



ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS

MBA Program

Challenges and opportunities of Adopting E-banking services:

The Case of Bank of Abyssinia

BY

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*A Thesis Submitted To Addis Ababa University College of Business and Economics in Partial
Fulfillment for the Requirement of Master of Business Administration*

March 2021

Addis Ababa, Ethiopia

Approval Sheet

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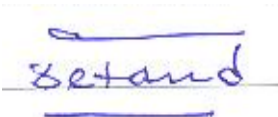
COLLEGE OF BUSINESS AND ECONOMICS

MBA PROGRAM

Challenges and opportunities of Adopting E-banking services: The Case of Bank of Abyssinia

By TEWODROS SHAREW

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Declaration

I, the undersigned, declare that this thesis is my own original work, prepared according to the guidance of Doctor Meskerem Mitku. All sources of materials I used for the study have been duly acknowledged. I further state that the thesis has not been submitted either in part or in full to any other higher learning institution for earning any degree.

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March 2021

Letter of Certification

This is to certify that this thesis is prepared by Tewodros Sharew, entitled: Opportunities and challenges of Electronic banking in Bank of Abyssinia submitted in partial fulfillment of the requirements for the Degree of Master of Business Administration complies with the regulations of the University and meets the accepted standards with respect to originality and quality. The assistance and help received during conducting of this course have been duly acknowledged. Therefore, I suggested that it can be accepted as fulfilling the project work requirements.

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ACKNOWLEDGEMENT

Above all, I would like to thank God, he has been there with me throughout. Then I would like to abundantly thank my advisor Dr. Meskerem Mitku for her support in providing me with critical comments and advises right from proposal development to completion of the paper; and always having opened hands and door for me despite the responsibility her shouldered. I would like add my gratitude to my family and friends who have been with me from the beginning till now. Special thanks also go to staffs of Bank of Abyssinia who works in branches and E-Banking department and involved in the survey study. Without their passionate participation and input, the study could not have been successfully conducted.

Thank You All whom you are supporting me in the project!

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ABSTRACT

The objective of this paper is to examine the current practice, challenges and opportunities of e banking adoption in case of bank of Abyssinia. The study follows descriptive research design and the data was collected from clerical staffs who worked in Addis Ababa branches and digital director of the bank by employing questionnaires for and interview methods. The secondary data was collected from several publications. Purposive sampling method was used to select respondents in branches. Quantitative and qualitative research approach used for the study. The quantitative data was analyzed by support of SPSS version 24 software using percentage, frequency, mean and standard deviation. Based on the finding from respondents, Bank of Abyssinia adopted several e banking products and services which enable the bank to compute successfully in the banking industry. ATM, POS, mobile banking, internet banking, virtual banking and agent banking are the major e banking products in bank of Abyssinia. Among the challenges of e banking identified by respondents security challenge is the major obstacle to implement e banking services effectively. Another challenges include customers resistance to change, lack adequate and of well-trained workforce and managerial efficiency, lack of sufficient government support and legal frame work, lack of public awareness, lack of ICT infrastructure and system failure, political instability, low economic development and low literacy rates. Despites of those barriers, there are some opportunities of e banking such as the existence of high demand, new government initiative about physical cash limit movement and security measures. In addition, the new upcoming banks also will facilitate the banking competition in near future. The number of mobile phone users is also increasing and it enables customers use several e banking products like mobile banking, internet banking and others.

Keywords: Electronic banking, practices, challenges, opportunities, Bank of Abyssinia

LIST OF ACRONYMS

ATM-Automatic Teller Machine

BOA-Bank of Abyssinia

E-banking- Electronic Banking

FIS –Financial inclusion Strategy

FCY-Foreign currency

ICT - Information and Communication Technology

ITM –interactive teller machine

NBE -National Bank of Ethiopia

POS -Point of Sale

SMS -Short Message Service

SPSS-Statistical Package for Social Scientists

TOE -Technological Organizational Environmental frame work

CHAPTER ONE

Introduction

1.1 Background of the study

The history of banking services started by branch-banking model through giving services only using branches and a person who has an account in one branch was not able to get banking services even within a several branch of the same bank. The technological development in general and the birth of the internet, in particular, has changed the way of banking services that given for many years. Currently, the success of a bank is measured against its innovation to deliver innovative products and services to their clients. Thus, banks are forced to introduce technologies in performing their day-to-day activities, and e banking is one of the innovative services that enable the banks to provide banking products and services through electronic channels (Equbamariam, 2018).

Electronic banking or online banking is a banking service delivered by many banks that allow handling of all types of banking business, primarily over the internet by using the information technology and communication. In many developed countries, E- banking plays a very vital role because it is the cheapest way of providing banking services. In addition, it also improved swift movement of funds domestically and across borders and enables the client to held financial transactions on the website of the institution, such as virtual bank, retail bank, a credit union etc. (Hajera, 2017).

In the past two decades, the banking sector has chosen a new service provider on the progress of information technology such as the Internet for providing response to the changes in customer needs and option. The increasing competition from non-banks, changes in demographic and social trends, and government deregulations of the financial service sector is also another factor to implement e-banking services (Majid, 2012).

Despite of the emergence and development of E-banking has several benefits and opportunities it also facing serious challenges. The challenges include financial, regulative and legal issues, infrastructure and system, organizational culture and process barriers (Mahsa, 2018). According to Lusaya and Kalumba in 2018 study, the major challenges of e- banking adoptions are the

perceived risks in terms of security or privacy risk and complexity of related technology. Electronic banking is also facing barriers such lack of knowledge of end users, failure of bank transitions and user interface issues that limit the effective adoption and implementation (Farshad, 2013).

The E-banking service in Ethiopia is at low stage, even though expansion of e- banking throughout the developed and the developing nation is rapid and Ethiopia's financial sector remains behind in expanding the use of the service. Certainly, the banking industry is not well developed with a growing number of international trades; increase the demand of the custom and international relations. Banks in the today's world has problems of providing efficient and dependable services (Gardachew, 2010).

The electronic banking service in Ethiopia is not known detail and having been in operation for small period as a result, the Ethiopian financial sector has not been researched to any great extent, from the perspective of provision of electronic banking service (Abdulselem, 2019).

There is limited studies conducted on the challenges and opportunities of E-banking service and even the available studies are not contained or studied in great extent by considering the present legal and regulatory issues of financial industry generally and banking particularly. Therefore, the current study tries to fill the gap in the literature through examining the E-banking adoption level in Bank of Abyssinia focusing on opportunities and challenges.

1.2 Background of the Organization

As per the information from the BOA's website, the bank established in 15 February 1996 and the bank is girding to celebrate its 25th years of establishment. Bank of Abyssinia firstly started its banking operation with an authorized and paid up capital of Birr 50 million, and Birr 17.8 million respectively, and with only 131 shareholders and 32 staff.

Since its establishment until now, Bank of Abyssinia has registered a significant growth in paid up capital and total asset by attracting many professional staff members, valuable shareholders and large customers from all walks of life. This makes the bank to get public confidence in the bank and reliability and satisfaction in its services. In addition, BOA employing the state-of-art banking technology to serve excellence domestic, international and special banking services to

its customers. The bank also strives to serve economic and services sectors through its ever-increasing branch in all parts of the country.

The logo of BOA includes diamond shaped six petals yellow colored endemic flower called “adeyabeba”, surrounded by a square. The logo is obtained from an endemic six petal flower, locally known as “*adeyabeba*” and its botanic name is *Bidensmacroptera* found in 1984. The flower is found 38 km East of Robe town, in Bale. The color describes hope and peace, signifying bright future for the BOA in a growing and peaceful economic environment.

The vision of BOA is to become a leading commercial bank in East Africa by the year 2030. The mission of the bank is to provide excellent financial services through competent, and motivated employees, and digital technologies in order to maximize value to all stakeholders. The core values of the Bank also includes customer satisfaction, integrity, teamwork and collaboration, and caring for community.

Due to strong demand for better service and products from all aspects on the one hand, and a groundbreaking development in ICT, on the other, the BOA replaced its previous IT system with the state-of-the-art technology called Temenes-24. The bank provides ATM and POS services with Habesha card and mobile banking. BOA also provides internet banking and other app based e-banking services. The recently introduced machine, which is called Interactive Teller Machine (ITM) is providing all banking service given by a branch. In addition, the bank opened virtual banking center to achieve its vision of becoming the leader bank in east Africa by 2030 though effectively implementing digitalization.

The total customer of the Bank is more than 2,829,789 and the number of total employees reached 6910. In Addis Ababa, there are 2982 employees in which 2441 are clerical and the other 541 non-clerical staffs. The bank also has 2400 total shareholders and 541 branches all over the country. Bank of Abyssinia also has 10 Districts in Ethiopia as whole and 3 districts in Addis Ababa. The number of branches is 209 in Addis Ababa.

Digital banking issues of BOA

To achieve its vision BOA used digitalization as a mission through its Digital Department. The digital banking department of BOA is responsible to enhance operational excellence in the bank by delivering effective and efficient digital banking operation service for new and existing customers through smooth and uninterrupted digital banking services. In addition to this the department is also aims to ensure the provision of convenient and dependable card banking, online banking and agent banking products and services to enable the bank make successful presence in all market segments. There are four sub departments under Digital banking such as Card banking, online banking, agent banking and digital banking operations.

Source: portal.bankofabyssinia.com

1.3 Statement of the problem

Banks are mainly affected by the evolution of technology; competition between banks has forced them to find new ways of market to expand and the number of financial institutions that offer electronic banking products increasing as well. Therefore, banks are enforced to provide electronic banking services to improve the effectiveness of distribution channels through reducing the transaction cost and increasing the speed of services. Nowadays electronic banking is become the way for the enhancement of banking system, and the role of electronic banking is increasing in many nations. It also provides opportunities to create services processes that require few internal resources, and therefore, lower cost as well as it provides wider availability and possibility to reach in to more customers (Mohammad, 2012).

The main factors that forced banks and financial services to change includes increased competition, changing business environments, globalization and the advancement of Information and Communications Technology and the customer reaction for banking service is rapidly changing. Therefore, to change the traditional ways of banking service to electronic banking, new strategies have become necessary in order to attract and retain existing and new customers (Majid, 2012). Because of emergence of a knowledge-based economy and society as information and communication technology (ICT) advanced, banking services have undergone profound changes during the last period (Berhanu, 2019).

The banking industry in Ethiopia is still underdeveloped although the rapid expansion of electronic payment systems throughout the developed and the developing world. Due to the

increasing of import-export businesses and increased international trades, increase the demand of the customer and international relations, the current banking system is short of providing efficient and dependable services. The customers of Ethiopian commercial banks are not using technological advancement in great extent in banking sector, which has been entertained elsewhere in African and the rest of the world. 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 sector (Beza, 2010 cited in Berhanu, 2019).

The electronic banking service is introduced in Ethiopia in the late 2005 and the financial sector has not been studied to any great extent, from the perspective of provision of electronic banking service (Michael, 2013).

With the development of new technologies, the way the banking products and services delivered is fundamentally changed. Ethiopia's banking sector has, therefore, had to deploy ICT and introduce a branch banking commonly called e-banking in order to meet the challenges of the day. Not only with the willingness to introduce the technology but also the National Bank by a directive mandates every commercial bank to introduce core-banking technologies. By now, all private and government-owned banks introduced different forms of e-banking products and services (Equbamariam, 2018). However, BOA was late to adopt e banking technologies and has not significant market share in Ethiopia.

So far, limited researches have done on the area of Challenges and opportunities of E-Banking in Ethiopian banking sector such as Gardachew (2010),(Michael,2013), Tesfalem (2017), Wegayehu and Berhanu (2019). Those researches are limited in particular area and issues of e banking they raised also limited in concept. The banking sector in Ethiopia is growing fast and e banking becomes the main competitive criteria for the key success of many banks. In addition, the current political situation in related to Banking service is changing and many upcoming private banks are expected soon since the directive of national bank of Ethiopia permit additional banking establishment. Therefore, those researches are very few in number and the area requires many researches to study it in greater extent. Hence, this study is expected fill this gap and contribute its part for the area.

1.4 Objective of the Study

1.4.1 General Objective

The general objective of this study is to investigate practice, opportunities and challenges of adopting e-banking in Bank of Abyssinia.

1.4.2 Specific Objectives

1. Assess the adoption level of electronic banking in BOA
2. Identify the main challenges for the adoption of e-banking in BOA
3. Identify the opportunities for practice of e-banking in BOA

1.5 Research Questions

1. What is the adoption level of electronic banking in BOA?
2. What are the main challenges that affect the practice of e-banking in BOA?
3. What are the opportunities for practice of e-banking BOA?

1.6 Significance of the Study

The study is primarily used for academic purpose as a partial fulfillment for the requirements of Master of Business Administration. It also used as an input or as a piece of reference for researchers who want to study about the opportunities and challenges of e-banking in Bank of Abyssinia or else. Moreover, the study expected to indicate direction or become hint for several stakeholders to devise appropriate strategy on alleviating the challenges and use the opportunities entailed to the business. BOA can use the study as an input to see the challenges and use opportunities by supporting further study on the area. The study also support researcher to get experience as future professional.

1.7 Scope and Limitation of the Study

1.7.1 Scope of the Study

The study focuses on the practice, challenges and opportunities of electronic banking adoption in Bank of Abyssinia. Geographically, it is challenging to cover all branches and departments of BOA and the study is only limited to E- Banking department of the bank and some selected branches in Addis Ababa which called grade 3 and corporate branches. The respondents are staffs in selected grade 3 and corporate branches. E banking department managers also interviewed as key informants. It would be more satisfactory if customers of the bank and other bodies participate in the study.

1.7.2 Limitation of the Study

The major limitations while conducting the task includes lack of sufficient time due to researcher's workload and even the respondents are so busy to fill the questionnaires as expected time. Corona virus pandemic is also the major challenge to communicate to gather data through physical presence. In addition, difficulty of getting well-published books and other related secondary sources is also another limitation. Despite of those limitations, the researcher tried to pick relevant and representative information by making sufficient analysis and finding reflective information from staffs of BOA who are service provider and know about all other users of E-banking in the bank.

1.8 Organization of the Study

The paper is organized into five chapters. Chapter one is the introductory part containing of background information of the study, background of the organization, statement of the problem, basic research questions, objective of the study, significance of the study, Delimitation and limitation of the study and organization of the paper. The second chapter incorporate related literatures about the study. Methodology is elaborated in third chapter of the study. The fourth chapter is about the result and discussion part of the paper. Finally, the fifth chapter presents summaries of major findings, the conclusions and the forward recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 What is Electronic Banking?

Electronic banking have different definitions since it has several types of services in which bank customers can request information and conduct retail banking services through devices such as computer, digital television, television or mobile phone (Daniel, 1999). According to Daniel electronic banking is the delivery of banking services via open access computer network, which is internet directly to clients' specific address or homes. Electronic banking also defined as the way of providing banking services by secure intermediaries without physical presence or going to bank (Mahsa and Ali, 2018). Electronic banking is a way of providing a remote banking services by the authorized banks, or their representatives via devices operated either under the bank's direct control or management or through outsourcing agreement. Customers of banks use e-banking to perform basic banking activities without going to a hosting branch (Hajera, 2017).

Electronic banking used to access accounts, make business transaction, or obtain information on financial products and services through a public or private network, including the Internet (Hajera, 2017). According to Andrea, 2002, electronic banking is a subset of electronic finance for to deliver banking products and services through electronic delivery channels such as automatic teller machine (ATMs), internet, wireless communication network, and telephone banking. Electronic banking also defined as a way of providing banking services such as money transfer between accounts, or making payments through electronic channels (Simona et al. (2010).

2.2 Types of E-banking

1. Automated Teller Machines (ATM)

Automatic teller machine (ATM) is an electronic device that used to operate basic banking transactions without the support of bankers or tellers (Julia, 2020). It uses clients to get quick self-services such as cash deposits, withdrawals payment of bills, balance checking and transfers funds between accounts etc. ATM initially introduced to function as cash dispensing machines and latter due to advancement in technology it enable to provide a wide range of services, such as making deposits, funds transfer between two or more accounts and bill payments

(Mensah,2012). ATM is mostly located outside of banks such as airports, malls, and places far away from the home bank of customers.

2. Point-of-Sale Transfer Terminals (POS)

POS is the system that allows clients of the bank to pay for retail purchase with a check card, a new name for debit card (Malak 2007). It is credit card but with a significant difference by transferring money for the purchase immediately from account of debit cardholder to the stores account.

3. Internet / extranet banking

It is provision of retail and small value banking related products and services via electronic channels and large value electronic payments and other wholesale banking services delivered electronically (Farshad et al. (2013). Internet banking defined as home banking system using web technology in which Bank clients are able to conduct their business transactions with the bank through personal computers and other devices (Meaza,2010). Internet banking offers more convenience and flexibility to customer who used it effectively (Mensah, 2012). Internet banking offers the traditional players in the financial services sector the opportunity to add a low cost distribution channel to their services (Nehmzow, 1997).

4. Mobile banking

Mobile banking is a way of getting banking services such as account enquiry and fund transfer through short text messages (Ayana, 2014). Mobile banking services not only contains basic services such as bank account statement and fund transfer but also electronic payment options and information oriented financial services like alerts on account limit or balance (Birritu ,2015). Mobile phones used as the electronic devices and enable customer the opportunity to operate their account with bank as long as their phones and network services provider support the SMS (short messaging service) to check account balance (Wegayehu,2019). It also used for transfer balance within accounts in the same bank, for mobile top up or buy airtime and else (Meaza, 2010). The function of mobile banking services includes short messages reach to the register customers' mobile number in time of cash withdrawals and deposits, ATM card usage notifications, bill payments notifications from bank balance, transfer of money between accounts, and so on (Dereje,2019).

5. Agent banking

The NBE directives no. FIS/01/2012 defines agent banking as it is a way used to provide banking activities or business by representing financial institution via agent using several service delivery channels. It is the delivery of financial services outside of a bank using technological devices like POS(point of sale) or mobile phones (Modupe, 2010). Agent banking is a cheaper alternative conventional branch based banking activities in which financial institutions and other commercial players offer financial services outside the hosting bank (Yonas, 2018 cited in Hassan, 2011). The main types of agent banking delivery channels POS, mobile phone, mobile wallet and bank provided account linked to a mobile wallet (Clara, 2010). It supports banks to reach out to many customer through agent network and minimize operational cost.

2.3 Benefits of e banking

The benefit of e banking is different from several point of view. From banks point of view e banking used to attract high profit customers who are high players in banking industry to increase the bank deposit, customer acquisition and others (Mahlet 2016). In addition banks used e banking to enhance their public image to attract many customers and increase revenue (Young, 2007). The need to expand banking service expansion is also supported by using e banking. By reducing costs banking can reach in large geographical area without opening new branches (Shah and Clarke,1997). From customers point of view, e banking used to transact in 24 hours without visiting banks in person. It also used to save time by getting fast banking services, reduce cost, and minimize cash holding risks (Mahlet,2016 cited in Gurau,2002). Electronic Banking is also play significant role to improve the general economy by creating environment that supports growth, productivity and prosperity (Mahdi, 2004)

According to (Hajera, 2017) the most common benefits of e-banking are:

- A. To transfer of funds, payment of bills, loan applications and other transactions
- B. To perform number of transactional activities like request for issuing of cheque book, stop or make payments, online statements, updating the contact information of a customer.

According to Devulapalli and Oruganti in their studies about e banking listed the following advantages of e banking.

- 1. Convenience:** available to anyone and everyone who is a bank account holder. It allows the customers to easily access the bank's website using their username and passwords; and carry on with the transactions even if the bank is closed.
- 2. Flexibility:** it used to perform 24/7 flexible services to customers by ATMs and mobile banking. It used to withdraw cash using their debit cards, and payment of bills.
- 3. Time Saver:** it is the major advantage to our generation as we are not able to spend a lot of time for anything. Electronic banking enables the users to carry on banking transactions within minutes, not disturbing our routine.

The better opportunities of E-banking are also includes on the ideas of:

- ❖ minimize customer service cost,
- ❖ opportunity of time saving and convenience,
- ❖ Convenient in terms of time saving,
- ❖ convenient to use everywhere
- ❖ reduces physical presence of customer and
- ❖ Convenient life style to users (Berhanu, 2019).

2.4 Overview of E banking in Ethiopia

Electronic banking service is the new phenomenon in many countries around the world and there is significant agreement that the new channel will have a significant impact on the bank market (Daniel,1999).

Electronic banking in Ethiopia started since the late 2001, when the largest state owned, commercial bank of Ethiopia (CBE) introduced ATM to provide service to the local customers in Ethiopia (Gardachew, 2010). Commercial Bank of Ethiopia (CBE) is the pioneer in introducing ATM based payment system despite of it lagged behind some private commercial banks like Dashen Bank. Dashen bank follows CBE in 2006 through its Dashen Visa and international cards. Dashen bank maintained the electronic payment system by working aggressively on it and installed more than 40 ATMs in 2009 in the banks' area branches, university compounds, shopping malls, restaurants and hotels. The bank has maintained its leadership in introducing and expanding e-banking in Ethiopia (Fekadu and Gardachew,2009).

Three commercial banks such as Awash international bank, Nib International bank and United bank S.C agreed and signed to launch ATM and POS terminal networks in February 2009. This opened the door to improve the electronic card payment system in Ethiopia. Moreover, the agreement of those banks encouraged other banks in Ethiopia to follow them (Beza, 2009). Zemen Bank also started prepaid bank cards which used without opening a deposit account at the bank branch. Generally, all banks in Ethiopia are too late to adopt and move with technological advancement (Gardachew, 2009). Even some banks have not websites to inform about their products and services to their customers (NBE,2008/09). Currently all banks have adopted several electronic banking services and products.

2.5 Challenges and opportunities of Electronic banking

Currently most industries are try to operate their activities through digital ways of operation and the banking industry is also performing to cope. Although electronic banking is the best ways to deliver banking services, it is better to aware that there are still many challenges which hidens the efficiently adoption and implementation of the system. However, there are also opportunities of electronic banking that are going at both.

2.5.1 Challenges

1. Security challenges

The security issue is the first issue when customers' wants to put their money in banks and customers are fear of their information may be accessed by illegal ways (Danni White, 2020). In electronic banking transaction, there are ways for attackers may access private confidential information of customers (Barnes, 2001). Banks must consider several security issues by protecting all users. Among the security barriers disclosure of private information, counterfeiting and illegal alteration of payment data are put as the first line which make users of e banking not efficiently adopt and implement e banking services (Ali Ibrahim,2009).

2. Infrastructural challenges

For effective adoption and implementation of electronic banking, the reliable infrastructure is the decisive issue. Among the infrastructural challenges, lack of sufficient internet access is the leading issue since most electronic banking requires network. In addition, low level of internet

penetration and poorly developed infrastructure hinders the e-banking growth mostly in developed nation (Kumaga, 2010). Electronic banking needs a network to provide services to customers but most of the payment instruments fails to provide a service due to lack of network connection. In addition lack of sufficient power supply is also the challenge for effectively implement electronic banking (Tekabe,2016).

3. Legal issue

The legal and regulatory framework that improves trust and confidence by supporting technical efforts is the major issue when thinking about electronic banking adoption. In this regard, legislative support is essential to keep customers while using electronic banking and banks in various areas such as liability for lose in time of fraud, keeping of records, evidence and burden of proof, protecting of frauds etc. (Mishra, 2009). Absence of payment laws and regulations which incorporate contracts, digital signatures, intellectual copyright and restrict the use of encryption technologies are the key legal issue (Tekabe, 2016).

4. Socio-economic challenges

To implement electronic banking at international level, several cultural and historical differences to use different ways of e banking such as use of credit card in North America and use of Debit card in Europe. In addition, the degree of security and efficiency among several culture and level of development is different to aggregate the challenge (Tadesse and Kidan, 2005). For long period of time customers use and trust the traditional way of banking system and it makes likely to adopt the new technology based banking systems. Until customers know and confident that their privacy will be secured and have sufficient assurance, the new technology will not be dominantly used. In addition new technologies also needs time to get acceptance even if easier to use than the traditional ways of banking (Kumaga,2010).

5. Supplementary challenges

There are also many other challenges which affect the adoption of electronic banking negatively. According to Tekabe (2016), the major e banking challenges contain language barriers since most of the time e banking service is provided by some limited languages. The other obstacles of e banking listed by Tekabe (2016) includes lack of awareness or know how to use e banking, lack of skilled human power, low level of literacy rate and high cost of internet, Resistance to changes in technology among customers and staff and low Commitment of the governments.

2.5.2 Opportunities

Danii white (2020) puts that digital banking give opportunity of customer and profit maximization. Banks can offer their products and services to their customers easily and maximizing profits as well. It also used for better market prediction. For the near future bank ques will be not repeated and many banks will dominate the market.

According to Tekabe (2016), opportunities of electronic payment in Ethiopia includes Government Commitment. The Ethiopian government believes that ICT plays significant role to alleviate poverty and improve state transformation and initiate many electronic projects such as woreda network projects in different parts of the country. In addition ICT e-learning programs also increasing such as School Net program introduced in Ethiopia to connect Schools and it helps citizens to be familiar with ICT applications and improve the awareness of the public.

Competition between Banks and their cooperation to use common resources is another opportunity in adoption and efficient utilization of E banking in Ethiopia. Moreover, untouched market and rapidly increasing of mobile phone users are the major important opportunities in Ethiopia (Milion,2013).

2.6 Review of Empirical studies

The researcher tried to check available studies of electronic banking issues generally and e-banking challenges and opportunities particularly in the world, Africa and Ethiopian case based on the available sources.

2.6.1 E-banking Challenges and prospects in the World

Georgis and Athanassios in 2011 studied about the challenges and opportunities of e-banking in Greece. The top listed challenges that hinders the e-banking adoption in Greece are the low response rate from customers and the implementation of security and data protection ways. Lack of low internet usage and awareness with technological devices are also the main factors that affect negatively of the e-banking services of customers in Greece. The banks in Greece expand the implementation of e-banking service to remain competitive, keep track with technological advancements and benefit from the low cost of e-banking transactions (Georgis and Athanassios, 2011).

The provision of electronic banking in United Kingdom and republic of Ireland also studied by Daniel in 2009. The objective of the study was to quantify the current provision of electronic banking services by major retail banking organizations in the UK and Republic of Ireland by exploring the organization and future market aspects. According to the information gained from the mailed questionnaires, 25 percent of banks in the UK and Republic of Ireland offered online banking service for customers in their homes. Moreover, the study identifies the most important factors for the adoption of electronic banking service such as customer acceptance for e banking service and the motive of banks to adopt e banking is low.

In Bangladesh, Tukrejul and Bahrul in 2016 studied about the possibilities and challenges of mobile banking using survey method of data collection. The researcher collected data from websites of banks, leaflets, technical personnel of several banks in Bangladesh. The study identified that mobile banking is a new term and rapidly getting popularity in Bangladesh society. Despite most Bangladesh people live in rural areas of the country, almost every family has at least one mobile phone and has the possibility to use mobile banking. The study of Tukrejul and Bahrul described the prospects and limitation of mobile banking in Bangladesh by portraying the existing condition of mobile banking. Among the existing challenges of mobile

banking which listed by the study includes lack of awareness about mobile banking issues and uses, security threat, absence of interbank fund transfer facility and technology complexity issues.

Another study conducted by Rahman (2008) in Bangladesh states that, E-banking become a global phenomenon and countries are experiencing strong growth in E-Banking services. There is strong government initiative through expanding ICT park and infrastructure, waiving taxes on computer peripherals and other measures including the automation program of banking sector.

Lichtenstein and Williamson, which published in 2006, conducted an interpretive study about the adoption of internet banking in the Australian banking context. The study supports the understanding of how and why specific factors affect the consumer decision whether or not to bank on the internet. According to this study, convenience is the main motivated factor for customers to use internet-banking services. Another factor or opportunities to use internet banking which described in the study includes the increasing of risk acceptance level by consumers and the growing importance of giving sufficient consumer support for such services.

The study conducted by Syed and Muhammad in 2015 identify the critical practices and barriers for the development of online banking industry in Pakistan. In Pakistan foreign banks played significant role to introduce electronic banking systems in the mid of 1990's. Afterwards, the domestic banks adopted and use the foreign e-banking practices such as ATM ((Abidet al.2006). According to the study of Syed and Muhammed, the major challenges for adopting e-banking includes lack of sufficient ICT infrastructure and the security issue in which hackers hack the customers basic banking information. Moreover, the customers trust of banks is low and the banks not designed better websites for aware their customers about e-banking as a result it makes the service complex to understand by clients.

In India Karimzadeh studied e-banking issues that published in interdisciplinary journal of contemporary research in business in 2012. The objective of study was identifying the challenges of e-banking from the perspective of employees and bank customers. The challenges of e banking in India are categorized as legal and security aspects, socio-cultural problems, and management-banking issues. The main factors, which obliged to practice of e-banking includes increasing of competition, changing business environments, globalization and the advancement of Information and Communications Technology. In addition, the demand for financial services

is changing rapidly and customer behavior regarding these services is also adapting rapidly. Hence, to transform traditional banking activities to electronic banking, new strategies must be in practice to attract new customers and retain existing ones.

The data taken from customers indicated that less awareness, limited trained human resources, and low levels of income are the main challenges for the development of e banking. In India, infrastructural challenges such as Weak Telecommunications (fiber optic, satellite networks, and communication bandwidth) are the major obstacle for implementing electronic banking there. The legal challenges of electronic banking also includes lack and limitation of regulation and law, increased potential of fraud, denial of e-documents in courts, lacking or weak security measures, lack of strong trust environment (Karimzadeh,2012). Resistance of employees and managers regarding new technologies and lack of adequate coordination, interaction and cooperation between banks and other decision making centers, lack of long term strategic management and change and shift of managers and decision makers are also an important obstacles (Karimzadeh, 2012).

Another study also made by Masha and Ali on the Issues and Challenges of Electronic Banking Regime in Iran, which published in 2018. The major barriers of electronic adoption are financial, regulative and legal issues, organizational culture and process issues, infrastructures and systems. In the study, the e-banking achievements of Iran included and elaborated. Those achievements are Electric interbank communications, implementing Centralized Banking Systems, reduce the costs of branches and headquarters of banks, expansion of electronic payment equipment and tools, reduction of the cost of doing banking activities, expanding the use of Mobile Bank and payment systems. In addition, rising security and reducing the incidence of human error in banking activities and the growing use of electronic money instead of paper money listed as achievements in Iran (Masha and Ali, 2018).

In related to system challenges Masha and Ali identified hardware and software issues. The hardware challenges include lack of proper hardware with the size of banking operations and initial cost of hardware systems. The software issues include lack of specific standards in software systems, the initial cost of software systems, not paying attention to the potential of domestic software in the field of finance and banking and Incompatibility of domestic banking

operations with international banking operations and as a result of incompatibility with international software.

Among the Cultural Challenges of electronic banking in Iran lack of proper and comprehensive culture among banking users in the field of virtual banking also explained. As per the information taken from Mash and Ali's study Organizational and Process Challenges are also become the obstacle in effectively implement e- banking issues in Iran. There is significant difference in governing the virtual and current banking activities. The continuous and direct communication between the bank and the customer based on the customer's physical presence. Educational and infrastructural challenges are also listed as the obstacle. Government monopolizes the telecommunication. In addition Risk Management Challenges such as high competitive pressure to provide new business applications in a very compact time frame as well as the dependence of banks on information technology and the resulting technical complexity in security and operational issues critical issues in Iran. In related to Legal challenges Masha and Ali stated that, all banking activities are conducted electronically, but in the current legal system, written documentations are authentic in the current legal system. There is lack of admissibility of electronic records in the authentication of individuals. Masha and Ali recommended that the legislator needs to take the necessary measures, taking into account the needs and necessities of the present, before serious problems and large legal cases with wide implications for individuals and the judiciary take place.

In Hong Kong Chi Shing and Grant in 2007, conducted study about the factors affecting the adoption of internet banking implications for banking sectors. The study describes the sense of internet banking in Hong Kong from three perspectives. The first is the current adoption rate of internet banking. The second perspective is the perceived usefulness, perceived ease of use, perceived risk and personal innovativeness in information technology. Third angles identify the potential impacts on the strategic activity of banking organizations operation in Hong Kong market. There is better market demand and better banking strategy to adopt e-banking there despite of the security and technology complexity issues.

2.6.2 E-banking challenges and opportunities in Africa

Electronic banking services is growing fast in Nigerian Banking sector. This is because customers understand that e-banking provides convenience and flexibility, speed, efficiency and

accessibility services to them (Elisha, 2010). E-banking also provides transactional advantages like easy transfer, speedy transaction, less cost and time saving instruments for customers. Despite of this benefits, the study of Elisha shows that the Nigerian customers have security and access challenges and lack of sufficient knowledge about electronic banking services rendering by banking sector in the country. The study suggested that critical infrastructural issues such as power and telecommunication should provided with significant level of stability to implement and improve the status of e-banking services in Nigeria. Moreover, the stud recommends that the banking locations mostly found in urban area of the country should be expand in to the rural area customers.

Puopiel and Felix's study, which published in International Journal of Advances in Management, Economics and Entrepreneurship in 2012, describes *the* prospect and challenges of e banking in Zenith Bank Sunyani, Ghana. The study carried out by taking customers of e-banking products and some staff of the bank. The study indicated that 96.7% of respondents used e-banking products Such as ATM, Internet Banking, Z-Prompt, Z-web Acquirer. ATM is the mostly used and preferred way of e banking over other e-banking products because of its easy access. Additionally, some customers used combinations of the products. The study also identified benefits customers derive from e-banking such as saving of time, quickness in banking transactions, easy access to account details and reduction of long queues in banking halls. The study also mentioned that customer satisfaction and competition from other banks are the factors to adopt e banking service. Challenges such as frequent network failure, high bank charges, limit on amount of cash withdrawal and wrong debit are listed in the study.

The customers of Zenith bank get opportunity of using electronic banking services such as time saving, easy access to cash and convenient in the use of the products. However, most customers use ATM than the other e-banking products because of its effectiveness and user friendliness. To protect the customers' data from theft and other security threat, there are security features designed for e-banking users such as user and password and this have influencing factor for customers to trust the product. According to the study of Puopiel and Felix (2012), the barriers of e banking includes network failure from internet connection is the major challenge facing customers using E-banking products from Zenith Bank. However, respondents believed that

considerable education and marketing of E-banking products from the bank could attract more customers and taken as opportunity (Puopiel and Felix, 2012).

Savior and Kalumba in 2018 studied about e-banking adoption and challenges to customers in Kasama district banking cases in Northern Province of Zambia. The study was descriptive and the data was collected from 50 respondent customers of e banking. The output of study indicated that availability of information on e-banking, education level and the cost associated with e-banking were the significant challenges to adopting and use of e-banking by customers. According to the study making information available would increase the number of customers using e-banking and the researcher recommended that Banks embark on information dissemination on the use of e-banking, benefit and cost.

The study of Kalumba suggested that familiarity is very important in the use of e-banking as technological acceptance is based on the familiarity and complexity of the service. The surprising idea here is in comparative with other theories emphasis on the concern for security; security is not a challenge in the adoption and use of e-banking. The study rather indicates that the only challenges to the use of e-banking are availability of information, education level and the cost of the service and recommended the banks should aware customers about the benefits, costs minimized and how to use e banking etc. available to the all customers and merchants. In the study the use of e banking is indicated as for both the customer and the bank. For customers e banking reduces transaction time; it is convenient and reduces the amount of cash to be carried in order to do a transaction which reduces the risk of losing cash. In related with banks the use of e-banking has helped to reduce cost of handling the transaction including reduced cost of back room staff.

In South Africa, banks begun banking services via internet since 1996. Although slow start of e-banking there, customers of South African banks responded fast due to the convenient and cheap way of the e-banking service. According to a study made in 2000 may, 672,000 peoples in South Africa use online banking services (Karine,2002). Comparatively in SA the customers' acceptance and use of internet banking is still at lower stage compare with UK and other developed nations. Now a days South Africa exposed to global market forces as a result of technology and lifting of sanctions (Van, 2002).

Jacques in 2013 conducted an empirical study about e-banking in Cameroon by taking data from bank customers through in-depth interview and questionnaires. In the study several factors that have positive or negative impact on e-banking service providing are identified. The factors are demographic (age, income, educational level and occupation) and psychological (perception of relative advantage, compatibility, complexity and perceived cost). According to the study, Perceived risk negatively affect e-banking services in Cameroon customers. Social factors such as opinion of friends, family and colleagues can influence e banking adoption. The factors are independent variables and the adoption of e banking was dependent variable.

The major challenges to adopt e banking in Cameroon are lack of trust, lack of information, lack of knowledge and perceived risk by non-users. In addition to those barriers, resistance to change by bank employees, absence of laws and legislations for e-banking, absence of proper telecommunications infrastructure and IT related training are also identified by Jacques.

Issac (2005) identifies the challenges and derive forces for adoption of e banking in Africa. The security concern, lack of technological infrastructure especially in rural area and absence of proper legislation governing are the major barriers of e banking listed by Issac. The customers preference of paper money than that of using virtual transaction is also another challenge.

Amongst the prospects of e banking in Africa Issac (2002) point out the following.

- Rapidly increasing customers' needs and preferences of e banking
- Availability of competitive forces and product differentiation strategies
- Increasing pressure to reduce transactional and operation costs

2.7 Opportunities and challenges of E-banking in Ethiopia

2.7.1 Challenges

Another study conducted by Tesfalem in 2017 about the E banking in southern Ethiopia identifies that the network failure from internet connection is the major challenge facing customers who use E- banking products. Berhanu in 2019 also studied the main challenges affecting the adoption and growth of e-banking. These are; high internet cost, frequent network/internet interruption, lack of awareness about e-banking, frequent power interruption, inconvenient locations of ATMs and POS and inaccessible ATM and POS.

By taking data from interview and onsite observation, Wondwossen and Tsegai (2005) conducted a study on the challenges and opportunities of electronic payment and the main challenges identified are lack of customers trust to use e-payment, lack of sufficient laws and regulations, lack of skilled workforce and power interruption.

According to Gardachew (2009), the banking sector is still underdeveloped compared to other part of the world. The main medium of exchange is cash and electronic payment systems are still at low stage in Ethiopia. He identifies the Key Challenges for E-banking practice in Ethiopia includes lack of sufficient internet availability and ICT infrastructure, absence of better legal and regulatory framework for e-commerce. In addition, political instability is another tackles of e banking in Ethiopia. Gardachew also added that there is low literacy rate as a serious impediment for the adoption of E-Banking in Ethiopia. High cost of Internet and unavailability of well-designed financial institutions networks that links different banks and power interruption is another obstacles.

Based on the exploratory study made by Ali Ibrahim (2009), the e banking service availability is challenged by lack of sufficient technology related infrastructure i.e. most peoples in Ethiopia are living in rural areas in which there is no sufficient ICT infrastructure and internet access. He also added that lack of awareness about new technologies, fear of technological risks among banks, lack of trained work force in key organizations and users resistance to change are the major e banking challenges.

Abdulselem Fetua in 2019 also conducted a descriptive study about the opportunities and challenges of electronic banking system in commercial bank of Ethiopia in case of Gurage zone. The data he used for the study was collected from staff and customers of the bank through questionnaires and focused group discussion. The study identifies the e-banking benefits and describes the challenges and opportunities of e banking as well. According to the study the major e banking challenges are infrastructural, legal and regulatory, socio-cultural, and illiteracy related challenges. This major challenges includes the following in detail.

Abduselam recommended that immediate action needed on capacity building arrangement and modern banking system to employ the e-banking service effectively in Ethiopia. This is due to the rapidly expanding domestic and international trades and increasing international banking services.

2.7.2 Opportunities

The main opportunities of e-banking in Ethiopia includes existence of high customers demand due to large population, improvement in the banking habit of the society, late adopter of E-Banking in the industry. There is also In addition the commitment of the government to facilitate the expansion of ICT infrastructure and to strengthen the banking industry is increasing (Wogayehu, 2019). According to Gardachew (2010) who conducted a study aimed of analyzing the status of electronic banking in Ethiopia and investigates the main opportunities of implementing E-Banking system. He describes that opportunities offered by ICT through e-learning programs and the commitment of the government on development of ICT infrastructures is expanding in Ethiopia.

Considerable education and marketing of E-banking products from the banks could attract more customers in the Ethiopia (Tesfalem, 2017).

DawitEndeshaw (2019), writes in Reporter titled as “new banks are preparing to join banking sector”. He explains that currently, there are 16 private and 2 public banks in Ethiopia. A new law recently approved by NBE, which allows Ethiopian diaspora to invest in the financial sector. As a result, many new banks are selling shares to enter in to the banking sector. In addition, the central bank permits for establishment of Islamic banks, which are under formation. Hence, it is possible to say this escalates the banking industry generally and e banking specifically in the near future.

2.8 Conceptual Framework

There are several technology adoption frameworks used by researchers who conducted technology adoption related studies. For this study TOE (Technology, Organization and Environment) model which developed by Tornatzky and Fleischer in 1990 is applied. This model is the most used theory since it better explains innovation adoption and has consistent empirical support for application of information system adoption (Tiago and Maria, 2011).

The TOE framework is used to identify basic issues of enterprises that affect the technological adoption process and implementation such as technological context, organizational context and environmental context (Tiago and Maria, 2011). The technological context is associated with relevant internal and external technological issues of a firm. It also contains existing practices

and equipment internal to the firm(Starbuck 1976), and available technologies external to the firm (Thompson et. al 1967). In related to Organizational context the descriptive measures about the organization such as scope, size, and managerial structure included. The environmental context contains the arena in which a firm operates its business like the industry, competitors, and the legal issues from governments (Tornatzky and Fleischer 1990).

To identify the practice, challenge and opportunities of electronic banking in Bank of Abyssinia, TOE framework preferred. The challenge aspect of electronic banking which categorized as Technological, Organizational and Environmental factors are independent variables which better describes concept of electronic banking adoption. Although several issued are raised under technological, organizational and environmental aspects, the relevant points are included as a model to achieve the objective of this study which is depicted as follow.

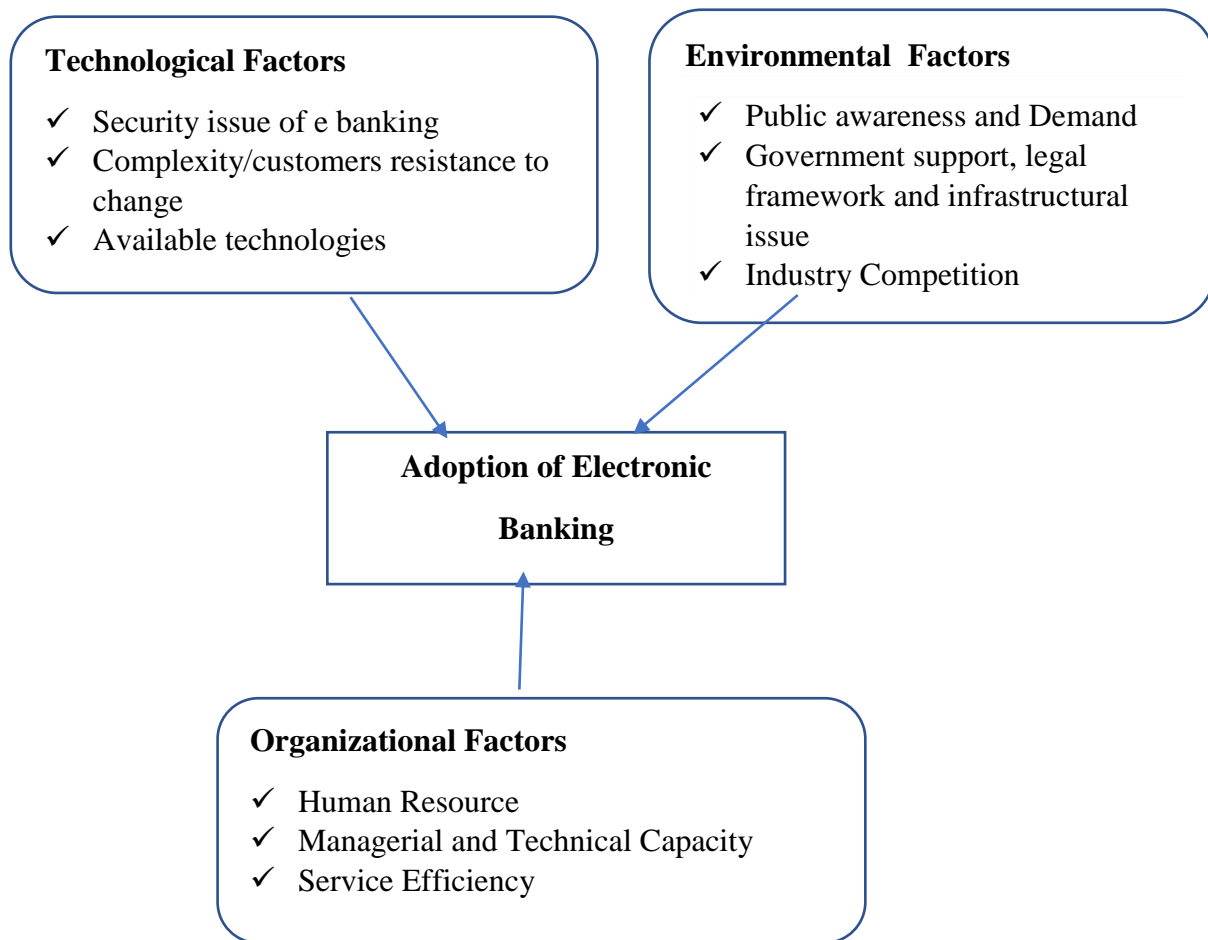


Figure: Conceptual Framework

Source: Mokhtar and Ismail(2016) and customized by the researcher

CHAPTER THREE METHODOLOGY

3.1 Research Design

Robson, 2002 classified the research design as exploratory, descriptive and explanatory. The use of exploratory research is to find out ‘what is happening; to seek new insights; to ask questions and to assess phenomena in a new light’ (Robson 2002). The descriptive research used to portray an accurate profile of persons, events or situations (Robson 2002). In addition, descriptive method of research issued to gather information about the present or existing condition (Creswell, 2003). In explanatory studies, causal relationships between variables exist. It emphasis on studying a situation or a problem in order to explain the relationships between variables (Saunders, 2016 cited in Robson 2002).

From the three categories of research designs, descriptive type is used for this study. The objective of this study is to check the current practice, challenge and opportunities of e banking in BOA. Additionally, the study describe the nature of challenges and opportunities of electronic banking by portraying the profile of respondents. Therefore, descriptive type of research design is better and used in study.

3.2 Research Approach

To conduct a given study there are three research approaches such as quantitative, qualitative and mixed research approach (Creswell,2003). The quantitative research approach used for measurement that can be quantifiable while the qualitative approach used for non-numeric values (Bryman& Bell, 2007). In mixed research, approach data’s are interpreted by both qualitative and quantitative assumptions (Creswell, 2009).

In this study both quantitative and qualitative approach are used to minimize errors by using single method and to understand the research problem in better way by mixing both numeric values of quantitative research and the detail of qualitative research Creswell (2009). Results from questionnaires and interview are interpreted using mixed method.

3.3 Population and Sample

For this study, the population is clerical Staffs of BOA in Addis Ababa grade 3 and corporate branches. The branches are purposively selected because of they are highly performer in daily transaction, customer base and have many e-banking users. Moreover, the respondents believed to have sufficient knowledge about the area and can be taken as representative of all e-banking users because of their direct contact to customer and the staffs themselves are users of e banking. Moreover, the staffs are also clerical who have the required experiences and knowledge such as junior banking officers, Business banking and operation officers in senior level and managers are taken as respondents.

There are 3 corporate branches and 12 grade III branches in Addis Ababa. The total number of clerical staffs are 287. The sample size is 167 and purposive sampling method used to select sample respondents. Employees who have more than one year experience and believed to have required knowledge included in the sample. The sample size for this study is determined by simplified formula provided by Yamane (1967), 95% confidence level which stated as follow.

$$n = N/1+N (e^2)$$

$$n = 287/1+287(.05^2)$$

$$n= 167$$

N =Total number of Population

n = Number of samples

The following table show how samples proportionally drawn from the population by using proportionate stratified sampling.

No.	Branch Name	Grade	No. Population	No. of Sample
1	Bole	Corporate	20	12
2	Habesha	Corporate	22	13
3	Ras	Corporate	22	13
4	Filwuha	III	17	10
5	Negadras	III	17	10
6	Raguel	III	20	12
7	Guenet	III	17	10
8	Abba Mela	III	17	10
9	Urael	III	16	9
10	Arada	III	20	12
11	Gerji	III	23	13
12	Addisu Gebeya	III	17	10
13	Bole Medhanialem	III	17	10
14	Merkato	III	26	14
15	Bisrate Gebriel	III	16	9
	Total		287	167

3.4 Data Collection instruments

The researcher opt two ways of surveys. The first is questionnaires, which is distributed for clerical staffs of BOA. The previous researcher's questionnaires used to keep content validity of data collection instrument. In addition, before distributing the questionnaires the researcher

consults staffs of BOA who have the required knowledge by critically examining the instrument, some modification added as well. Moreover, pre-test also conducted by taking some samples and some modification added on the contents that are not clear for pre-test samples. The second data collection method is interview questions to get information from digital banking managers of the bank who have direct responsibility and expertise in digitalization issues of the bank. In addition to questionnaire and interview, secondary data source such as BOA websites, manuals, and memos, NBE directives, magazines, and others are used.

3.5 Data Analysis

Descriptive statistics method of data analysis used by employing version 24 SPSS software. The quantitative data collected from sample respondents who are clerical staffs of BOA using percentages, tables, mean and standard deviation to address the opportunities and challenges of e banking. In related to qualitative data, interview and secondary data sources analyzed narratively and presented in combination with the quantitative information.

3.6 Reliability test

Reliability Statistics on all variables	
Cronbach's Alpha	N of Items
.868	27

There are 27 questionnaires as indicated above and divided as practice, challenges and opportunities. To accept the data instruments and internal consistency of items in research, the value of Cronbach's Alpha should be greater than 0.7 and closer to 1.0 (George & Mallery, 2003). As shown in the above Cronbach's Alpha reliability test statistics, the entire collection of items are reliable since coefficient of Cronbach's Alpha is 0.868, which is greater than the acceptable standard value of 0.7 and possible to say the study is in reliable scale. In addition, for keeping validity, questionnaires prepared based on the literature review and some of previous study's questionnaires that are similar in context.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

This chapter presents, analyze and interpret data gathered from both secondary and primary sources such as questionnaires, interview and document analysis. A sum of 167 questionnaires distributed for selected grade 3branches' clerical staffs of Bank of Abyssinia which found in Addis Ababa. All questionnaires were returned and valid by 100 percent response rate. In addition to this 4 digital banking mangers who are key informants from card banking, agent banking, online and digital operation are interviewed. Several documents from the Banks's website, manual and other sources reviewed as well. The chapter contains the demographic information of respondents, electronic banking practice of Bank of Abyssinia, challenges and opportunities of e banking respectively. The analysis of the data is conducted by SPSS version 24 software.

4.1 Demographic information of Respondents

This part describes the demographic information of respondents such as age, gender, educational qualification and years of experiences by using descriptive analysis in SPSS software and summarized in the following table.

Table 4.1 Demographic Information of Respondents

Variables	Classification of variables	Frequency	Percent
Gender	Male	116	69.5
	Female	51	30.5
	Total	167	100.0

Age	18-25	91	54.5
	26-35	64	38.3
	36-45	11	6.6
	46-55	1	.6
	Above 56	0	0.0
	Total	167	100.0
Educational Qualification	Diploma	3	1.8
	BA/BSc	141	84.4
	MA/MSc	23	13.8
	PhD	0	0.0
	Total	167	100.0
Years of Work Experience	1-3 Years	106	63.5
	4-6 Years	31	18.6
	7-9 Years	16	9.6
	10-12 Years	5	3.0
	Above 13 Years	9	5.4
	Total	167	100.0

Source: Survey result, 2020

As per the information in the above table, out of 167 respondents, 116 (69.5 %) are males and the remaining 51 respondents (30.5%) are females. Hence, the number of male respondents is far greater than that of the females.

The age information of respondents indicates that 91(54.5%) of respondents are categorized between the age group of 18-25 and 64(38.3%) of respondents are between age group of 26-35 age category. The remaining respondent's age category indicates that 11(6.6%) respondents are between 36-45, 1(0.6%) respondent between 46-55 and no respondents are above age 56 respectively. From this information, it is possible to say the majority of workforce in Bank of Abyssinia are in young age category.

In terms of educational qualification, 3(1.8%) respondents are diploma holders, 141(84.4%) degree, 23(13.8%) masters and no respondents are PhD holders respectively. This indicates that majority of workers are degree holders and have the required knowledge in the area.

In related with years of work experience in the bank, 106(63.5%) of respondents have 1-3 years, 31(18.6%) 4-6 years, 16(9.6%) 7-9 years, 5(3%) 10-12 years and the remaining 9(5.4%) have above 13 years of experience respectively. It shows majority of the respondents have 1-3 years of experiences.

4.2 E-Banking Practice in Bank of Abyssinia

To understand the e-banking practice of Bank of Abyssinia, managers of digital banking department of the bank interviewed. BOA has 13 departments and digital banking department is one of the 13 departments, which has 4 sub divisions under it. The sub-divisions under digital banking department are Card Banking, Agent Banking, Online Banking and Digital Operation divisions. As per the information from Director of card banking, the card banking division is mainly responsible for production and distribution of cards. The card types includes Habesha classic debit card, Gold card and Ameen cards. Until the end of the year 2020 GC, 1,218, 152 cards produced and 46% or 560,350 cards distributed to customers, which is below half percent of the produced cards. The director added that the bank has serious problems on distributing the cards to customers. This is because of the card is prepared without asking the customers willingness to use e banking which is aggressive way of marketing. In addition customers of the bank have not sufficient awareness to use e banking services even the educated one are preferred to visit the bank for simple transactions which can be operated by ATM and mobile banking.

Director of online banking manger said that the online division is doing on internet and mobile banking activities. The bank is currently working to increase the number of mobile and internet banking users or customers than any time before. These products are simplify the banking activity of customers by making transaction in everywhere they found.

The director of digital banking operation division says that BOA has 630 ATMs and 300 POS. The bank is currently introduced a unique self- service machine which is called Interactive Teller Machine (ITM) which give many banking services without going to a bank such as cash

withdraw, account transfer, cash deposit via cheques, payment through fund transfer in BOA and other bank accounts, purchase of FCY cash notes and other services.

According to the agent-banking director of the bank, BOA is delivering partial banking services in cooperating with recruited agents. Amongst the agent banking services opening of E-wallet account (LucyPay), fund transfer and mini statement are included. The director of digital banking operation division also informs the division is responsible for technical support, account reconciliation and back office card management issues.

Based on the information from the interview and open-ended questionnaires distributed for clerical staffs, the bank has e-banking products like ATM, Gize-Pay, Internet banking, Mobile banking and Virtual banking.

Generally, BOA has more than 2,800,000 total customers and out of this, more than 1,200,000 customers are using at least one of the above electronic products.

To check the total banking activities of BOA the following information gathered from respondents through questionnaires and analyzed below using SPSS software. The representation of agreement of respondents is made according to Zaidaton and Bagheri (2009) which states that the score between 1 up to 1.80 is considered as strongly Disagree, 1.81 up to 2.60 shows Disagree, 2.61 up to 3.40 neutral, 3.41 up to 4.20 Agree and 4.21 up to 5.00 considered Strongly agree. Therefore, the responses in this study is based on this statement.

SD=Strongly Disagree, DA= Disagree, A=Agree, SA= Strongly Agree

Table 4.2 E-banking Practice in Bank of Abyssinia

E –banking Practices of BOA	SD		DA		Neutral		A		DA		Mea n	St.D
	F	%	F	%	F	%	F	%	F	%		
1. Bank of Abyssinia developed and implemented a user-friendly system for providing e-banking services.	9	5.4	18	10.8	23	13.8	81	48.5	36	21.6	3.70	1.089
2. The Bank gives information on its website or other media	9	5.4	17	10.2	47	28.1	72	43.1	22	13.2	3.49	1.023

how to use electronic banking.													
3. The e-banking services of the bank are provided by multi languages	13	7.8	21	12.6	25	15.0	66	39.5	42	25.1	3.62	1.211	
4. Bank of Abyssinia is improving and updating its e-banking services continuously.	7	4.2	16	9.6	19	11.4	65	38.9	60	35.9	3.93	1.112	
5. The bank provides differentiated e-banking products and services compared to other competitors.	9	5.4	17	10.2	18	10.8	77	46.1	46	27.5	3.80	1.115	
6. Learning and using electronic banking service and products of the BOA is easy	9	5.4	27	16.2	24	14.4	79	47.3	28	16.8	3.54	1.113	

Survey result, 2020

As shown in the above table 4.2, item number 1, Bank of Abyssinia developed and implemented a user-friendly system for providing electronic banking services. This is supported by the respondent’s agreement of 81(48.5%) said agree and 36(21.6) said strongly agree. The total responses of agree which is agree and strongly agree is 117(70.1%). To make the statement more descriptive and elaborative, mean and standard deviation also used. The results is 3.70 and 1.089 for mean and standard deviation respectively and it provides the same information that most respondents are agree on it. It also supported by information from the digital banking operation manger BOA who said that electronic banking services of the bank are easy to learn and the bank has virtual banking center to support customers by using toll free line of the bank. Especially, the currently developed mobile system which is GizePay, and Interactive teller machine are very simple to use and attracting many customers.

Based on the above table item number 2, respondents asked if BOA gives information on its website or other media how to use electronic banking for customers. Most respondents or 72(43.1%) are agreed on it. It also supported by the mean result of 3.49 and there is also deviation of responses by 1.023 value of standard deviation.

In addition, BOA provides the e banking services by multi languages according to the respondent's agreement on the above table item number 3, which is 66 (39.5%) and 3.62 mean value. The online banking manager of BOA added supportive information on it. Accordingly, BOA has alternative language procedures when customers use ATM, Mobile banking and other application-based systems of the bank. Moreover, customers have option about the SMS notification and call center of the bank support the customers through various languages.

According to the respondent's level of agreement on the above table item number 4, Bank of Abyssinia is improving and updating its e banking services continuously. Majority of respondents, which are, 39.9 % and 35.9 % agree and strongly agree respectively. The mean result also support it by 3.93 value. The director of Agent banking also said that, recently BOA updates its mobile banking application by a newly developed system called GizePay which has better features than the previous mobile banking services. In addition, the interactive teller machine (ITM) is a unique banking service-giving machine that significantly contributes for the betterment of digital transformation of the bank.

On the above table question number 5, the respondents asked if bank of Abyssinia provides differentiated e banking products and services compared with other competitor banks in the industry. The level of agreement of respondents indicates that majority, which are 77(46.1%) said agree and 46(27.5%) said strongly agree. The mean result also supported by a mean value of 3.80. It also supported by the director of digital banking operations' response. The bank give attention for digital issues than any time in the past since the mission of the bank incorporates digitalization. The virtual banking center and ITM are unique e banking achievements, which are not available in other banks in Ethiopia.

As per the information in the above table question number 6, majority of respondents 60.10 % agree on the issue that learning and using electronic banking product of the bank is easy. The result is supported by mean value of 3.54. Therefore, the banks e banking system is user-friendly for customers.

4.3 Challenges of E-banking

In this section, the challenges in related with technological, organizational and environmental are analyzed and interpreted. To understand the challenges easily, the items are categorized as technological, organizational and environmental based on TOE framework.

Table 4.3 challenges of e banking

E-banking Challenges	SD		DA		Neutral		A		SA		Mea n	St.D
	F	%	F	%	F	%	F	%	F	%		
Technological Issues												
1. Customers have not confidence and trust on the bank's security issue of electronic banking service giving by the bank.	10	6.0	13	7.8	30	18.0	79	47.3	35	21.0	3.69	1.074
2. Security issues and Fear of fraud hinders customers to practice e-banking services. (E.g. loss of ATM card, PIN or mobile phone etc.)	17	10.2	20	12.0	48	28.7	56	33.5	26	15.6	3.32	1.178
3. Customers resist to change due to the perceived complexity of new technologies compared to conventional ways of banking	6	3.6	22	13.2	52	31.1	68	40.7	19	11.4	3.43	0.979
Organizational Issues												
4. The charge of e-banking service for bank's customer is relatively expensive, e.g., ATM service charge.	33	19.8	67	40.1	24	14.4	28	16.8	13	7.8	2.49	1.236
5. Bank of Abyssinia has not	9	5.4	12	7.2	39	23.4	78	46.7	29	17.4	3.63	1.026

well-trained work force to build and maintain e-banking systems.												
6. Management of the bank has not been devising and implementing effective control mechanisms (MIS audit and others) for solving fraud and erroneous transactions.	14	8.4	17	10.2	40	24.0	62	37.1	34	20.4	3.51	1.171
7. There is lack of adequate human resources to implement e-banking projects in BOA	8	4.8	14	8.4	39	23.4	65	38.9	41	24.6	3.70	1.078
8. There is lack of sufficient and appropriate maintaining capacity upon failure is a challenge for the smooth practice of e-banking service.	13	7.8	38	22.8	44	26.3	56	33.5	16	9.6	3.14	1.115
9. BOA not gives E-banking service easily for its customers (E.g. provides fast services and produce ATM card in short period of time).	15	9.0	35	21.0	39	23.4	55	32.9	23	13.8	3.22	1.188
Environmental Issues												
10. There is no sufficient government support that affect customers willingness to use technological	6	3.6	21	12.6	41	24.6	62	37.1	37	22.2	3.62	1.074

innovation												
11. There is no sufficient government policy framework for implementation and growth of e-banking service in Ethiopia.	2	1.2	17	10.2	52	31.1	72	43.1	24	14.4	3.59	0.90
12. There is lack of ICT infrastructure required for providing e-banking services in the city.	6	3.6	26	15.6	33	19.8	72	43.1	30	18	3.56	1.067
13. There is lack of sufficient public awareness and literacy rate in Ethiopia.	15	9.0	21	12.6	35	21.0	66	39.5	30	18.0	3.45	1.186
14. There is lack better competition with local banks and foreign banks are prohibited to operate in Ethiopia	14	8.4	22	13.2	28	16.8	77	46.1	26	15.6	3.47	1.155

Survey Result, 2020

Technological Challenges

Based on question number 1 in the above table, customers have not confidence and trust on electronic banking products and services. Majority of respondents which are 114(68.3%) of agree on this statement. The mean value also support the result by mean score of 3.69. This indicates that many customers have fear of risks in related with e-banking services since they fear of hackers from accessing their account, making fraudulent transactions, theft of cards and passwords. The result is consistent with the finding of Wogayehu and Nardos(2019). Customers feel uncertain with regard to security issues due to the e banking technology is new and still not practiced widely.

According to the information in the above table question number 2, respondents asked if security issues and fear of fraud are barriers to practice e banking services e.g. loss of ATM card, PIN, or

mobile phone etc. The majority of respondents agree on it in which 49.1 % said agree and strongly agree. The finding of Georgis and Athanassios (2011) supported the finding. According to their study, the barriers of e-banking adoption in are the low response rate from customers and the implementation of security and data protection ways. Wogayehu (2019) also studied that customers are very concerned about their personal information or security issues such as losing of phone numbers and more importantly the PIN.

Customer's resistance to change due to the perceived complexity of new technologies compared to conventional ways of e banking raised in the above table question number 3. Most respondents, which are 87 (52.4%), agreed that customers have resistance to change due to complexity of new technologies. The mean and standard deviation is also supported the result which is 3.43 and 0.979 respectively. Syed and Muhammad (2015) support the finding of the above. Customers of the bank are not aware of the e banking services as a result they believed that the service is complex to understand. In addition to customers, resistance of employees and managers regarding new technologies and lack of adequate coordination, interaction and cooperation between banks and other decision making centers, lack of long term strategic management and change and shift of managers and decision makers are also an important obstacles (Karimzadeh, 2012).

Organizational Challenges

As per the information on the above table item number 4, the charge for e banking services for BOA customers is for instance ATM service charge is not expensive. Respondents asked if the banks e banking services is relatively expensive and 67(40.1%) which is the majority's response said disagree. The result also supported by the mean value of 2.49. There is dispersion of 1.236 standard deviation. Hence, e banking service charge is not the challenge.

Based on the information in the above table item number 5, BOA has not well trained workforce to build and maintain the electronic banking system. Out of 167 respondents, 78(46.7 %) said agree and 29(17.4) said strongly agree which is a total agree response of 64.1%. The mean result also supported by a mean value of 3.63 that is in agree section. According to Karimzadeh (2012) lack of trained human resources is main the challenges of e banking implementation.

In the above table question number 6, is about the management control issues of the bank. Most respondents are agree on the issue that management of the bank has not been devising and implementing effective control mechanisms such as MIS audit and others for solving fraud and erroneous transactions. From the total 167 respondents, 96 (57.5%) agreed on this statement by saying agree and strongly agree. The mean result also supported by a 3.51 mean value. Resistance of managers regarding new technologies and lack of adequate coordination, interaction and cooperation between banks and other decision making centers, lack of long term strategic management and change and shift of managers and decision makers are obstacles of e banking service and products (Karimzadeh, 2012).

The respondents also asked to check their level of agreement about the human resources aspect of the bank in question 7 above. For the question, 63.5% of the respondents agreed on that BOA has not the required human resources to implement e banking services effectively. The mean result generated from SPSS software also support the agreement which is 3.70 score value. Required human resources is one of the major factor in organizational issue and the availability of adequate human resources to implement the e banking system is the major challenge (Mahlet,2016).many tasks are operated by few employees not worked on e banking effectively. They rather focus on the routine tasks of the bank.

Based on the information on the above table question number 8, respondents asked if there is lack of sufficient and appropriate maintaining capacity upon failure is a challenge for smooth practice of e banking services. There is 43.1% response of agreement and 30.6% response of disagreement. The remaining 26.3 % of respondents said neutral. The agreement of respondents on the above table question number 9, about e banking service of the bank indicates that, BOA not provides e banking service easily for its customers, which is 46.7% agreement on it. The remaining 30 % and 23.4% said disagree and neutral respectively. Respondents have not sufficient knowledge about the raised questions.

Environmental challenges

In related to environmental factors respondents asked if there is sufficient government support that affect customer's willingness to use technological innovation. Based on the information from the above table question number 10, majority of the respondents agreed that there is no sufficient government support that affect customers willingness to use technological innovation.

The response rate of agreement is 59.3% on it. The remaining 16.2% and 24.6 % said disagree and neutral. The result is also supported by a mean value of 3.62. Wogayehu (2019) identified absence of proper legal and regulatory framework is one of the legal challenges for effectively implementing e banking services in Ethiopia.

In the above table question number 11, the other environmental problem for effectively adopting and implementing e banking is lack of sufficient government policy framework in Ethiopia. From the total of respondents, 57.5 % agreed on the statement. The level of disagreement is 11.4 % and the remaining 31.1 % are neutral on this issue. The mean and standard deviation result also support it by a value of 3.59 and 0.90 respectively. A set of legal laws operated in national, regional and international level have significant impact for successful practice of e banking services. These laws include regulation of money laundering and controlling commercial laws to protect customers data, support cooperation issue and competition (Michael, 2013).

For question number 12 in the above table indicates that lack of ICT infrastructure, for providing e-banking e banking service is one of the barriers of e banking adoption and implementation. From the total respondents, 61.1 % agreed on it. The mean result is also 3.56, which is highly near to the agreement level. The statement is supported by many previous researches. According to the study of Syed and Muhammed (2015), one of the major challenge for adopting e banking includes lack of sufficient ICT infrastructure. Infrastructural challenges such as Weak Telecommunications (fiber optic, satellite networks, and communication bandwidth) are the major obstacle for implementing electronic banking (Karimzadeh,2012). The finding of Gardachew (2009, Berhanu(2019) and Abduselam (2019) also supported the above result.

Based on the above table question number 13, there is also lack of sufficient public awareness and literacy rate in Ethiopia. This is confirmed by 57% of respondents who said agree on this statement. The mean result is also provide similar agreement by 3.45 mean value, which is in agree level of response. Lack of low internet usage and awareness with technological devices are also the main factors that affect negatively the e-banking services of customers (Georgis and Athanassios, 2011). The finding is also consistence with the study conducted by Tukrejul and Bahrul (2016), Savior and Kalumba (2018) and Tesfalem(2017).

The last environmental challenge for e banking is competition issue raised in the above table question number 14. Majority of the respondents, which are 61.7% agreed that there is lack of

better competition with local banks and still the foreign banks are prohibited to operate in Ethiopia. The mean score also has similar information with value of 3.47 agreement level. Masha and Ali(2018) conducted a study on similar issue and identified that government monopoly of the banking center is the great challenge to adopt and implement new e banking products and services. Despite of protecting the local banks from technologically developed foreign banks competition, the Ethiopian government strategy of foreign bank entry barriers affect the e banking industry as proved above.

From the open ended questioners about the challenges of e banking , many respondents said that system failure and the wrong deduction of balance of customers, political instability, low economic development and high level of illiteracy rate are listed.

4.4 E-banking Opportunities

E-banking Opportunities	SD		DA		Neutral		A		SA		Me an	St. D
	F	%	F	%	F	%	F	%	F	%		
1. The demand for e-banking services is increasing from time to time.	4	2.4	9	5.4	11	6.6	92	55.1	51	30.5	4.0 6	0.89 6
2. The habit of using e-banking services show significant improvement.	1	0.6	13	7.8	15	9.0	97	58.1	41	24.6	3.9 8	0.83 9
3. The number of educated population is increasing in Ethiopia as an opportunity for the growth of e banking.	6	3.6	5	3.0	20	12.0	94	56.3	42	25.1	3.9 6	0.90 4
4. There is strong commitment from the government to strengthen e-banking services in Ethiopia.	7	4.2	32	19. 2	57	34.1	46	27.5	25	15.0	3.3 0	1.07 3
5. The current situation in related to Corona virus pandemic is a good opportunity to spread E-banking	6	3.6	19	11. 4	27	16.2	63	37.7	52	31.1	3.8 1	1.10 7

services to customers.													
6. The current new directive of national bank of Ethiopia, which limit physical cash limit withdrawal, can be taken as an opportunity for using e-banking services.	3	1.8	7	4.2	20	12.0	58	34.7	79	47.3	4.2	0.93	2 9
There will be better computation due to many new upcoming local banks	9	5.4	10	6.0	17	10.2	70	41.9	61	36.5	3.9	1.09	8 5

Survey Result, 2020

As per the information from the above table question number 1, the demand of e banking services is increasing from time to time. Most respondents said agree which is 85.6%. The mean and standard deviation result also prove the same result, which are 4.06 and 0.896 respectively. According to Wogayehu in 2019, the opportunities of e banking in Ethiopia includes existence of high customers demand and improvement in the banking habit of the society. The number of population is large in Ethiopia and it create better opportunity to expand the services.

The habit of using e banking service show significant improvement as shown in the above table question number 2. From the total respondents 82.7 % agreed on the statement. The mean and standard deviation result also provides similar information, which is 3.98 and 0.839 respectively.

Based on the information from the above table, question number 3, most respondents also agree and responded that, the number of educated people is increasing in Ethiopia and it is good opportunity for e banking service improvement. From the total respondents 81.4% said agree. The mean and Standard deviation result also prove the same way by scoring 3.96 and 0.904 respectively. The number of educated people is increasing and marketing of E-banking products from the banks is attract more customers (Tesfalem in 2017).

For question number 4, the respondents agreement about the government’s commitment to strength e banking services indicates that 42.5% said agree and 23.4% said disagree. The remaining34.1% said neutral.

To check the response of employees of BOA if the current situation in related with Corona virus pandemic is a good opportunity for implementing e banking, the questionnaires designed and asked. Majority of respondents agree which is 68.8 % response. The mean value is also confirm it by scoring 3.81 mean value. Covid19 has significant impact since the physical relation of peoples is the major transmission methods and peoples opt transacting using e banking products without visiting banks.

Currently NBE is implementing new directives, which limits the physical cash movement. The NBE directive no. FIS/03/2020 come into effective since 07 October 2020, sets a maximum cash withdrawal limit in a single financial institution. Accordingly, the maximum cash withdrawal limit is ETB 50,000 per a day for single person and ETB 75,000 per a day for juridical persons. NBE also limit the physical cash deposit for another person's account not greater than 5000 with some exceptions. Respondents asked if this directive is an opportunity of facilitating e banking practices and they agreed on it that this directive is a good opportunity to use e banking products and services. From the total of respondents, 82% agreed on it. The mean and standard value of 4.22 and 0.939 also provides the same result. Customers use e banking products like mobile banking and internet banking and fund transfer services rather than physical cash movement.

According to the above information from table 4.4 question number 7, the upcoming many new local banks is also another opportunity for e banking. From the total of 167 respondents, 78.4 % of respondents agreed on the statement.

The open-ended answers of respondents indicates that the following are also opportunities for adoption of e banking services.

- There is good government initiative to prevent security issues of e banking such as strong measurement are taking to prevent money laundering.
- The number of smartphone users is increasing and it enables customers to use e banking services effectively such as internet banking etc.

CHAPTER FIVE

Summary of Findings, Conclusion and Recommendations

In this chapter summary of major findings, conclusion and recommendation of the paper included based on the information gathered from respondents and interviewees in previous chapter. Basic summary is covered firstly followed by conclusion and finally recommendation forwarded.

5.1 summary of Major Finding

The overall finding of the data is prepared, collected and analyzed based on the objective of the study, which is identifying the practice, challenges and opportunities in bank of Abyssinia. The following are the summary and conclusion of findings.

- The finding obtained from interview and questioners revealed that Bank of Abyssinia developed and implemented a user-friendly system for providing e-banking services. According to the information from the digital banking operation manger BOA, electronic banking services of the bank are easy to learn and the bank has virtual banking center to support customers by using toll free line of the bank. Moreover, the data from questionnaires support that the bank gives information on its website or other media how to use electronic banking for customers.
- BOA provides the e banking services by multi languages. The bank has alternative language procedures when customers use ATM, Mobile banking and other application-based systems of the bank. In addition, customers have option about the SMS notification and call center of the bank support the customers through various languages.

- Based on the information gathered from the respondents, Bank of Abyssinia is improving and updating its e banking services continuously. For instance, recently BOA updates its mobile banking application by a newly developed system called GizePay, which has better features than the previous mobile banking services. In addition, the interactive teller machine (ITM) is a unique banking service-giving machine that significantly contributes for the betterment of digital transformation of the bank. Besides, bank of Abyssinia provides differentiated e banking products and services compared with other competitor banks in the industry.
- The challenges for adoption of e banking classified as Technological, organizational and environmental as discussed above. Among the technological challenges of e banking, security is the major issue and it supported by data collected from respondents. This indicates that many customers have fear of risks in related with e-banking services since they fear of hackers from accessing their account, making fraudulent transactions, theft of cards and passwords. Customers have not confidence and trust on electronic banking products and services since customers feel uncertain with regard to security issues due to the e banking technology is new and still not practiced widely.
- Another technological barriers of e banking is customers resistance to change due to the perceived complexity of new technologies compared to conventional ways of e banking services. This is because of customers of the bank are not aware of the e banking services as a result they believed that the service is complex to understand.
- In related to e banking service charge, the charge for e banking services for BOA customers is for instance ATM service charge is not expensive. Therefore, this is not the challenge of e banking practices.
- In related with Organizational challenges human resources issue is raised first and BOA has not well trained workforce to build and maintain the electronic banking system. In addition, most respondents are agree on the issue that management of the bank has not been devising and implementing effective control mechanisms for solving fraud and erroneous transactions. Besides, there is also lack of adequate human resources to implement e-banking projects in BOA i.e. the number of human resources is not sufficient and few staffs are doing many tasks.
- Among the environmental challenges of electronic banking, there is no sufficient government support and legal framework that affect customers' willingness to use technological

innovation. There is also lack of ICT infrastructure, for providing e banking service adoption and implementation.

- Awareness is the basic issue for adapting e banking services. In this regard, there is lack of sufficient public awareness and literacy rate in Ethiopia and most respondents are agreed on it.
- Another challenges for e banking is lack of better competition with local banks and still the foreign banks are prohibited to operate in Ethiopia. Despite of protecting the local banks from technologically developed foreign banks competition, the Ethiopian government strategy of foreign bank entry barriers affect the e banking industry as proved above.
- The other challenges for adoption of e banking includes System failure and the wrong deduction of balance of customers, political instability, low economic development and lack of the required ICT devices.
- The last issue covered by the study is opportunity of e banking services. In this regard, the demand of e banking services is increasing from time to time. The number of educated people is increasing and marketing of E-banking products from the banks is also attract more customers. In addition the habit of using e banking service show significant improvement.
- Covid19 has significant impact since the physical relation of peoples is the major transmission methods and peoples opt transacting using e banking products without visiting banks. According to the respondents, this is also another opportunity of e banking.
- According to the information from respondents, there is also good government initiative to prevent security issues of e banking such as strong measurement are taking to prevent money laundering.
- The new directive of NBE which limit the physical cash movement is an opportunity of facilitating e banking practices. Customers use e banking products like mobile banking and internet banking and fund transfer services rather than physical movement. In addition, the upcoming many new local banks is also another opportunity to use from the industry competition.
- Another opportunity of e banking associated with mobile phone users. The number of smartphone users is increasing and it enables customers to use e banking services effectively such as internet banking etc.

5.2 Conclusion

Since the objective of the study is to assess the practice, challenge and opportunities of electronic banking in bank of Abyssinia, the study try to conclude the paper accordingly. From the practice of the bank the study concludes that Bank of Abyssinia developed and implemented a user-friendly system for providing e-banking services to make the service easy to learn and the e banking service is delivered by multi languages. Bank of Abyssinia is also improving and updating its e banking services continuously to improve its digital transformation to play well in banking competition.

In this study, the challenges for adoption of e banking classified as Technological, organizational and environmental challenges. Based on the finding from the study, security issue is the major challenge to adopt e banking in BOA since many customers have fear of risks in related with e-banking services like fear of hackers from accessing their account, making fraudulent transactions, theft of cards and passwords. Customers' resistance to change is another technological challenge due to the perceived complexity of new technologies compared to conventional ways of e banking services.

The other challenge for effective implementation of e banking is human resource aspect. In this regard there is lack of well trained workforce to build and maintain the electronic banking system in BOA. In addition, management of the bank has not been devising and implementing

effective control mechanisms for solving fraud and erroneous transactions. There is also lack of adequate human resources to implement e-banking projects in BOA.

Among the environmental challenges of electronic banking, there is no sufficient government support and legal framework that affect customers' willingness to use technological innovation. There is also lack of ICT infrastructure, lack of sufficient public awareness and literacy rate and lack of better competition with local banks. In addition, System failure and the wrong deduction of balance of customers, political instability, low economic development and lack of the required ICT devices are other environmental challenges.

Among the opportunity of e banking services demand aspect is raised first since e banking services is increasing from time to time. Moreover, educated people is increasing and marketing of E-banking products from the banks is also attract more customers. Covid19 has significant impact since the physical relation of peoples is the major transmission methods and peoples opt transacting using e banking products without visiting banks. There also good government initiative to prevent security issues of e bank. Moreover, National bank of Ethiopia comes with several new directives, which obliged customers of the bank to use e banking service delivery channels. The upcoming many new local banks is also another opportunity to use from the industry competition. In addition, the number of mobile phone users is increasing and it enables customers to use e banking services effectively.

5.3 Recommendation

- Since security is the major issue for implementing e banking, all banks generally and BOA particularly, should take serious security measures such as creating awareness medias how to use e banking in a secured way. In addition, banks should acquire latest and reliable e banking technologies to enable customers to use e banking products and services without fearing of security risk.
- According to the information collected from interview, BOA has the distribution problem of produced ATM cards for customers. To solve this problem the bank should aware and motivate customers by calling and following them to use the card. Not only doing on ATM

cards but also the bank should be motivated by preparing gifts to customers to use other e banking products of the bank.

- There is lack of adequate human resources to implement e-banking projects in BOA. Most of the time, the staffs are busy on routine works of retail banking activities and not effectively doing on e banking activities. The bank should hire additional staffs who work on selling and awareness creation about the e banking products to customers. Besides, there should be a continuous training program for employees from lower level to higher managerial position for effectively implementing e banking products and services of banks.
- According to the information from respondents, there is no sufficient government support and legal framework that affect customer's willingness to use technological innovation. Hence, the responsible government organ i.e. NBE should provide a clear set of legal framework to support and facilitate the e banking practice effectively by protecting them from fraudulent risks that might arise from using electronic banking.
- According to the respondents, there is also lack of ICT infrastructure, for providing e banking service adoption and implementation. The government should support the banking industry by working on ICT infrastructure improvement. In related with it the responsible government organ is Ethio-Telecom. Hence, there should be a better and quality network that not disturb the customers to use e banking services.
- Another challenge for e banking is lack of better competition with local banks and still the foreign banks are prohibited to operate in Ethiopia. Most technologies in our country are universal and not unique. They lack flexibility and better technological features. This is due to lack of better competition especially from foreign banks. Therefore, government should open the door for foreign banks, which have the required technologies to implement e banking.

5.4 Suggestion for further study

This research assessed challenges and opportunities of electronic banking in BOA. The study centered on technology-organizational-environmental factors to examine opportunities and challenges. To allow for generalization, the researcher recommends that further studies on the same subject shall be conducted to other banks taking other project management factors under consideration. Researchers are also recommended to identify other variables that affect project

implementation process. The research is conducted with a constraint of sample size and it is assumed that conducting a regression analysis was not optimal. Therefore, the researcher suggests further studies on project implementation factors to be supported by regression analysis.

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Research Questionnaire for Bank of Abyssinia Staff

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I am a postgraduate student in MBA program in Addis Ababa University, College of Business and Economics. Currently, I am undertaking a research on the topic “*Challenges and opportunities of adopting E-banking services in the Bank of Abyssinia*” in partial fulfillment of the requirements for the degree of Master of Business Administration. The general objective of the study is to examine the current practice of electronic banking services and the related opportunities and challenges that Bank of Abyssinia facing. It is believed that the study result could possibly benefit not only the bank but also other stakeholders in the area.

The expected respondents of this questionnaire are clerical staffs’ who have one year and above experience in the bank and operating in Addis Ababa Branches. As staff member working at the chosen research branch, you are one of the target respondents selected to participate in this study. Please cooperate me by giving correct and complete information so that it is possible to come up with basic findings on matters chosen for investigation. Your response is voluntary, the data will be kept confidentially, and it will be used for only academic purpose.

So, I am kindly requesting you to complete and give me the completed questionnaire (the date will be stated later on). If you have any question, please do not hesitate to contact me via the above address. Thank you in advance for your cooperation.

Part 1: Demographic/ Personal Information

Instruction: Please indicate your answer for each of the following questions by marking (√) inside the bracket given.

1. Gender: A. Male [] B. Female []

2. Age category:

A. 18-25 [] B. 26-35 [] C. 36-45 [] D. 46-55 [] E. above 56 []

3. Your level of educational qualification:

A. Diploma [] B. BA/BSc [] C. MA/MSc [] D. PhD []

4. Years of experience in Bank of Abyssinia:

A. Below 1-3 Yrs. [] B. 4-6 Yrs. [] C. 7-9 yrs. [] D. 10-12 Yrs. [] E. above 13 Yrs. []

5. Which type of E-banking products are the banks provided by the bank?

A. ATM [] D. Enqu pay []

B. Mobile banking [] E. Agent Banking []

C. Internet Banking [] F. POS []

Others, please specify _____

Part 2: Questions related to E-Banking practice in Bank of Abyssinia

Instruction: Please tick your answer or level of agreement or disagreement with each of the following statements inside the given table below

1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=strongly agree

E-banking Practice in bank of Abyssinia	1	2	3	4	5
1. Bank of Abyssinia developed and implemented a user-friendly system for providing e-banking services.					
2. The Bank gives information on its website or other media how to use electronic banking for new users.					
3. The e-banking services of the bank are provided by multi languages					
4. Bank of Abyssinia is improving and updating its e-banking services continuously.					
5. The bank provides differentiated e- banking products and services compared to other competitors.					
6. Learning and using electronic banking service and products in BOA is easy					

Part 3: Questions related to E-Banking challenges in Bank of Abyssinia.

Instruction: Please tick your answer or level of agreement or disagreement with each of the following statements inside the given table below

1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=strongly agree

E-banking Challenges	1	2	3	4	5
Technological Issues					
1. Customers have confidence and trust on the bank's security issue of electronic banking service giving by the bank.					
2. Security issues and Fear of fraud hinders customers to practice e-banking services. (E.g. loss of ATM card, PIN or mobile phone etc.)					
3. Customers resist to change due to the perceived complexity of new technologies compared to conventional ways of banking					
Organizational Issues					
4. The charge of e-banking service for bank's customer is relatively expensive, e.g., ATM service charge.					
5. Bank of Abyssinia has not well-trained work force to build and maintain e-banking systems.					
6. Management of the bank has not been devising and implementing effective control mechanisms (MIS audit and others) for solving fraud and erroneous transactions.					
7. There is lack of adequate human resources to implement e-payment projects in BOA					
8. There is lack of sufficient and appropriate maintaining capacity upon failure is a challenge for the smooth practice of e-banking service.					
9. BOA not gives E-banking service easily for its customers (E.g. provides fast services and produce ATM card in short period of time).					

Environmental Issues					
10. There is no sufficient government support that affect customers willingness to use technological innovation					
11. There is no sufficient government policy framework for implementation and growth of e-banking service in Ethiopia.					
12. There is lack of ICT infrastructure required for providing e-banking services in the city.					
13. There is lack of sufficient public awareness and literacy rate in Ethiopia.					
14. There is lack better competition with local banks and foreign banks are prohibited to operate in Ethiopia					

What other challenges have you faced or observed while working for the bank if any?

Part 4: Questions related to E-Banking opportunities in Bank of Abyssinia.

Instruction: Please tick your answer or level of agreement or disagreement with each of the following statements inside the given table below

1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=strongly agree

E-banking Opportunities	1	2	3	4	5
1. The demand for e-banking services is increasing from time to time.					
2. The habit of using e-banking services will show significant improvement in the near future.					
3. The number of educated population is increasing in Ethiopia as an opportunity for the growth of e banking.					

4. There is strong commitment from the government to strengthen e-banking services in Ethiopia.					
5. There is good commitment of the government to facilitate the expansion of ICT infrastructure in the country.					
6. The current situation in related to Corona virus pandemic is a good opportunity to spread E-banking services to customers.					
7. The current new directive of national bank of Ethiopia, which limit physical cash limit withdrawal, can be taken as an opportunity for using e-banking services.					
There will be better computation due to many new upcoming local banks					

What are other opportunities, which not listed above?

Thank you again for your cooperation



ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

MBA IN MANAGEMENT

Research Questionnaire for Bank of Abyssinia Staff

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Part 5: Interview questions for Digital department managers of BOA

1. What kind of common and unique Electronic banking products and services are BOA provides?
2. How many customers are there in BOA who uses E-banking services and percentage of E-banking users from the total customers of BOA?
3. How many ATM devise, POS and others does your BOA has?
4. What are the major challenges in BOA facing in related to E-banking?
5. What are the opportunities for implementing and providing e-banking services?
6. What is expect from the government of Ethiopia for enhancing E-banking services?
7. What is your comment/suggestion regarding the practice, challenges and opportunities of E-banking in Bank of Abyssinia?