive access to finance for a large part of the population (Kariuki Nyaga, 2014). In developed world, mobile phone users are becoming less hesitant towards the adoption of mobile applications. Recent results from Mobile Quality Assurance (MQA) research by IBM company shows that, consumer interest in mobile banking and payments services in the US has increased significantly in the past years. Around 75% of those surveyed say they would consider using mobile banking services if offered, compared to only 49% who expressed their willingness to try mobile banking services in a similar survey conducted in 2006.

Finally, even though there are researches conducted in other countries like Bangladesh and

revealed that unavailability of a backbone network connecting the whole country; inadequacy of reliable and secure information infrastructure especially telecommunication infrastructure; sluggish ICT penetration in banking sector; insufficient legal and regulatory support for adopting e-banking etc are the major challenges for the efficient uses of e-banking in the country (Bashir Uddin, Sayma Sadia shawon, and AbdurRakib Nayeem,2017), there is no prior study conducted in Ethiopia even though many researches which the researcher got that are done in Ethiopia mainly focused on opportunities and challenges for implementing mobile banking but does not investigate the practice after implementation and did not consider the the customers side. Therefore, this study intended to show opportunities and challenges in the mobile banking services and practice of M banking service focusing on DB (Dashen Banks) in light of the research problems discussed above and to fill the existing gap of limited research availability. the Dashen Bank of Ethiopia is making an investment into the mobile banking project for effective provision of mobile banking service to its customers. hence, it is important for Dashen Banks that provide mobile banking service to understand the challenges impeding the intention to use mobile banking service, in order to obtain the desired end result of the project thereby create cash less society, which is the ultimate objective of financial sectors in the current digital world. moreover, a clear understanding of these factors would enabled the Dashen Bank of Ethiopia to develop suitable marketing strategies, tailored awareness creation programs and pilot projects.

Therefore the study sought to find out from the customer perspective, the factors that influence consumer practice of mobile banking services in the case of Dashen Bank in Addis Ababa, Ethiopia.

And the study tries also to identify the current challenges in order to mitigate them and the existing opportunity that can be grasped. when the banks alleviate the problem on the customers and the banks this would have lead to more customers, it also helps the higher authorities to clear the way for the technology to develop and increase usage level.

hence identified the research gap in this regard. with this understanding the student researcher likes to pose and find answer to the following Research question:

- 1.How does the current practices of mobile banking in dashen bank looks like?
- 2.What are the challenges faced by the bank in the usage of mobile banking?
- 3.What are the existing opportunities for mobile banking services ?

1.3 Research Objectives

1.3.1. General Objective:

The Major objective of This Study is to Assess Opportunities and Challenges of Mobile Banking Service in the case of Dashen Bank S.C. while the specific objectives are as follows:

1.3.2. Specific Objectives

1. To Assess The Current Practice Of Mobile Banking Service In Dashen Bank.
2. To Identify And Discuss The Challenges Faced Realized By The Bank and customers In The Usage Of Mobile Banking Service .
3. To Identify The Existing Opportunity Towards Mobile Banking Services.

1.4 Significance Of The Study

Since mobile banking system is in an infant stage in Ethiopia, this study would help banks to benefit from the mobile banking service of this technology by assessing the current practices of mobile banking ,by investigating the different opportunities and challenges of this service delivery channel and by recommending solutions for the identified problems,. the study mainly attempts to provide a better understanding of the factors that influence challenges, opportunities and practice of mobile banking services of Dashen Banks in Addis Ababa, Ethiopia.

1.5 Scope Of The Study

The study is confined to assess mobile banking services and factors influencing usage of mobile banking service as well as opportunity and challenges of mobile banking services in dashen bank. currently the numbers of banks operating in Ethiopia are twenty three out of these two are government banks and the remaining twenty one are private. out of these banks the researcher has selected one private bank that is Dashen Bank. the reason for selection of this bank is because of the pioneered in the adoption of technology.

1.6 Organization Of The Study

The study is presented in five chapters. the first chapter which is the introduction covers the background of the study, problem statement, objectives of the study, research questions, significance of the study, as well as the scope and limitations of the study. this is followed by chapter two which reviews theoretical and empirical literature on the subject matter. chapter three looked at the methodology of the research which comprises the research design, the research population, sample and sampling technique. it also considered the sources of data and data collection instruments, methods of data collection and analysis. chapter four the result & discussion and in the fifth chapter conclusion & recommendations of the study were presented consecutively.

1.7 Limitations Of The Study

This study focused on mobile banking service practices and factors influencing usage of mobile banking as well as opportunity and challenges of mobile banking services in Dashen Bank. since mobile banking is a new experience in Ethiopia it was very difficult to get recent secondary data as well as literature in this area from the country's perspective. there could be also delay in responses by the targeted audience because of target respondents are all working professionals and customers and busy in their work. besides the target respondents of customers are going to be selected in convenience sampling method due to difficulty of accessing sample customers. also the time frame may be very limit which restricts an in-depth treatment of the research topic which can be doing by increasing the number of sample.

CHAPTER TWO:

2.LITERATURE REVIEW

This chapter contains both the Theoretical and Empirical review of the study. the Theoretical framework includes: definition of mobile banking, back ground of mobile banking, background of mobile banking technology, M- banking development in Ethiopia, mobile banking in Ethiopia's banking industry, technology employed to provide mobile banking service, services available on mobile banking , the benefits and risks of mobile banking, challenges and opportunities of mobile banking and factors influencing usage of mobile banking respectively. in addition, it also includes Empirical review of the study from different researchers in different countries.

Theoretical Study

2.1 Definition Of Mobile Banking

According to kana Berhanu (2017) mobile banking is defined as 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).however, mobile banking came into full practice after several years of trials and errors as well as wait-and-see attitude by customers. since then, mobile banking has shown a gradual growth across many various parts of Ethiopia. despite the very high mobile penetration rate, the use and adoption of mobile banking services remains low. with the advent of new mobile technologies, such as blackberry, iphone, androids, etc, which serves as a catalyst, mobile banking is on the edge to draw millions of new users within the world teeming population (Agwu 2012).

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). mobile banking (M-Banking) is among the latest in a series of recent mobile technological wonders. although automated teller machine (ATM), telephone, and internet banking offer effective delivery channels for traditional banking products, but as the newest delivery channel established by retail and microfinance banks in many developed and developing countries, M-banking is likely to have significant effects on the market (Safeena et al., 2012).

in particular, the expanded uses of smartphones has increased demand for M-banking services, prompting many more banks, microfinance institutions, software houses, and service providers to offer this innovative service together with new sets of products and applications designed to extend their client reach (including to unbanked populations), improve customer retention, enhance operational efficiency, increase market share, and provide new employment opportunities (Shaikh, 2013). despite such benefits, the use of mobile phones or tablets to conduct banking transactions or access financial information is not as widespread as might be expected (e.g., dineshwar and steven, 2013; Luarn and Lin, 2005; Shih et al., 2010), as demonstrated by popular media reports (e.g., accenture, 2013). Juniper research (2013) has revealed that more than 1 billion people are expected to use M-banking globally by 2017, but that level represents only 15% of the Global mobile subscription base—a base that accounts for approximately 96% of the world’s population (International telecommunication union, 2011).

In the academic model of Tiwari and Buse, (2007) mobile banking is defined as:-“mobile banking is a service provided by a bank or other financial institution that allows its customers to conduct some financial transactions remotely using a mobile device such as mobile phone or tablet, the scope of offered services may include facilities to conduct bank and stock market transactions, to administer accounts and to access customized information. “delivering financial services to the unbanked via mobile banking technology holds significant progress with an estimated one billion people in emerging markets that have a mobile phone but no bank account.

according to this model mobile banking can be said to consist of three inter-related concepts: Mobile accounting, Mobile brokerage and Mobile financial information services.

Most services in the categories designated accounting and brokerage are transaction-based. the non-transaction-based services of an informational nature are however essential for conducting transactions - for instance, balance inquiries might be needed before committing a money remittance. the accounting and brokerage services are therefore offered invariably in combination with information services. information services, on the other hand, may be offered as an independent module.

2.2 HISTORY Of Moble Banking

M-banking dates back to the end of the 1990s when the german company paybox, in collaboration with deutsche bank, launched the first service. initially, it was deployed and tested mostly in

European countries: Germany, Spain, Sweden, Austria, and the United Kingdom. Among developing countries, Kenya was the first to introduce a text-based M-banking service, M-pesa, in 2007. By 2012, there were more than seven million registered M-pesa users in Kenya. As Veijalainen et al. (2016) argue, the main driving force for the rapid acceptance of small mobile devices is the capability they offer for obtaining services and running applications at any time and any place, including while on the move.

Researchers use various terms to refer to mobile banking, including m-banking (Liu et al. 2009), branchless banking (Ivatury and Mas, 2008), M-payments, M-transfers, M-finance (Donner and Tellez 2008), or pocket banking. As an important component of electronic banking, M-banking usually constitutes an alternative delivery channel (ADC) for various financial and non-financial transactions. Other prominent ADCs include ATMS, Point-of-sale terminals, interactive voice response, mobile phones, and the internet.

Regardless of the terminology they use, scholars generally define M-banking as an application of M-commerce that enables customers to access bank accounts through mobile devices to conduct transactions such as checking account status, transferring money, making payments, or selling stocks (e.g., Alafeef et al., 2012; Harma and Dubey, 2009; Lee and Chung, 2009).

In addition, a few studies (e.g., Akturan and Tezcan, 2012; Masreket et al. 2012; Shih et al., 2010) cite M-banking as an innovative communication channel in that the customer interacts with a bank through a portable device. However, the dynamic markets for mobile devices and m-banking suggest the need for a fresh definition that captures recent advances in the field. Previous definitions have not, for example, explicitly stated which mobile devices qualify for use under the term M-banking. Nevertheless, accessing banking services from a laptop should not be considered m-banking, since their user interface is similar to that of desktop PCs. Laptops are aligned with the online/internet banking category rather than with M-banking.

Retail and microfinance banks located in both developed and developing countries typically offer four points of access to M-banking services: (1) mobile applications that can be downloaded to a smartphone, (2) mobile browsers that can be used with any mobile or smartphone that has a web browser, (3) applications that can be downloaded to a tablet, and (4) short messaging services

(SMS) that provide notifications of account information. the first three routes require an internet connection on the mobile device; SMS relies on standard global system for mobile communication (GSM) networks. overall, though, M-banking has changed the financial landscape, and portable devices are now considered ADCS that use different applications to deliver financial and non-financial services and products to consumers.

2.2.1 Background Of Mobile Banking Technology

For the first time, in 1999, U.S. bank to use SMS banking services, it was not unique to bank. so that same year the U.S. the post office using SMS technologies to be aware of the position of the customer letter. since, according to the law Klein Cohen many organizations and governmental agencies in America use in order to reduce the cost of internet and mobile services. WAP system was introduced to the business world in 1999, and led to the reduction in the cost of information technology to develop use and innovation new methods, and lead to reduction and control services (Farnood, 2008). in the past, the use of internet banking by providing access to the bank at any time, have a great impact on the bank services to customer.

Therefore, those customers were able to review the status of your bank account, carry out other transactions such as deposit accounts, and pay bills from home or office easily. major restrictions of this model electronic banking are computer and internet access. therefore, mobile banking has been introduced as a model of E-banking provides customers who need only a mobile phone. the reasons for the superiority of this approach to banking with internet banking are no restrictions in space, using the minimum facilities and another reason is the great growth of mobile phone use among users. this way has provided the development of mobile banking. (Poornick,2010). the evolution of mobile banking continues as the following: The introduction of GPRS technology in late 1999 and in 2000, The introduction of personal office mobile services, The introduction of mobile money (in 2000), The introduction of third generation mobile (in late 2001),

Mobile banking beginning in the late 1990s, has experienced five distinct stages: the first stage, mobile banking will be summarized in simple banking operations, especially pays bills and send SMS from the bank to the customers and vice versa. the second stage is to add some of the accounts of depositors and related services to mobile banking services. in the third stage, were used banking services via mobile network, other media such as the internet and telephone, this phase was completed with this phase was completed with the emergence of intelligent mobile phones. the fourth step is to continue, development has been made as of jp phone and android, and this progress

has led to the providing of services such as mobile internet access and connection to the operating systems of banks. in the fifth stage, this is starting; technologies have been used such as radio frequency identification chips for mobile payments, and banking network connection to visa card and mastercard systems. qualitative and quantitative development of these technologies can be connected to make chips for mobile devices such as mobile phone, watches, TV and ipad even connected sunglasses. Porteous (2016) classified mobile banking into two; firstly, transformational mobile banking, which is the provision of banking services using a mobile phone to reach the unbanked population. secondly, additive mobile banking, in which the mobile phone is simply an additional channel that is used to provide banking services to those already banked.

2.3 Related Cases In Africa

Africa have experienced a considerable proliferation of mobile devices for the past two decades. and Africa has the fastest growth rates in internet penetration, driven by mobile connectivity, with the number of internet users across the continent increasing by more than 20% in 2017 (Kemp, 2018). there were an estimated 362 million internet users in Africa in january 2017 (Kemp, 2017), and by 31 december 2017, only 12 months later, some estimates were putting the African total at 453 million internet users (World Internet Stats, 2018). West Africa had over 175 million unique subscribers (Gsm, 2018c) while the Middle East and North Africa had over 365 million unique mobile users (Gsm, 2018d) by 2017.

Gsm (2018a) reports that the percentage of mobile connections compared to the total population in the Southern Africa, East Africa, West Africa And North Africa is at 147%, 61%, 89% and 106% respectively. this means that there are more connections than the number of people in the Southern Africa And Northern Africa. the percentage of unique mobile users to the total population in the middle east 24 the African journal of information and communication (AJIC) pankomera and van greunen and North Africa is 60% (GSMA, 2018d), while in Sub-Saharan Africa it is 46% (GSMA, 2018C). the new 2018 Global digital suite reports that Africa experienced a growing number of internet users of 20% on yearly basis, due to increasingly affordable smart devices and mobile data bandwidth (kemp, 2018). in addition, the amount of time spent by people online is steadily increasing. the number of social media users in Africa went up by 13% in the year 2017. in terms of the usage of social media, facebook is still the most-used social media platform in Africa, followed by youtube (GSMA Intelligence, 2018).(Pankomera, R., & Van Greunen, D. (2018).

2.3.2 Mobile Banking Development In Ethiopia

At the end 2013/14 fy, there were Eighteen Commercial banks operating in Ethiopia, of these sixteen are private commercial banks while the rest two are state owned banks. despite a rapid increase in the number of financial institutions since financial liberalization, the Ethiopian banking system is still underdeveloped compared to the rest of the world now reached Twenty Three Banks. the Ethiopian banking industry as a whole had a network of 2,323 branches as at september 30, 2014, in which the number of population being served by a single branch was around 37,861.8. commercial bank branch (per 100,000 adults) ratio in 2012 was 2.94 which is lower than Sub-Saharan Africa, 3.71 (World Bank, 2012). with urban skewed branch network it is hard to ensure efficient flow of financial resources and optimize the contributions of the entire financial system to the development processes.

The mobile banking development in Ethiopia is at its starting stage. currently M-banking practice in Ethiopia can be considered as accessing the core banking system within the bank. hence, only a customer of given bank can access some banking services via his/her mobile phone. moreover, there are only six commercial banks that have got license to operate mobile and agent banking services as per the directives no. fis /01/2012.as of December 2014 there are about 151,425 active number of mobile subscriber customers in these six banks. the mobile banking development in Ethiopia is not full-fledged in terms of exhaustively utilizing all the mobile services one can get. currently, of all the types of mobile banking services, most customers of the bank use notification or alarm inquiry.

2.4 Technology Employed To Provide Mobile Banking Service

customers can use mobile banking technologies for various banking services ranging from planning to pay their bills via their cell phones. mobile technologies used in the mobile banking include the browser-based applications, messaging-based applications and client-based applications (Kim et al. 2009; Tiwari & Buse 2007). mobile banking services could be used through more than one channel the most commonly known are:

1) SMS-short messaging service

The term "SMS banking" refers to the use of text messaging systems to deliver banking and financial services. This is where the customers communicate with the bank through their mobile devices by sending an **SMS** (short messaging service) to the bank. the short messaging service (SMS) works in two ways, and it can be either a pull mode or a push mode. in the push mode, the mobile customer send a text message to the bank which contains a service command with a predefined request code to the bank's specific number. the bank also reply with SMS containing the specific information requested from the bank while the pull mode is when the banks sends a text message to the subscriber (customer) to inform the customer about certain transaction that have just taken place over the account. the message could be in the form of an **MMS** (multimedia message service) or **SMS** (short message service) they both work similarly even though the use of SMS is more popular Tiwari, r. and Buse, s. (2007). **SMS** is used to make mobile banking available to users of older cell phones that do not have web browsers or applications. SMS has a variety of advantages and disadvantages for financial applications and services as per (Mobile Banking Overview 2009):

Advantages:-easy to use, common messaging tool among consumers, works across all wireless operators, affordable for consumers, requires no software installation, allows banks and financial institutions to provide real time information to customers and employees, stored messages can be accessed without a network connection

Disadvantage: -text-only and limited to 140-160 characters per message, does not offer a secure environment.

on the messaging-based applications, the communication between the bank and the customer is carried out via text messages. for example, by using a registered mobile number, the customer sends a predefined command to the bank, and then uses text messages to conduct transactions with the bank. an example of messaging-based applications is the unstructured

The supplemental service data (USSD) format is compatible with the majority of mobile phones. Wizzit in South Africa (Wizzit 2005), M-pesa in Tanzania (Camner & Sjoblom 2009), M-pesa in South Africa (Nedbank 2010b), and Fnb mobile banking are examples of existing mobile banking applications based on USD (Fnb 2010). SMS allows financial institutions to communicate with their customers.

SMS can be sent from almost any phone, which makes it suitable for sending messages from banks for a range of financial procedures. To start an inquiry, the customer sends an SMS to a special number established for this purpose, conveying the service request. The customer sends the bank a customized SMS (a command based on an arabic number) with the predefined commands for each service offered. If the request is found to be approved, the bank's server gets the SMS, interprets the commands, and executes the commands and instructions. The authentication procedure is followed.

2) Client-Based

This method requires the customers to use software installation, and this would serve as a user interface that can allow customers to use the mobile device while offline to access some basic transactions before going online. typing details before connecting to the internet could reduce cost. this client based application is particularly useful because it allows customers to stay offline and while preparing transaction such as entry of account details and afterwards the transmission is made by sending out the data, this Banking process conducted offline reduces online connection time and cost.(Tiwari, R. And Buse, S. 2007)

Mobile application uses a custom-designed software application installed on a smart phone or tablet that provides for a more user friendly interface than is possible with either SMS or Mobile browser based banking. as such this is the fastest growing delivery channel for mobile banking (Mobile Banking Overview 2009).

Advantage: -Offers organizations more control over the user experience, with a rich user interface capability, ability to work even when there is no connection to the wireless network, secure access can be established with applications, most applications also provide the ability to provide remote wipe-out of information when device is lost or stolen.

Disadvantage: -Thousands of different combinations for devices, operating systems and development environments may prevent support for all devices, differing handset capabilities and performance causes inconsistent user experience when using or downloading an application , possible increase in customer service and support issues.

The browser-based application is essentially a wireless access protocol (WAP)-based internet access (Kim et al. 2009).

this requires a compatible mobile phone which is WAP-enabled the mobile phone is used to access banking portals through the internet. browser-based customer needs to be connected to the internet to use this service. the interface is generated from the server which is transported to mobile device, and this allows the content to be displayed through the browser. this method is extremely fast depending on the server that the customer is connected to but one its disadvantages is that, it requires the subscriber (customer) to stay online all through the transaction process and could lead to higher cost for the customers.

3) Browser-Based

Browser-based customer needs to be connected to the internet to use this service. the interface is generated from the server which is transported to mobile device, and this allows the content to be displayed through the browser. this method is extremely fast depending on the server that the customer is connected to but one its disadvantages is that, it requires the subscriber (customer) to stay online all through the transaction process and could lead to higher cost for the customers Tiwari, R. And Buse, S. (2007) it is an extension of the online banking channel. customers can navigate to a website on a smart phone or tablet via the embedded browser in much the same way that they can access a site from a personal computer (Mobile Banking Overview 2009).

Advantages: -User experience of browsing the internet from a mobile device is familiar and offers a rich user experience, allows end users to access corporate applications, secure connection can be established on most of the mobile browsers.

Disadvantage: -Many non-standard variables including handsets, browsers and operating systems, inconsistent user experience due to varying connection speeds and handset limitations, user needs to have a data plan, which may be a barrier to adoption among price-sensitive demographics, no “offline” (out of the coverage) capability

Apart from these there are more options like USSD-Based - for this type, all you have to do is dial the bank's service code and you can ask for information on your bank account. you don't need a smartphone or high end phone to use the USSD platform, the mobile wallets, offered by telecom

service provider platforms, for instance Vodafone's M-Pesa, Bharti Airtel's, Airtel Money and Aircel's Mobile Money. bear in mind that even an un-banked customer can use this service. a smart phone and an internet connection are not essential Chandran, (2014).

this method requires the customers to use software installation, and this would serve as a user interface that can allow customers to use the mobile device while offline to access some basic transactions before going online. typing details before connecting to the internet could reduce cost. this client based application is particularly useful because it allows customers to stay offline and while preparing transaction such as entry of account details and afterwards the transmission is made by sending out the data, this banking process conducted offline reduces online connection time and cost (Pendharkar 2004). these are mobile banking applications that the users should download on their phone. using the properties of these applications, transactions can be encrypted completely in both source and destination. since this software has been designed for special purposes, mobile banking application designers can optimize the applied interface for the financial transactions. the independence of application is one of the advantages of these applications for financial institutions (Ming 2007). once customers have downloaded the software on their phone, they can use the mobile banking application. in other words, the application should be compatible with the various needs and functions for a large number of mobile phones and this is expensive. the phone should also support one of the environments such as the microsoft windows mobile. another problem of mobile banking applications is that the customers should download the software, install it on their devices, and update its new versions, and maybe this is a new problem for some of the customers.

2.5 Benefits Of Mobile Banking

Mobile banking allows anytime, anywhere (within the network coverage) banking with all the inherent advantages (Aggarwal, 2014). the high penetration of mobile phones across the strata of society makes it a natural tool for taking electronic banking to its next level. it is more than likely that internet banking and mobile banking would exist as allies rather than competitors for each other. convenience is one of the benefits of mobile banking as banking transactions and other related activities can be performed in the comfort of customer's home or offices. the usefulness of conducting banking transactions at home or from the office eliminates the difficulties that are associated with driving to the bank, the cost of petrol, and parking. mobile banking also allows

customers to perform banking transactions 24 hours a day, 7 days a week, and 365 days a year (Aggarwal, 2014). general benefits include: -

Offering Innovative, personalized mobile services can also assist banks to attract and retain customers. (Dr Lennart, Soderberg 2008), M-banking offers financial institutions the opportunity to target and acquire new customer segments that value mobility and real-time control of their finances, leading to increased customer growth and revenue.

Reduced Customer Support Costs; mobile banking solutions also offer a full range of benefits for financial institutions, ranging from reduced customer support costs to improved customer satisfaction and retention as well as revenue growth. (Www.Mobileaware.Com)

Offers More Cost Effective Channel; according to nasikye, 2009 mobile phone offer more cost effective channel and hold greater promise for making financial services reach much lower income and remote client. it's the most cost effective service suitable for a developing country (Abunyang, 2007).

Mobile Banking Extends The Convenience Of Existing Online Services; such as account balance information, funds transfer, bill payment and mini statements by making them accessible from any mobile device. (Nyaoke William, 2008).

Drastically Cuts Down The Costs Of Providing Service To The Customers; this is the biggest advantage that M-banking offers to banks. according to the newly-appointed UK international development secretary andrew mitchell, M-banking can also provide a route out of poverty.

M-Banking Enables 'Anywhere Banking'; customers now don't need access to a computer terminal to access their banks; they can now do so when they are traveling or when waiting for their orders to come through in a restaurant.

Benefits Of Mobile Banking To Customers

as per Aggarwal (2014) the importance of mobile banking are:-

- **Easy Accessibility:** Mobile banking provides the customers to anytime and anywhere banking with the help of mobile telecommunication services. this facility is very easy accessible by each mobile internet users. they no longer have to go to the actual banks to make their transactions.
- **Security:** Mobile banking is very safe and secure with the help of mobile pin (M-Pin). each user of mobile banking is secured by pin number which was firstly issued by the bank but we can

change it many times as per the needs of the customers. all the transactions through mobile banking can be easily operated by the customers and all records will be safe in the account details.

□ **Less Cost:** Mobile banking is less expensive comparative to other modes of banking. there are various types of charges imposed by the banks when we use other modes of banking likes atm facility, but through mobile banking there are very less charges would be charged by the banks.

□ **Speed:** With the help of new technology like 3g services, the customers make their banking transactions in the fraction of seconds. mobile banking is done by the mobile internet users in a very fast speed as compare to another mode of banking. for example: if we want to deposit the money in branch, firstly we have to wait for our turn in a big queue to reach the counter but these hurdles can be easily removed by the usage of mobile banking. instead of allocating time to walk into a bank, you can check account balances, schedule and receive payments, transfer money and organize your accounts when you're on the go.

□ **Account Statement:** If we need our account details immediately, it is only possible with the online and mobile banking. mobile banking provides us immediate effect of banking transaction on our mobiles with sms and mini statements on our mobiles. you can check your account balance, review recent transaction, transfer funds, pay bills, locate ATMS, Deposit Cheques, Manage investments, etc.

□ **Always Connected:** Mobile banking gives us an option to always connect with their bank accounts for getting the updating of every minute. some account holders have large transaction per day. with the help of downloading the mobile banking application and software of their banks, they can get the update of their account by every minute or second.

□ It utilizes the mobile connectivity of telecom operators and therefore does not require an internet connection.

□ Mobile banking is available round the clock 24/7/365, it is easy and convenient and an ideal choice for accessing financial services for most mobile phone owners in the rural areas.

Benefits Of Mobile Banking To Banks

Increasing Customers: Mobile banking helps the banks to increase their customers. we know that the frequency of mobile users is increasing at very high speed but the frequency of banks account holder is very less. so, mobile banking is a new technological platform to the banks to increase their customers.

Easier Expansion: Traditionally, when a bank wanted to expand Geographically it had to open new branches, thereby incurring high startup and maintenance costs but now banks with a

traditional customer base in one part of the country or world can attract customers from other parts, mobile banking transactions mostly do not require a physical presence.

Reduce Operating Cost: - With mobile banking, banks don't need to set many costly customer service desks and call centers. the cost of processing a transaction via mobile phone can be as much as 10 times lower than via atm, and as much as 50 times lower than via physical branch.

Enhanced Image: Mobile banking helps to enhance the image of the organization as a customer focused innovative organization. this image also helps in becoming effective at E-marketing and attracting young/professional customer base.

Increase Market Penetration: - It goes for underserved population segment. mobile banking can serve primarily to reduce the cost of deploying customer touch points into lower income and more remotely located population segments.

The rise of mobile banking has made the banks more competitive. it resulted in opening of better prospects and avenues for banking operations.

The mobile banking has ensured transparency of transactions and facilitated towards removing the documentation requirements to a major extent, since majority of records under an E-banking set up are maintained electronically (google).

Mobile banking removes space and time limitations from banking activities such as checking account balances, or transferring money from one account to another.

For The Country Economy

Today, there are large portion of Africans population which has no bank account but with the help of mobile banking awareness especially young account holders will open the bank account and helps in economic development

It has great contribution in terms of mobilizing domestic savings with these services.

Boosting domestic savings through expansion of financial services to the poor and rural populations.

Reduction in financial transactions costs, leading to lowering cost of doing business that will benefit smes and overall private sector development.

Increased government revenues as a result increased corporate revenues from booming M-banking, improved corporate earnings, etc. Ondiege (2010).

2.6 Mobile Banking Risks

The loss of a person's mobile device often means that criminals can gain access to your mobile banking pin and other sensitive information.

Regular users of mobile banking over time can accumulate significant charges from their banks. most mobile banking apps need an internet connection to be able to operate, so if you live in a rural area or experience problems with your internet connection, then you won't be able to access your account. the same applies if your mobile phone runs out of battery.

Many phones aren't yet compatible with anti-virus software. most cell phones don't come standard with anti-virus protection even if they have the capacity to browse the internet. some phones are not even compatible with the anti-virus software available and there are known cases in which people were unable to put anti-virus software registered to them on corporate cell phones. although identity thieves are still a few steps behind when it comes to learning to implement some of their most successful computer tricks (phishing, spamming, spreading viruses, account hacking, etc...) on a cell phone level, experts agree that is only a matter of time and people shouldn't assume that anti-virus software isn't necessary for cell phones. mobile banking users are specially concern with security issues like financial frauds, account misuse and user friendliness issue - difficulty in remembering the different codes for different types of transaction, application software installation & updating due to lack of standardization Chandran, (2014). but still the usage of mobile banking is a debatable issue among the educated persons and professional body because of the risk involved in such transactions.

though many of such people argue that internet and other technology based transaction is not safe, not practical and would lead to fraud, a lot of people think it safer, flexible in time and can be done anywhere and anytime (Chowdhury and Ahmmad,2011).

2.7 Services Provided By M-Banking Systems

There is no universal form of m-banking; rather, purposes and structures vary from country to country. mobile banking can offer services such as account information, mini statements, checking of account history, alerts on account activity(passing of set thresholds) monitoring of term deposits, access to loan statements, access to card statements, mutual funds (equity statements, stop payment on cheque, ordering cheque books, balance checking in the account.

also, it can do payments, deposits, withdrawals, and transfers such as domestic and international fund transfers, micro-payment handling, mobile recharging, commercial payment processing, bill payment processing, peer to peer payments, withdrawal at banking agent, deposit at banking agent Ishengoma,(2015).

2.8 Services Available On Mobile Banking

Mobile Accounting

Tiwari & Stephan (2007) defined mobile accounting as transaction-based banking services that revolve around a standard bank account and are conducted and/or availed by mobile devices. not all mobile accounting services are however necessarily transaction based. mobile accounting services may be divided into two categories to differentiate between services that are essential to operate an account and services that are essential to administer an account (Renju 2014). moreover, additional services are required that inform a customer about his/her transactions and other activities involving their account. it is for this reason that mobile accounting is offered almost regularly in combination with services from the field of mobile financial information.

Account Operation

The term account operation, as used in this study, refers to an activity that involves monetary transactions. such transactions may involve an external account and/or internal account. mobile services that are used to operate an account are (Tiwari & Stephan 2007).

Money Remittances: - mobile devices may be used to instruct the bank to remit money in order to conduct one-time transactions, such as paying bills or transferring funds. this service can also include the facility to cancel an ordered remittance.

Issue Standing Orders: - the house bank may be entrusted with standing orders for payment of regularly recurring payments such as payment of standing payments, monthly rent or telephone bill.

Transfer Funds To And From Sub-Accounts: - funds from one sub-account may be transferred to another as and when needed, for instance from a savings account to checking or other types of account and vice versa (Sunil and Durga 2013).

Subscribing Insurance Policies: - standardized, low-cost insurance policies like travel insurance policy may be purchased via mobile devices. this service could be particularly attractive in time-critical situations, for instance, if a bank customer has to set out on an urgent, unplanned journey, he may still be able to subscribe to a travel insurance policy offered by his house bank.

Account Administration

The term account administration refers to tactical situations, for instance, if a bank customer has to set out on an urgent, unplanned journey, he may still be able to subscribe to a travel insurance policy offered by his house bank. this may involve activities like access administration and cheque book request. mobile accounting services that are used to administer the account are (Tiwari & Stephan 2007), (Sunil and Durga 2013):

Access Administration: - Mobile devices may be used to administer the access to an account, for example to change the individual pin or to request new transaction numbers.

Change Operative Accounts: - Through this service a customer can change his default operative account and do transactions using a different account. this option is attractive for customers holding several sub accounts. funds of sub-accounts may be hereby utilized in a targeted manner without first transferring the amount to the default account.

Blocking Lost Cards: - Mobile non-voice telecommunication systems such as wireless application protocol, short message service (WAP, SMS) can be used round the clock to speedily block lost credit and debit cards irrespective of the current geographic location.

Cheque Book Request: - Instead of going personally to the bank, the customer can request for a cheque book to be mailed to his or her address as per the records of the bank. this saves his/ her valuable time (Sunil and Durga 2013).

Bill Payment: - for those companies which register with the bank for this service, the payment is made on request on mobile phone banking.

Change Of Primary Account: - the customer has the option to change the primary account to another new account number for carrying out transactions (Sunil and Durga 2013).

Mobile Financial Information

mobile financial information refers to non-transaction based banking- and financial services of informational nature (Tiwari & Stephan 2007). this sub-application may be divided into two categories: account information and market information (Cruz et al. 2010).

Account Information

The term account information refers to information that is specific to a customer and his bank, even though it does not necessarily involve a monetary transaction. mobile services that belong to this category are:

Balance Inquiries: - mobile devices may be employed to check the current financial status of own bank or securities accounts (Sunil and Durga 2013).

List Of Latest Transactions: - mobile devices may be used to request a list of the latest transactions performed on an account. this service works with a standard, pre-specified number of latest transactions that are reported, as and when demanded. most of the banks provide a list of transactions.

Statement Request: - unlike the request for a list of latest transactions, it generates a list of all transactions in a given period, for instance in a week or in a month. statements may be requested either manually, as and when needed electronically. with mobile banking the account statements can be requested via and/or delivered on mobile devices (Cruz et al. 2010).

Transaction And Balances: - the bank may be instructed to automatically alert the customer via sms whenever transactions (credits as well as debits) exceeding a certain amount are performed on the account. in addition, a similar threshold alert may be activated for the balance status of the account.

the customer may be informed via SMS whenever the balance falls below a certain predefined level. this service may be useful to help the customer avoid unpleasant situations by not being able to honor his commitments (Cruz et al. 2010).

Threshold Alerts For Stock Prices: - the bank may be instructed to send an alert on mobile devices, via SMS, when prices of some particular stocks fall or jump to a predefined threshold value and ask for further instructions (Suoranta and Matila 2004).

Returned Cheques Or Cheque Status: - the customer may be informed without time delay if one of her or his deposited cheques has not been honored and corrective steps are required.

Credit Card Information: - the customer may check anytime and anywhere the current status of his credit cards and the amount that he may utilize at that given point of time. branch and atm locations: - mobile devices may help finding the nearest branch or atm affiliated with a bank. the current location of the customer may be determined by positioning the mobile device. this service may be particularly useful while travelling (Crosman, 2011).

Helpline And Emergency Contact: - mobile devices may be provided with content that is required in emergency situations, for instance to block a lost credit card and cheque book. the information may be either embedded in the telephone menu, for example in cooperation with a network carrier or the information may be provided on a wap page analogue to a web page.

information on the completion statuses of an order: - the bank may use “push” services to inform the customer via his mobile device regarding whether or not his orders could be carried out. this ensures that urgent information can be provided to the customer while on the move.

Product Information And Offers: - the bank can provide information about its products and new offers to a customer on the move. a customer can “pull” the information that he wishes to access. on the other hand, the bank can “push” the information or offers that the customer has identified as interesting and is willing to receive.

Market Information

The Term market information as opposed to account information refers to information with a macro scope. this information is not directly related to the customer account. it is generated either externally like exchange rates or central bank’s interest rates, or internally by the individual bank (Tiwari & Stephan 2007), for example bank-specific interest rates. the individual bank customer does not play a direct role in this process.

the information may be later sorted out to cater the individual needs and preferences of a particular customer, if so desired by him, and subsequently delivered to a mobile device of his choice, or a pda. information in this category generally concerns: foreign exchange rates, interest rates, stock market news and reports and commodity prices (for example: - gold and raw materials)

2.9 Challenges Of Mobile Banking

Mobile internet banking besides its benefit it has challenges. due to the countries infrastructural condition network availability is the main problem to operate the system and the customer's literacy make it hard to cover all customers that's because the system is designed in foreign language. operational challenge, chances of risk and security challenge are also challenges faced by the bank. as internet technology advances so does the ability of criminals to hack into an internet bank and steal important client information. the major challenges in addressing the issue of financial inclusion through mobile banking. such as:

Handset Operability:- there are a large number of different mobile phone devices and it is a big challenge for banks to offer mobile banking on any type of device, some of these devices support java me and others support sim application toolkit, a wap browser, or only sms.

Security:- as most internet connected devices, as well as mobile telephony devices, cybercrime rates are escalating year on year. the type of cyber-crimes which may affect mobile banking might range from unauthorized use to remote hacking, or jamming or interference via the internet or telephone network data streams.

Scalability And Reliability:- another challenge 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 and hence banks need to ensure that the systems are up and running in a true 24*7 fashion.

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 website for regular upgrade of their mobile banking application.

User Adoption:- it should be noted that studies have shown that a huge concerning factor of having mobile banking more widely used , is a banking customers unwillingness to adopt for several reasons like learning curve associated with new technology , having fears about possible security compromises , just simply not wanting to start using technology, etc.

Personalization:- it would be expected from the mobile application to support personalization such as:- preferred language, date/time format, amount format, default transaction, standard beneficiary list, and alerts.

Illiteracy : - as most cell phone applications are designed in foreign language and the majority of unbanked societies, who have cell phone, live in rural areas, where illiteracy rate is high, there exist language barriers to execute financial transactions via mobile phones. Asfaw, (2015).

According to Dr. Sarita Bahl (2012) the following are the new challenges of E banking for bank management and regulatory and supervisory authorities.

- **Regulatory Challenge:** - as the internet allows services to be provided from anywhere in the world, there is a danger that banks will try to avoid regulation and supervision. what can regulators do? they can require even banks that provide their services from a remote location through the internet to be licensed.
- **Legal Challenge:** - electronic banking carries sensitive legal risks for banks. banks can potentially expand the geographical scope of their services faster through electronic banking than through traditional banks.

in some cases, however, they might not be fully versed in a jurisdiction's local laws and regulations before they begin to offer services there, either with a license or without a license if one is not required. when a license is not required, a virtual bank—lacking contact with its host country supervisor—may find it even more difficult to stay abreast of regulatory changes. as a consequence, virtual banks could unknowingly violate customer protection laws, including on data collection and privacy, and regulations on soliciting. in doing so, they expose themselves to losses through lawsuits or crimes that are not prosecuted because of jurisdictional disputes.

- Operational Challenge: - the reliance on new technology to provide services makes security and system availability the central operational risk of electronic banking. security threats can come from inside or outside the system, so banking regulators and supervisors must ensure that banks have appropriate practices in place to guarantee the confidentiality of data, as well as the integrity of the system and the data.
- Reputational Challenge: - breaches of security and disruptions to the system's availability can damage a bank's reputation. the more a bank relies on electronic delivery channels, the greater the potential for reputational risks. if one electronic bank encounters problems that cause customers to lose confidence in electronic delivery channels as a whole or to view bank failures as system wide supervisory deficiencies, these problems can potentially affect other providers of electronic banking services.
- Security Challenge: - internet banks collect and keep some very important personal information from each client. as internet technology advances, so does the ability of criminals to hack into an internet bank and steal important client information, according to financial expert steve ellis, writing on the computer world website.
- Personal Information: - internet banks need to collect personal information in order to do business, but if they do not follow local information collection laws then there could be lawsuits and Government penalties.

In addition an exploratory research done by Asfaw (2015) which attempted to identify the major challenges and opportunities for mobile banking development in Ethiopia. lack of timely approval of new products by regulatory body, lack of interoperability system and lack of aggregators between service provider and retail agents were the major problems observed in the study. identified poor network quality and procuring agents, as these institutions are operating in remote areas of the country there is poor network quality which inhibits the full benefits derived from mobile money. and illiteracy in general and financial illiteracy in particular was found out to be another challenge in mobile banking development.

Research done by Worku (2010) which examines the practices, opportunities and challenges of E- banking services in Ethiopia found that low level of internet penetration and poorly developed telecommunication infrastructure, lack of suitable legal and regulatory framework for E-commerce and E-payment, high rates of illiteracy, high cost of internet, absence of

financial networks that links different banks, lack of reliable power supply, and cyber security issues are the most important challenges for development of E-banking in Ethiopia.

an Empirical study done by Iddris (2013) in Ghana to investigate the perceived barriers to adoption of mobile banking among consumers showed that the four main reasons for rejecting M-banking were: M-Banking requires knowledge and learning; M-banking attract additional banking charges; poor telecommunication network; consumer preference for traditional means of banking instead of mobile enabled banking services

Mwaura (2009) a case study on mobile banking in developing countries with the objective of finding the extent of access to financial services, the attitudes towards mobile banking by small business and the effects and challenges of implementing mobile banking. this study revealed that security and applications updating were the major challenges facing M-pesa and slow speed in customer adoption, data quality and lack of interoperability were other challenges facing the M- pesa service.

impact of mobile banking on traditional banking practices in zimbabwe” by severino et.al (2015) Mobile banking has its own challenges which according to this research include mobile network failures, lack of a clear regulatory framework, systems failures and lack of trust. if commercial banks fail to manage these challenges well customers will prefer the traditional way which will be more reliable for them.

2.10 Opportunity Of Mobile Banking

According to Tiwari & Buse (2007) the reasons for the development of mobile commencement can be traced back primarily to the technological innovations and some other factors, listed below: the penetration of the society by mobile phones has reached an all-time high.

the integration of world economies is leading to more mobility so that availability of mobile services is no more a luxury but a necessity for many.

the younger generations of the society seem to be fascinated by modern data and telecommunication services.

mobile devices have become more powerful. data transmission has become faster with the launch of new standards, such as the universal mobile telecommunications system (UMTS).

2.11 Empirical Study

some related studies are conducted by different researchers in different parts of the world. however, there are limited numbers of studies conducted in Ethiopia on the adoption of technological innovation. specifically, Gardachew (2010) conducted research on the opportunities and challenges of E-banking in Ethiopia. the aim of his study was focused on analyzing the status of electronic banking in Ethiopia and investigates the main challenges and opportunities of implementing E-banking system. the author conducted a survey on the existing operating style of banks and identifies some challenges of using E-banking system, such as, lack of suitable legal and regulatory frame works for E-commerce and E- payments, political instability in neighboring countries, high rates of illiteracy and absence of financial networks that links different banks.though it is true that traditional banking has grown steadily over the years, in terms of technological based financial service/product the Ethiopian banking sector didn't fully benefit from ICT in general and M-banking in particular Asfaw, (2015).

Opportunities Of Mobile Banking

According to Tiwari & Buse (2007) the reasons for the development of mobile commencement can be traced back primarily to the technological innovations and some other factors are: the penetration of the society by mobile phones has reached an all-time high, the integration of world economies is leading to more mobility so that availability of mobile services is no more a luxury but a necessity for many, the younger generations of the society seem to be fascinated by modern data and telecommunication services and mobile devices have become more powerful. data transmission has become faster with the launch of new standards, such as the Universal Mobile Telecommunications System (UMTS).

The convergence of telecommunications and financial services has also created opportunities for the emergence of mobile banking solutions (CGAP, 2006). as well as facilitating a rise in data connectivity in Africa, these factors are creating a platform for a range of new digital services on the continent, such as mobile financial services, E-commerce and digital content and services for the business market (Reed et al., 2014).mobile money is causing a significant transformation in how banked and previously unbanked people in emerging markets are conducting their financial activities.

these services play a central role in extending the reach of formal financial services to the unbanked and financially underserved populations in emerging economies (berg insight).the concept has thus far been most successful in Africa, where 81% of all mobile money accounts have been registered through a mobile-centric branchless banking service (berg insight).

The total value of mobile money transactions in emerging markets reached us\$ 44 billion in 2011 and is projected to grow at a cagr of 44% to reach us\$ 395 billion in 2017. in 2011, mobile money transactions in Africa stood for 63% of the total value and kenya alone accounted for us\$ 13.2 billion. indeed, financial services are no longer the preserve of banks as they increasingly find themselves competing with other non-traditional players like mobile network operators, retailers and social networks (Lee, 2012). Abid and Noreen (2006:4) defined it as any use of information and communication and technology and electronic means by a bank to conduct transaction and have interaction with stake holders. services offered by banks using the internet include: mobile banking, PC banking, electronic fund transfers, E-payments and ATM cards. of all E-banking services on offer, currently technological advancements is broadening the frontier of possibilities in all human endeavour's and thus more E-banking services are being developed and introduced.

The rapid spread of information and communication technology (ICT) has made electronic banking the best channel to provide banking services/products to customers. the quality of online banking services has become a major area of attention among researchers and bank managers due to its strong impact on business performance, profitability and customer service delivery. hence, banks now consider online banking as part of their strategic plan (Alhaji. A & Josu. T, 2014:562). adoption of ICT has influenced the content and quality of banking operations. from all indications, ICT presents great potential for business process reengineering of banks. investment in information and communication technology should form an important component in the overall strategy of banking operators to ensure effective performance. it is imperative for bank management to intensify investment in ICT products to facilitate speed, convenience, and accurate services, or otherwise lose out to their competitors (Agboola, 2004:19).

2. Research Gap

Despite the fact that numerous mobile banking adoption studies have been investigated by various scholars, most of them were conducted in countries such as Singapore (Riquelme and Rios 2010), Brazil (Laukkanen et al 2010), Taiwan (Luarn and Lin 2005), and China (Wang et al. 2007) with relatively little attention paid to developing countries like Ethiopia. The existing research in Ethiopia included mobile banking in electronic banking challenges and barriers (Ayana 2012), (Garedachew 2010), influencing usage of mobile banking in Ethiopia (Kalkidan 2016). As a result, the student researcher was unable to get adequate local research work which is done in the field due to the immaturity of the study area excluding the thesis paper by Asfaw (2015) an exploratory research which attempted to identify the major challenges and opportunities for mobile banking development in Ethiopia. Many researches which the researcher got that are done in Ethiopia mainly focused on opportunities and challenges for implementing mobile banking but does not investigate the practice after implementation and did not consider the customers side.

Besides, as per the researcher knowledge there is insufficient study conducted with regards to factors affecting challenges and opportunities mobile banking service in the case of Dashen Bank. This study therefore aims at filling that gap by shedding light on issues that influence customer's practice of mobile banking services in order to create an understanding of this new technology in the banking sector. And also the study tries to fill practice after implementation research gap by assessing its opportunities and challenges of mobile banking service in specifically Dashen Bank.

Hence this paper fills the above research gap and is different from other researches on investigating the mobile banking service the practice after implementation on both customers and the Banks side.

3. Conceptual Frame Work

A theoretical framework is a conceptual frame work of how one theorizes or makes logical sense of the several factors that have been identified as important to the problem (Sekaran, 2014). this will help the researcher to understand the different variables of interest to the research. several theories are offered in order to identify factors that cause people to accept new technologies and information system and use them. the study tries to assess and determine some of these theories and study variables such as: practice,challenges and opportunities . hence, based on the above study conceptual frame work for this particular study is formulated to study and determine factors influencing for the usage of mobile banking service in Dashen bank customers.

even though different literature reviewes shows the penetration of mobile phones among the population continues to grow in significant numbers year after year still the customer's usage of mobile banking service within these banks still remains low.

CHAPTER THREE:

3. RESEARCH AND METHODOLOGY

3.1 Introduction

This Chapter discusses the research Design and Methodology use in the study. research methodology refers to the approach use to systematically solve the research problem. it explains how the research would be done, what approach would chose to answer the research question, what data collection method would be use, and why certain methods or techniques would chose over others (Jabar 2009:47; Gupta & Gupta 2011:11; Oates 2006:35). this section elaborates particular research methodology adopt in this study such as; research approach, research design, target population, sampling technique and sample determination data collection method, data analysis and presentation.

3.2 Research Design

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. in fact, the research design is the conceptual structure within which research is conducted; it constitutes the blueprint for the collection, measurement and analysis of data. as such the design includes an outline of what the researcher would do from writing the hypothesis and its operational implications to the final analysis of data.” claire selltiz and others, research methods in social sciences (1962, p. 50). research design is “the framework or plan for a study, use as a guide in collecting and analyzing data. it is the blueprint that is follow in completing a study. cooper and schindler (2008, p. 711) explains that research design is the "blueprint for fulfilling objectives and answering questions". there are different classifications of research design. the major ones are: exploratory, descriptive, or causal/explanatory Cooper And Schindler (2008); Churchill, 1999).

Among the three research methods this study would employe descriptive resarche design. the major purpose of descriptive research is description of the state of affairs as it exists at present. descriptive research is guid by the initial hypotheses or research questions. its objective is to describe the phenomena associated with a subject population or to estimate the proportions of the

population that possess certain population of the study and sampling. a descriptive type of research design would be used because it helps to clarify and explain the existing phenomenon

3.3 Research Approaches

Research methods are plans and the procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis (Creswell, 2009). according to Creswell, there are three types of research methods: qualitative, quantitative and mixed method

The study would adopt both quantitative and qualitative research approach. a mixed research method i.e. quantitative and qualitative research method, would use in this study. it is noted that research approaches in social research includes the quantitative, the qualitative and the mixed approaches (Creswell, 2003; Creswell And Plano, 2007). it is argued that to use only a quantitative or a qualitative research approach falls short of major approaches being used in study of social and human sciences. therefore, a mixed research method is an approach of inquiry that combines both qualitative and quantitative data forms. selecting an appropriate research approach helps the researcher in gathering adequate and relevant information for the study. moreover, mixed method also helps to triangulate the findings of different approaches in an effort to provide greater confidence to the study.

The study would begin with a survey to gather data and compare the findings with other practices in the literature to generalize results to a population in addition, detailed qualitative, open-ended interviews would be conducted to supplement and enrich the findings obtained from the survey.

3.4 Target Population

Population means the total collection of all units of analysis about which the researcher wishes to make specific conclusions (Neuman, 2011). Thus, The Targets Population Of This Study Shall Be Employees Of Dashen Bank Whose Position Is Related With The Subject Matter On Hand Such As; Customer Service Manager, Customer Service Officers, IT Department Heads And Its Customers Of Mobile Banking In Addis Ababa. Employees Of Dashen Bank In Each **mexico, kera, lideta, bole, sengatera, commerce akababi, stadium, safari, And Megenagna Branches** Would Be Taken As A Target Population. These Branches Are Selected As They Have The Largest Number Of Mobile Banking Service Users and based on location, more than 50,000

Dashen Bank Customers Who Uses Mobile Banking Are Going To Be Target Customers.
(Dashen head office 2022)

3.5 Sampling Technique

Sampling is the process or technique of selecting a suitable sample for the purpose of determining parameters or characteristics of the whole population. there are two types of sampling i.e., probability and non-probability sampling. probability sampling is a sampling technique where a researcher sets a selection of a few criteria and chooses members of a population randomly. all the members have an equal opportunity to be a part of the sample with the selection parameter. non probability sampling is a sampling technique where a researcher chooses members for research at random. this sampling method is a non a fixed or predefined selection process (Creswell, 2003).

Non-probability sampling, technique is purposive and subjective in nature and involves selection of a sample based on judgment and knowledge. the population may not be available for the study in certain cases specially the customers would be difficult to be reached using probability sampling. within the non-probability technique convenience sampling is used. convenience sampling attempts to obtain a sample of convenient elements. often, respondents are selected because they happen to be in the right place at the right time and in this study it is used for the customer population due to the difficulty of getting them and also cost and time limitation. the data is collected from 246 customers of Dashen Bank who are actively using internet and mobile banking. the selection of employees is made in a way to get sufficient data regarding the case study as they are related with the subject matter and have more knowledge (expertise) than others. hence purposive sampling and convenience sampling are used in this study.

Assumptions

Sample Size Formula for Infinite Population

The following sample size formula for infinite population is used to arrive at a representative number of respondents (Godden, 2004):

$$SS = \frac{Z^2 \times p(1-p)}{M^2}$$

Where:

SS= Sample Size for infinite population (more than 50,000)

Z = Z value (e.g. 1.96 for 95% confidence level)

P = population proportion (expressed as decimal) (assumed to be 0.2 (20%) since this would provide the maximum sample size).

M = Margin of Error at 5% (0.05)

calculation

$$n = \frac{1.96^2 * 0.2(1-0.2)}{.05^2}$$

$$n = \frac{3.8416 * 0.16}{0.0025}$$

$$n = \frac{0.6147}{0.0025}$$

$$n = 245.88 \sim 246$$

3.6 Data Source and Data Collection Method (Instruments)

Basically, there are two types of data, namely primary data and secondary data. the primary data are those which are collected afresh and for the first time, and thus happen to be original in character. the secondary data, on the other hand, are those which have already been collected by someone else and which have already been passed through the statistical process.

In this study, both primary and secondary data was used to develop the research. the primary data were collected through questionnaires, observation and interviews from the selected sample of Dashen Bank customers and employee of DB, which is a likert scale questioner. the second data had collected from, primary writing of other. website, published journal, articles and books.

3.6.1 Questionnaire

Questionnaire is a type of data gathering techniques where respondents write answers to questions posed by the researcher on a question form. A number of respondents were asked identical questions, in order to gain information that can be analyzed. The types of questionnaires can be open and closed ended questions. Questionnaires help to cover many subject or issues and can be easily quickly analyzed once field data gathering work is completed (Wilkinson and Birmingham, 2003).

A questionnaire was distributed to respondents (customers) to measure their perception and practice of mobile banking service. To measure the outcome of mobile banking service for each respondent (customers), researchers also used population assessment data from head Dashen bank Office. The questions were formed in a five point Likert scale such as 1= Strongly Disagree, 2=Disagree, 3 =Neutral, 4 =Agree, 5 = Strongly Agree which allows respondents to indicate level of agreement with the statement provided. The semi-structured questionnaire was completed by the customers and employee in semi-structured interviews.

3.6.2 Interview

Interviews is another instrument for data collection used in this study. the interview outline was prepared with a list of subjects and questions drawn from the questionnaire. interviews are well suited when looking for opinions, experiences and privileged information from respondents in key positions. open-ended interview are preferred because it enables the study to elicit a great amount of firsthand data from knowledgeable key informants. interview and document review

was used for collecting secondary data from the literatures and to triangulate and supplement the data obtained from questioner.

In this study in addition to the questionnaire, structured interview conducted with Dahen Bank managers. it is supposed as a useful data collection instrument and more helpful to obtain detailed information about personal feelings, perceptions and opinions. it uses more clarified questions to be asked, and it achieves a high response rate. it is also chosen as it provides better opportunities for explaining more explicitly what interviewees know on the issue (Best and Kahn, 2003).

3.7 Methods Of Data Analysis

The researcher has used SPSS version 20 for the analysis of data collected. Data is analyzed quantitatively by statistical techniques i.e. descriptive. Descriptive analysis; mean, frequencies and standard deviation are used to describe the profile of respondents,

qualitative data are associated with such concepts and are characterized by their richness and fullness based on the opportunity to explore a subject in as real a manner as is possible (Robson 2002). the study would use qualitaive approach to analyze the qualitative data collected to build up a theory that is adequately grounded on data.

3.8 Data Reliability And Validity

3.8.1 Data Validity

Validity is concerned with whether the findings are really about what they appear to be about (Sounders *et. al.*, 2003). Validity is defined as the extent to which data collection method or methods accurately measure what they were intended to measure (Sounders *et. al.*, 2003). numbers of different steps was taken to ensure the validity of the study: data were collected from trusted sources from respondents and survey was based on literature reviews and reference frames to validate the results.

To test the researches 'validity, the researcher conducted used the pilot study. it promotes efficiency in testing and verifying the survey questionnaire before executing a large-scale survey. **Twenty Five** respondents would be participated in the pilot study prior to administer the questionnaire. it was conducted to check if the questionnaire is clear, easy to understand and straightforward to ensure that the respondents could answer the questions with no difficulty. based on the feedback from the pilot survey study, necessary changes were carefully made on the questionnaire.

Internal Validity

Internal validity measures the extent to which right data was collected from the right informants and whether it measures the phenomenon correctly. it defines the degree to which the study results are the true reflection of reality than results of other factors.

Internal validity can be affected by multiple factors including history, which refers to events occurring during the research; change in subjects' biological or psychological behavior, known as maturation; instrument decay, which is deterioration of research instrument during the study period; researcher bias and influence; subjects' concern of being measured or tested; diffusion or imitation of treatments, meaning the situation where respondents having the chance to discuss if data collection is conducted in a one after the other manner (Rubin & Babbie 2009: 247-250; Tayie 2005: 23-26).

Different measures would be taken to enhance internal validity of this study. participants' anonymity would be ensured in order to avoid their concern of being measured or tested. presentation of the research instrument was performed in a consistent way, which helped to

eliminate researcher influence. all organization employees within the identified group would be included in the sampling, which helped to ensure representativeness, thereby improving internal validity.

External Validity

External validity is concerned with the generalizability of the research finding to a wider population (Lecompte & Goetz 1982:32). Purposive sampling does not intend to generalize the conclusion, rather it emphasizes on gathering and analyzing quality data from willing and capable informants. it provides reliable and robust data and contributes to internal and external validity.

3.8.2 Data Reliability

Reliability analysis is to test whether a group of items (i.e. items measuring a construct generated from factor analysis) consistently reflected the construct it is measuring (Field, 2005). The most common measure of reliability is internal consistency of the scale (Hair *et al.*, 2006). According to Malhotra and Birks (2007), reliability is the extent to which a measurement reproduces consistent results if the process of measurement were to be repeated. The Cronbach's alpha (α) coefficient is a statistical tool that evaluates the confidentiality through the inner consistency of a questionnaire. It is commonly used as a measure of the internal consistency or reliability of a psychometric test score for a sample of examinees. A Cronbach's alpha coefficient greater than 0.9 indicates excellent than 0.8 is good, greater than 0.6 is acceptable, greater than 0.5 is poor, and less than 0.5 is unacceptable (Mooi and Sarstedt, 2014). The Cronbach's alpha values shown in table below were found to be above the lower limit. Thus, the reliability of each item is in the acceptable range. in addition to this Successive Pre- And Pilot- Testing Were Conducted In Order To Improve The Likelihood Of Respondents' Understanding Questions In The Same Way, In Turn, Improving Reliability.

Table 1 Reliability Test for Item

The study Variables	No of items	Cronbach's alpha	Reliability of Range
practice	4	0.7	Acceptable
Challenge	4	0.7	Acceptable
Opportunities	6	0.90	Excellent
Total	33	0.8	GOOD

Source: Own Survey, 2022

As shown from the above tables for Cronbach's alpha coefficients for each item test, the variable are acceptable at the GOOD RANGE. To describe the variables in detail item are GOOD RANGE.

3.9 Ethical Considerations

An Ethical research treats the research participants with fairness and honesty. research participants have the right to be treated with dignity, and whenever possible, to benefit from the research output. moreover, participants should not suffer from adverse consequences of the research, in case of any. ethical obligations in research include the right to voluntarily participate, right to withdraw, right to informed consent, right to anonymity and right to confidentiality, hence, the researcher would protect research participants' personal privacy and would make sure consent of the respondents is granted before any attempt is made to collect the required data. they would be informed about the objective of the study that the data would be used for the academic purpose only.

This section presents the ethical considerations of the study and measures taken to meet the ethical obligations such as; voluntary participation, informed consent, anonymity and confidentiality protection from harm and benefit from the research.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRIETATION

This chapter deals with the analysis of data collected from respondents using both descriptive and inferential statistics and the discussion of findings and results. This chapter of the study presents the data analysis, interpretation and discussion of the outcomes obtained from the data collected on the research topic. The raw data collected using the structured questionnaire was sorted, edited, coded and reviewed so as to have the required quality, accuracy, consistency and completeness.

4. Survey Response Rate

According to (Mugenda, 2003-1999) the statistically significant response rate for analysis should be at least 50%. This study fulfills this response rate analysis.

Table 2 Response Rate of the Study

Response	Answer	Respondents	Percent	Response Rate
Returned	Completed	229	93.3 %	93.3%
	Incomplete	7	2.8%	
	Total	236	100%	
Not Returned	Not Returned	10	4.06%	6.7%
	Total	246	100%	100%

Source: Own Survey, 2022

The study's analysis and findings are presented in this chapter, as outlined in the research methodology. This study had a total of 246 participants, with questionnaires being dropped and picked up from all of them. Due to invalid or incomplete data entries, seventeen (17) responses had to be removed. A total of 229 people completed the questionnaires and returned them. This resulted in a 93 percent response rate, which is acceptable and can be utilized to make conclusions.

Various demographic characteristics such as age, gender, occupation, and so on are discussed in the following subjects. The responses of the sample respondents are examined. Factors influencing the practice of mobile banking have been observed on a variety of variables and The results are discussed by taking the mean scores of the questions and responses of respondents for each variable, and the results are described in the next part. The criteria given by have been used to interpret mean values (Hom,1977). He proposed that,

To do so, a five-point likert scale ranging from "Strongly Disagree" to "Strongly Agree" was utilized to gauge their level of agreement or disagreement on each item. The researcher used a range provided by to estimate the minimum and maximum length of the likert scale (Hom,1977). The following factors are used to evaluate the level ranking translation.

- A score of 1 to 1.80 indicates a strong disagreement (Lowest)
- 2.61 to 3.40 signifies true to some extent (Low)
- 1.81 to 2.60 represents disagree (Low)
- 3.41 to 4.20 represents agree (High)
- 4.21 to 5 represents strongly agree(Highest)

4.1. Descriptive Analysis

Descriptive statistics such as minimum, maximum, percent, mean and standard deviation has used to present various characteristics for data sets. This study enabled to present the data in a more meaningful and simplest interpretation way by using descriptive statistics. Therefore, the response of respondents towards each variable would be discussed in detail.

4.2. Demographics Characteristics of Respondents

4.2.1. Age and Gender

Table 3 Demographic characteristics of respondents

Items	Responses	Frequency	Percentage
Gender	Male	133	58.1%
	Female	96	41.9%
	Total	229	100%
Age group	18 – 25	38	16.6%
	26-35	102	44.5%
	36-45	57	24.9%
	46-55	23	10%
	Above56	9	3.9%
	Total		%
occupation	Student	5	2.2%
	Employed	152	66.4%
	Unemployed	30	13.1%
	Others	42	18.3%
	Total	229	100%
Education	High school or below	41	17.9%
	Diploma	46	20.1%
	Bachelor Degree	83	36.2%
	Masters or Above	59	25.8%
	Total	229	100%
Income	Less than birr 3,000 per month	58	25.3%
	Between birr 3,001 and 6,000 per month	29	12.7%
	Between birr 6,001and 10,000 per month	42	18.3%
	More than birr 10,000 per month	100	43.7%
	Total	229	100

Source: survey data (2022)

The respondents with the highest percentage were between the ages of 26 and 35 (44.5%), followed by those between the ages of 36 and 45 (24.9%), and those older than 56 years (24.9%). (3.9 percent). According to bank policy, an applicant must be 18 years old to open a bank account without the agreement of their parents or other approved government bodies; as a result, the study's findings demonstrate that all respondents are over the required age category. In terms of gender, the majority of respondents (133, or 58.1%) are male, while the remainder 96, or 41.9 percent, are female. A large percentage of the respondents (36.2 percent) and (25.7 percent) were university graduates with bachelor's and master's degrees, respectively; this was beneficial to the study's findings because the bulk of respondents had a higher level of education. The remaining 20.1 percent, 17.9%, and 17.9% of respondents have diploma, secondary, and primary level educationa(elementary and level) accomplishment, respectively, as indicated in the table. The majority of respondents (66.4 percent) and (18.1 percent) were employed or owned a private business, which was helpful for the study's results because the majority of respondents had a higher degree of education. Unemployed and student responders account for 15.3 percent of the total. The majority of the respondents were well-paid, with 43.7 percent earning more than 10,000 birr per month, 25.3 percent earning less than 3000 birr per month, and the remaining 31% earning between 3000 and 1000 birr per month. This implies that as one's income rises, so will their use of mobile banking.

4.3 Analysis and Discussion Practice Of Mobile Banking

4.3.1 Practice of mobile banking

Table 4 mobile banking practice I of respondents

Items	Responses	Frequency	Percentage
Do you Use mobile banking	Yes	160	69.9%
	No	61	26.6%
	I don't know	8	3.5%
	Total	229	100%
if No why	It is not accessible easily	4	1.7%
	I am not sure of the security	8	3.5%
	Transaction charges are high	8	3.5%
	I have never heard the service	10	4.4%
	There is no reliable network	26	12.2%
	others	5	2.2%
	Total	61	27.5%
	If yes How often do you use	Daily	8
weekly		15	7%
monthly		57	25.8%
occasionally		80	35.8%
Total		160	72.5%
How long have you been using mobile banking service	Less than 1 year	33	14.4%
	2-5 years	119	52%
	6 - 10 years	47	20.5%
	Don't remember	30	13.1%
	Total	229	100%
Do you still visit your bank	Yes	220	96.1%
	No	---	----%
	I don't know	9	3.9%

	Total	229	100%
Are you satisfied with Mobile banking services	Very Satisfied	53	23.1%
	Not Satisfied	104	45.4%
	I'm not sure	72	31.4%
	Total	229	100%

Source: survey data (2022)

- To assess if the respondents had signed up for and were presently using a mobile banking service, they were asked to indicate whether they had signed up for and were currently using the service at their bank. The respondent has two categories of answer alternatives from which to choose: 'Yes' or 'No.' As a result, 69.9% of the total respondents were subscribed to the service, while the remaining 26.6 percent were not. However, 69.9% of the respondents are now utilizing DB's mobile banking service, while the remaining 30.1% are not. If the answer is yes, As indicated below, 35.8% of respondents utilize mobile banking on a limited basis, indicating that users are dissatisfied with the system as a result of its poor practices. It is used by 25.8% of people on a monthly basis, 7% on a weekly basis, and 3.9 percent on a daily basis. This indicates that customers are not using the service and that it is still not being used properly; 52 percent of respondents aged 2 to 5 years use mobile banking, while the remaining 48 percent do not. This indicates that customers are not friendly and that there is still a gap with the system due to poor practice. Year of Those customers to use the service 6 to 10 years, less than one year, and are unable to recall 20.5 %, 14.4% and 13.1 %, respectively,. New customers level low. This means that most consumers are not using the service, and those who do visit the bank are 96.1 percent yes and 3.9 percent don't know, and those who were satisfied with Mobile banking services were not satisfied 45.4 percent, those not sure very well 31.4 % and 23.1 percent only satisfied with the service. This demonstrates that there is still a gap in the system's service delivery . This means that even if customers subscribe mobile banking high percentage of occasional users and still visit banks i.e. 36% & 97% respectively and, in general practicing service still shows Gaps on it being used properly.

4.4 Analysis and Discussion Challenges of mobile-banking

Table 4 Summary Of Survey Findings For Challenges Factors

		Rating point						
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total	Remark
Challenges (C)								
CH	problem with mobile network service	2 0.9%	10 4.4%	27 11.8%	125 54.6%	65 28.4%	229 100%	Agree
CH	Vulnerable to security	4 1.7%	43 18.8%	26 11.4%	104 45.4%	52 22.7%	229 100%	Agree
CH	No hosting high paying items	5 2.2%	35 15.3%	28 12.2%	101 44.1%	60 26.2%	229 100%	Agree
CH	Language problem	59 25.8%	78 34.1%	20 8.7%	50 21.8%	22 9.6%	229 100%	Disagree

Source: survey data (2022)

As previously stated, 54.6 percent of respondents were dissatisfied with the use of mobile network services, 11.8 percent were unsure about the service, 11.8 percent were neutral about service delivery through mobile banking, and only 4.4 percent disagreed, indicating that customers continue to have issues with system service delivery. This means that even when users aren't utilizing the service, it's still not performing well. A sizable proportion In addition, 45.4

percent of respondents agreed that using mobile banking poses a security risk, while 11.4 percent were neutral and 18.8 percent disagreed, indicating that using mobile banking poses a security risk in DB. In addition, 44.1 percent of respondents agreed that using mobile banking does not allow them to store high-value items, while 12.2 percent were neutral and 15.3 percent disagreed. This demonstrates that there is still a gap in the system's service for clients delivery. This implies that no high-value products should be stored in the mobile banking service. It discourages users from using the service, and finally, 21.8 percent of respondents cited language as a difficulty, stating that because most cell phone applications are written in a foreign language, there are linguistic obstacles when doing financial transactions on mobile phones.

5.1.1 Response opinion on challenges of mobile banking service

Statements	N	Mean	Standard Division
problem with mobile network service	229	4.05	.809
Vulnerable to security	229	3.69	1.075
No hosting high paying items	229	3.77	1.069
Language problem	229	2.55	1.335
<i>Aggregate Mean</i>		3.51	

Source: survey data (2022)

The results suggest that Dashen Bank has a 4.05 problem with mobile network service, a 3.69 vulnerability to security, a 3.77 mean score for no hosting high paying items, and a 2.55 language problem below the average. As a result of the majority's response, the respondents agreed on the challenges. The aggregate mean is 3.55, which is higher than the national average of 3.4. This means that there are positive effects of the obstacles on the mobile banking service.

4.5 Analysis and Discussion Existing opportunities

Table 5 Summary Of Survey Findings For Existing opportunities Factors

		Rating point						
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total	Remark
Existing opportunities (EO)								
EO	High penetration of mobile phone	1 0.4%	6 2.6%	18 7.9%	132 57.6%	72 31.4%	229 100%	Agree
EO	Commitment of the government to strengthen the banking industry	----- -----%	7 3.1%	13 5.7%	130 56.8%	79 34.5%	229 100%	Agree
EO	Commitment of the government to facilitate the expansion of ICT infrastructure	----- -----%	10 4.4%	22 9.6%	122 53.3%	75 32.8%	229 100%	Agree
EO	The existence of high demand increment	----- -----%	4 1.7%	18 7.9%	126 55%	81 35.4%	229 100%	Agree
EO	Increment of educated potential customer	----- -----%	8 3.5%	17 7.4%	132 57.6%	72 31.4%	229 100%	Agree
EO	To know and control their bank account	----- -----%	5 2.2%	10 4.4%	133 58.1%	81 35.4%	229 100%	Agree

Source: survey data (2022)

As previously stated, 57.6% of respondents said they have a high penetration of mobile phones, 56.8% said the government is committed to strengthening the banking industry, 53.3 percent said the government is committed to facilitating the expansion of ICT infrastructure, 55 percent said there is a high demand increment, 57.6% said there is an increase in educated potential customers, and 58.1 percent said they know and control their bank account, indicating that customers see opportunities on the us.

5.1 2 Response opinion on opportunities of mobile banking service

Statements	N	Mean	Standard Division
High penetration of mobile phone	229	4.17	.714
Commitment of the government to strengthen the banking industry	229	4.23	.689
Commitment of the government to facilitate the expansion of ICT infrastructure	229	4.14	.762
The existence of high demand increment	229	4.24	.668
Increment of educated potential customer	229	4.17	.708
To know and control their bank account	229	4.27	.645
Aggregate Mean		4.20	

Source: survey data (2022)

The results reveal that Dashen bank focuses on mobile banking opportunities. High mobile phone penetration (mean score of 4.17), government commitment to strengthen the banking industry (mean score of 4.23), government commitment to facilitate the expansion of ICT infrastructure (mean score of 4.14), existence of high demand increment (mean score of 4.24), increase in educated potential customers (mean score of 4.17), and knowing and controlling their bank account (mean score of 4.27). As a consequence of the majority's response, the respondents agreed on the opportunities to use the services. The aggregate mean score of 4.20 is higher than the average mean score of 3.4, implying that there are positive effects of factors for the use of mobile baking services.

Existing opportunities for mobile banking service uptake Opportunities Mobile phone penetration is high, and network coverage is expanding. Government commitment to strengthen the banking industry, technology level, and country growth The government's commitment to facilitating the spread of ICT infrastructure, the country's infrastructure development, the existence of strong demand, and the growth of educated potential customers. As shown above, one of the existing opportunities to use mobile banking is the country's population's high usage of mobile phones. With the increasing use of smart phones, individuals are now more comfortable and prefer to process their transactions using mobile phones. Almost everyone who owns a smartphone now prefers to do their banking transactions using it. The government's dedication to bolstering the banking industry, as well as the country's development, infrastructure development, and the presence of high demand. According to Tiwari and Buse (2007), the causes for the rise of mobile phones may be traced back to technology advancements and a few other elements.

5.1 3 Rating Summary of Variables Mean of Mobile banking service in dashen bank

Factors	No of Items	Mean
challenges	4	3.51
opportunities	6	4.20

Source: survey data (2022)

Respondents' responses are measured using a five-point liker scale. Where 1 denotes strong disagreement, 2 denotes disagreement, 3 denotes neutrality, 4 denotes agreement, and 5 denotes strong agreement. A descriptive statics of mean, such as challenges, and opportunities as of the outcomes that Agree, is shown in the table above. Mobile Banking Challenges are Agreed, , and Opportunities are Agreed.this means there is a relation ships between the mobile banking services and challenges and opportunities.

We can conclude from the above table that opportunities are the greatest outcomes for mobile banking services agreed to this variable, with the highest mean score of 4.20. which are higher than the overall mean of 3.4, indicating that the majority of respondents agreed with mobile banking service. And Dashen Bank's mobile banking service is more dependent on opportunities than challenges on other indicators, implying that more awareness creation is needed to extend the servicemon this areas , since this study demonstrates that the higher numbers of users are more reliant on external opportunities than internal and external challenges when compare each others .

5. CHAPTER FIVE CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the summary, conclusions drawn based on the findings obtained in the analysis and discussion part. Besides, it forwards the recommendations guided by research findings is also part of this chapter. Finally, it winds up by suggesting for future research directions.

5.1. SUMMARY OF MAJOR FINDINGS AND CONCLUSIONS

Based on the data analysis and interpretation provided in chapter four, summary of main findings and conclusions are presented here.

- Based on the finding we can conclude the factors that study identified as variable of mobile banking service in the case of Dashen bank S.C. is positive impact on the mobile banking service .
- This means that even if customers subscribe high percentage of occasional users and still visit banks i.e. 36% & 97% respectively and, in general practicing service still shows Gaps on it being used properly.
- The main challenges that Dashen bank face when using the technology according to the finding are Network availability, security challenge, operational challenge, Chances of risk and customer's literacy. The main challenges faced by majority of the customers when using the technology are network and language problem. From this finding it can be said that besides its benefit Dashen bank and the customers faced challenges when using the system network and literacy problem are also the main ones.
- It can be concluded that Dashens mobile banking service is practicing depends on opportunities of the services based on the practice by customers it is still at the infancy when compare to users
- The bank should consider the existence of large number of mobile phones holding customers in the bank as a great **opportunity** and strive to reach the service to all

customers by directing more effort on educating communities, especially potential customers at the DB, about the functionality, safety and benefits of mobile banking.

- The existing opportunities for the mobile banking service are high penetration of mobile phone, widening network coverage, Commitment of the government to strengthen the banking industry, the level of technology, country development, Commitment of the government to facilitate the expansion of ICT infrastructure, infrastructural development of the country, the existence of high demand, Increment of educated potential customer. This indicates in Ethiopia there are good opportunities for the adoption and practice of M-banking service.

5.2. RECOMMENDATIONS

- Ethiopia is a country where different languages are used in different parts. The mobile banking facilitates to access banking service to the urban and rural community. This requires customer friendly banking software that can be used in their local language so the system provider should consider this.
- The Awareness creation among the existing customers and providing special benefits for using the mobile banking will increase the mobile banking users. Once the customer becomes confident on technology it will automatically increase the use of mobile banking service in mass.
- The bank should consider the existence of large number of mobile phones holding customers in the bank as a great **opportunity** and strive to reach the service to all customers by directing more effort on educating communities, especially potential customers at the DB, about the functionality, safety and benefits of mobile banking.
- The service provider should modify the navigation and payment menu as it not easy for the customers.
- In order to mitigate the challenge faced by customers the bank should provide customer based orientation, create awareness, team working in the bank employees. The bank should have to also strength its ICT or E-banking department.
- Banking regulators and supervisors must ensure that the bank have appropriate practices in place to guarantee the confidentiality of data, as well as the integrity of the system and the data and also should use different security mechanisms as the times goes by security would be an issue.

- The Dahan Bank of the Ethiopia should prepare various capacity building activities for banks regarding mobile-banking operation and provide incentives for banks to invest rigorously on ICT and use of M-Banking. In order to improve mobile banking service Government should improve infrastructural development project in relation with ethio telecom. In order to run in smooth operation Ethio Telecom should enhance their service as well as the network system, should develop a wide network infrastructure coverage. And generally financial institutions, technology providers and telecom operator should work together and expand the opportunities to make the technology fully develop in the country.
- The bank needs to continuously strive to simplify the mobile banking application used for transactions. The marketing drive should focus on demonstrating the simplicity, usefulness and cost benefit of using mobile banking.
- The bank should consider the existence of large number of mobile phones holding customers in the bank as a great opportunity and strive to reach the service to all customers by directing more effort on educating communities, especially potential customers at the DB, about the functionality, safety and benefits of mobile banking.
- The bank in collaboration with the concerned government organs: like Ethio-Telecom and EELPA should work on the infrastructure to reduce the frequent network failure and electric power interruption, which adversely affects the practice of mobile banking service.

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7. APPENDIX: QUESTIONNAIRES

QUESTIONNAIRE FOR THE BANK CUSTOMER

Dear Respondent, I am a student from the st. marry university undertaking master degree in business administration (MBA). in this regards, i am kindly asking your help in filling in this questionnaire which will be used as a data in examining opportunities and challenges of mobile banking service in the case of Dashen bank S.C in reaching customers in addis ababa. the research is purely for academic purpose. i would like to assure you that the information given will be strictly confidential and will be used for academic purpose only and not otherwise. i am humbly requesting your help to make this exercise successful. please don't hesitate to contact me through the following mobile phone number; mobile: +251924116361.please put the tick mark on the appropriate space as per your choice for each closed-ended question and the appropriate reason for open-ended questions.

Section A: Socio Demographic Factors:

1). Gender

1. Male 2. Female

2). Age Group

1.18 - 25 26-35 3.36-45 4.46-55 5.55

3). Education

1. High school or below 2. Diplon 3. Bachelor D 4. Masters or
Above

4). Occupational status

1. Student 2. Employed 3. Unemployed 4. Others

5). Income

1. Less than birr 3,000 per month 2. Between birr 3,001 and 6,000 per month
3. Between birr 6,001 and 10,000 per month 4. More than birr 10,000 per month

Section B: Practice

6). Do you Use mobile banking? 1. Yes 2. No 3. I don't know

7) If no why don't you use Mobile Banking services? (Please tick many answers as possible)

1. It is not accessible easily [] 2. I am not sure of the security [] 3. Transaction charges are high []

4. I have never heard the service [] 5. There is no reliable network [] 6. Others []

8. If yes how often do you use? 1) Daily 2) weekly 3) monthly 4) occasionally

9. How long have you been using dashen mobile banking services? (Please tick only one answer)

1. Less than 1 year [] 2. 2-5 years [] 3. 6 - 10 years [] 4. Don't remember []

10. Do you still visit your bank since you started using Mobile Banking Services?

(Please tick only one answer) 1. Yes [] 2. No [] 3. I don't know []

11. Are you satisfied with Mobile banking services?

1. Very Satisfied [] 2. Not Satisfied [] 3. I'm not sure []

Section C. challenges Mobile Banking Service

1) Please circle the appropriate number to indicate the level of your agreement or disagreement with the following statements on a scale of 1 to 5, Please tick (✓) your appropriate answer based on the following rating. 1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree

Challenges						
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	problem with mobile network service					
2	Vulnerable to security					
3	No hosting high paying items					
4	Language problem					

Section D: Driving Forces and Opportunities for Mobile Banking Service.

2). Do you think that the following are among the driving forces for the adoption of Internet and Mobile banking services? 1=Strongly Disagree 2=Disagree 3= Neutral 4=Agree 5=Strongly Agree

S.N	Driving forces	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Excessive competition in the banking industry					
2	Fast and time saving service					
3	Having a desire to improve organizational performance					
4	Desire to improve the relationship with					
5	Desire to reduce transaction cost					
6	Enable use and trading anywhere(wide geographic area)					
opportunity						
7	High penetration of mobile phone					
8	Commitment of the government to strengthen the banking industry					
9	Commitment of the government to facilitate the expansion of ICT infrastructure					
10	The existence of high demand increment					
11	Increment of educated potential customer					
12	To know and control their bank account					

3. If There Is Something That Drive You To Use.-----

4.Other’s opportunities (if any) -----

Dear Respondent,

The aim of this questionnaire is to opportunities and challenges of mobile banking service in the case of Dashen bank S.C. I would like to assure you that the information you provide will be used only for the purpose of achieving academic award.

Thank you for your participation

Best Regards,

+7. Questionnaire in Amharic

በመላኾች የሚሞላ መጠይቅ ውድ ምላሽ ሰጪዎች በቅድሚያ ውድ ጊዜያችሁን ሰውታችሁ ትክክለኛ ምላሽ ስለሰጣችሁኝ እና ለጥናቱ ስለረዳችሁኝ ከልብ የሆነ ምስጋናዬን አቀርባለሁ። የምትሰጡኝ ምላሽ ለትምህርት አላማ የሚውል ምስጢራዊ የሆነና ለሌላ አላማ የማይውል ወይም የማንጠቀም በመሆኑ የምሰጡት ምላሽ ምንም አይነት ጉዳት አያስከትልም። በመሆኑም ይህ ምላሽ በአቃጠላይ እንጂ በተናጥል የሚወሰድ አይደለም።

መመሪያዎች እባክዎን ከዚህ በታች ለመምረጥ በተዘጋጀው ሳጥን ውስጥ ምልክት ያድርጉ

ክፍል ሀ: የግል መረጃ

1. ፆታ ወንድ ሴት

2. እድሜ 1. 18 - 25 2. 26-35 3. 36-45 4. 46-55 5. >55

3. የትምህርት መረጃ

1. ሃይስኩል ወይም ከዛ በታች 2. ዲፕሎማ 3. ባችለር ዲግሪ 4. ማስተርስ ወይም በላይ

4. የሙያ ደረጃ 1. ተማሪ 2. የተቀጠረ 3. ስራ ያልሆነ 4. ሌሎች

5. ገቢ

1. በወር ከብር 3,000 ያነሰ 2. በወር 3,001 እና 6,000 መካከል
3. በወር ከብር 6,001 እስከ 10,000 4. በወር ከብር 10,000 በላይ

ክፍል 2: ተግባራዊነት

6. በአሁኑ ሰዓት የሞባይል ባንኪንግ ተጠቃሚ ናት

1.አዎ 2.አይ 3. እርግጠኛ አይደለሁም

7.አይ ካሉ ለምን የሞባይል ባንኪንግ አገልግሎት አይጠቀሙም? (እባክዎ በተቻለ መጠን ብዙ መልሶች ላይ ምልክት ያድርጉ)

1. በቀላሉ የማይደረስበት 2. ስለ ደኅንነቱ እርግጠኛ አይደለሁም 3. የግብይት ክፍያዎች ከፍተኛ ናቸው 4. አገልግሎቱን ሰምቼው አላውቅም 5. አስተማማኝ አውታረ መረብ የለም 6. ሌሎች

8. አዎ ካሉ ከሆነ ምን ያህል ጊዜ ይጠቀማሉ? 1) በየቀኑ 2) በየሳምንቱ 3) በየወሩ 4) አልፎ አልፎ

9. የዳሽን የሞባይል ባንኪንግ አገልግሎት ምን ያህል ጊዜ ሲጠቀሙ ቆይተዋል? (እባክዎ አንድ መልስ ብቻ ላይ ምልክት ያድርጉ)

1. ከ 1 ዓመት በታች 2. 2-5 ዓመታት 3. 6 - 10 ዓመታት 4. አታስታውስ

10. የሞባይል ባንኪንግ አገልግሎት መጠቀም ከጀመርክ ጀምሮ አሁንም ባንክህን ትጎበኛለህ?

(እባክዎ አንድ መልስ ብቻ ላይ ምልክት ያድርጉ) 1. አዎ 2. አይ 3. አላውቅም

11. በሞባይል ባንክ አገልግሎት ረከተዋል?

1. በጣም ረከቻለው 2. አልረከሁም 3. እርግጠኛ አይደለሁም

ለ) የሞባይል ባንኪንግ ተግዳሮቶች

1. እባክዎ ከ 1 እስከ 5 ባሉት መግለጫዎች የስምምነትዎን ደረጃ ወይም አለመግባባትን ደረጃ ለማመልከት ተገቢውን ቁጥር ያክብቡ፡ እባክዎ በሚከተለው ደረጃ የተሰጠውን ትክክለኛ መልስ ምልክት ያድርጉ (✓) ።

ተ. ቁ	ተግዳሮቶች	በጣም እስማማለሁ	እስማማለሁ	ገለልተኛ	አልስማማም	በጣም አልስማማም
1	የሞባይል ኔትወርክ አገልግሎት ሰጪዎች ችግር መኖር					
2	ለደህንነት ስጋት ተጋላጭ መሆኑ					
3	ከፍተኛ ክፍያ የሚፈጸሙ ነገሮች አለመገኘት					
4	የቋንቋ ችግር (በሀገርኛ ቋንቋ ያለመሆኑ)					

ክፍልሐ: ለመጠቀም የገፍት ሁኔታ እና የሞባይል ባንክ አሰራርን አበረታች ምክንያቶች

(የመቀበል እድሉ)።

8. የኢንተርኔት እና የሞባይል ባንኪንግ አገልግሎት ተቀባይነት ለማግኘት ከሚረዱ አበረታች ምክንያቶች መካከል የሚከተሉት ይገኙበታል ብለው ያስባሉ።

1= በጣም አልስማማም 2=አልስማማም 3=ገለልተኛ 4=እስማማለሁ 5=በጣም እስማማለሁ

ተ.ቁ	ገፈ ምክንያቶች	በጣም እስማማለሁ	እስማማለሁ	ገለልተኛ	አልስማማም	በጣም አልስማማም
1	በባንክ ኢንዱስትሪ ውስጥ ከፍተኛ ውድድር መኖር					
2	ፈጣንና አገልግሎት ለማግኘት ጊዜ ቆጣቢ					
3	የድርጅት የሥራ አፈፃፀምን ለማሻሻል ፍላጎት መኖር					
4	ከደንበኛ ጋር ያለውን ግንኙነት ለማሻሻል ፍላጎት					
5	የግብይት ወጪን የመቀነስ ፍላጎት					
6	በየትኛውም ቦታ ሆነው ግብይት መፈጸም ማስቻሉ					
	ምቹ ሁኔታዎች					
7	የሞባይል ስልክ ከፍተኛ ደረጃ ዘልቆ መግባት					
8	የባንክ ኢንዱስትሪውን መጠናከር					
9	የአይሲቲ መሠረተ ልማትን መስፋፋት					
10	ከፍተኛ ፍላጎት መኖር					
11	የተማረ እምቅ ደንበኛ መጫመር					
12	የባንክ ሂሳባቸውን ለማወቅና ለመቆጣጠር					

9. ሌሎች ለመጠቀም የገፈት ምክንያቶች ካለ ይግለጹ-----

10. የሌሎች ምቹ ሁኔታዎች (ካለ) ይግለጹ-----

ውድ ተጠያቂ:

የዚህ መጠይቅ አላማ የሞባይል ባንኪንግ አገልግሎት፣ በዳሽን ባንክ ጉዳይ ላይ ያለውን ዕድሎች እና ተግዳሮቶች መገምገም ነው። ያቀረቡት መረጃ የአካዳሚክ ሽልማትን ለማግኘት ብቻ ጥቅም ላይ እንደሚውል ላረጋግጥላችሁ እወዳለሁ።

ለተሳትፎዎ እና መሰግናለን።

