

**CHALLENGES AND PROSPECTS OF E- BANKING SERVICE IN  
ETHIOPIA: THE CASE OF SELECTED COMMERCIAL BANKS AT  
WOLKITE TOWN.**

**BY:**

**DIRES ENDALE**

**A THESIS SUBMITTED TO THE DEPARTMENT OF MANAGEMENT,  
COLLEGE OF BUSINESS AND ECONOMICS, SCHOOL OF GRADUATE  
STUDIES WOLKITE UNIVERSITY IN PARTIALS FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS  
ADMINISTRATION.**

**June 2018**

**WOLKITE ETHIOPIA**



**WOLKITE UNIVERSITY**

**SCHOOL OF GRADUATE STUDIES**

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**Advisor: Temesgen Teshome (Assistant Professor.)**

**June 2018**

**WOLKITE ETHIOPIA**

## DECLARATION

I, Dires Endale hereby, declare that this thesis entitle; **challenges and prospects of e- banking service in Ethiopia baking industry at Wolkite town** is outcome of my own effort under the guidance and supervision of Temesgen Teshome (Assistant Professor) and co-advisor Alemayehu Takele To the best of my knowledge, this study has not been submitted for any degree in this university or any university. It is offered for the partial fulfillment of the degree of Masters of Business Administration.

By: Dires Endale

Signature\_\_\_\_\_

Date\_\_\_\_\_

## Statement of Certification

This is to certify that Dires Endale ID No GSE/024/08 has completed his MBA Thesis "Challenges and prospect of Electronic Banking in Ethiopian Banking Industry "under my guidance and supervision.

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**SCHOOL OF GRADUATE STUDIES**

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**EXAMINERS APPROVAL SHEET**

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## List of Abbreviations

CBE- commercial bank of Ethiopia

WB- wogagen Bank S. Co

ATM- Automatic Teller Machine

DB- Dashen Bank S. Co.

BA- bank of abysiniya

E-Banking- Electronic Banking

E-Commerce- Electronic Commerce

E-Payment- Electronic Payment

ICT- Information and Communication Technology

IT- Information Technology

MB- Mobile Banking

NBE- National Bank of Ethiopia

NIB- NIB International Bank S. Co

PIN- Personal Identification Number

WB- Wegagne Bank S. Co

. 7X24- 7 days and 24 hours

## Abstract

*Despite the growth of e-banking adoption worldwide, Ethiopian banks continue to conduct most of their banking transactions using traditional methods. The general objective of this study is to assess the challenges and prospects towards the implementation of E-banking technology in Ethiopian banking industry. Descriptive research design was employed to conduct this study and Both primary and secondary data were used. The collected data was analyzed by using descriptive analysis such as tables, mean and mode. The study was conducted based on the data gathered from five purposive sampled commercial banks at wolkite town from those sampled commercial banks the total of 200 clerical staff. Questionnaire were distributed to 170 clerical staff and used the research purpose. A mixed research approach was employed. In order to analyze the research results, SPSS V. 16.0 tool software and 5 Likert Scale used to gather respondents answer. The result of the study indicated that, the major challenges Ethiopian banking industry faces in the adoption and development of E-banking technology are, high cost of implementation of E-banking, lack of customer awareness, limitation in network infrastructure and internet related support services, security risk and lack of trust. The study also indicated existing prospects for E-banking such, as improvement in the banking habit of the society, late adoption of E-banking, commitment of the government to facilitate the expansion of ICT infrastructure and commitment of the government to strengthen the banking industry. And The*

*study recommended banks to facilitate proper and continuous training for their employees,*

*increasing security for E-banking products, create deep awareness about E-banking technology to the community while the government should support banking sector by facilitating sufficient ICT infrastructure development and issue clear and workable legal frameworks to ease the adoption and growth of E-banking Technology in Ethiopia.*

***Keywords:*** - *Banking industry, E-banking, and Adoption of E-banking technology.*



# CHAPTER ONE

## Introduction

### 1.1 Background of the Study

Like all other social entities financial institutions are being constantly shaken by technological innovations and inventions (Shyamapada et al., 2011). For instance, till now bank clients were used to stand in line to get financial services, but now because of the development of the Information and Communication Technology (ICT) and introduction of electronic banking services they can perform it at anytime from anywhere even from home. In electronic banking system, funds are transferred through electronic signals between financial institutions and individual accounts, and between individual accounts (Shyamapada et al., 2011).

Information technology is considered as the key driver for the changes takes place around the world. Due to pervasive and steadily growth of information and communication technology the world banking industry is entering into anew phenomena of unprecedented form of completion supported by modern information and communication infrastructure.(Murthy, 2004). Changes in the economic environment and therefore, strategies must be flexible to adjust to these changes. The financial services market is continuing to change rapidly, which brings into question whether traditional banks, as they are now structured, will actually continue to exist by the end of the decade or even survive through the next years (Olga lustsik, 2003). Banks and other financial institutions have moved to e-banking in their efforts to cut costs while maintaining reliable customer service (Kolodinsky and Hogarth, 2001).

As technology evolves, different kinds of electronic banking systems emerge, each bringing a new dimension to the interaction between user and bank. They include Automated Teller Machine (ATM), mobile and Internet (online) banking, electronic funds transfer, direct bill payments and credit card (Gikandi and Bloor, 2010; Liaoa and Cheung, 2002).

E-banking has many advantages and interesting diversities including more number of customers, services in higher quality and lower price, preservation and enhancement of share in market, unlimited space for market, concentration in new distribution, making competition between commercial brands, concentration on expenses and improvement of revenue, providing extensive services, improvement in management system, decreasing the expenses of contractions, close intra banking connection, controlling ecological pollution, etc.( Farshad Havasi1 et al., 2013).

In the face of rapid expansion of E-banking service throughout world, Ethiopian's financial sector can't remain an exception in expanding the use of E-banking service(Gardachew2010).

In Ethiopia, Online banking is in its infant stage. Even though, the concept of online banking implemented in Ethiopia with a single service of SMS message during late 2008, It does not show that much improvement as its age. Now a day some banks are adopting e-banking system which is the state - of- the art. In addition, many banks are making what seem like huge investments in technology to maintain and upgrade their infrastructure, in order not only to provide new electronic information based services, but also to manage their risk positions and pricing. The earliest forms of electronic and communications technologies used mainly in Ethiopian banking offices were automation devices.

In Ethiopia, commercial bank of Ethiopia being the pioneer in introducing ATM based payment system but Dashen Bank is the first to implement this system in the country. Generally there are many challenges for developing e-payment in Ethiopia so that, this paper focuses to identify this challenges and prospects in the case of Commercial Banks in Ethiopia.

## **1.2 Statement of the Problem**

In this era of globalization, with increased competition around the globe in all sectors, a strong banking industry is important in every country and can have a significant effect in supporting economic development through efficient financial services; as a result many

banks in the world are modifying their strategies to reach customers worldwide more easily and cheaply. Therefore, banks are developing the technologies that will help them deliver banking products and services by the most cost-effective channels and one of such channel is adoption of e-banking or internet banking. E-banking is a way to keep existing customers and attract new ones to the bank (Mahmood Shah 2008). E-banking has been widely used in developed countries and is rapidly expanding in developing countries. Nevertheless, in Ethiopia cash is still the most dominant medium of exchange, and electronic payment systems are observed late to move with rapid expansion of electronic payment systems throughout the developed and the developing world, Ethiopia's financial sector remain behind in expanding the use of the technology.

Lots of researches on E-banking system have been done in different countries in the world. Different factors in the adoption of E-banking have been taken as the main factors of the adoption of new technology by different researchers such as environmental factors (like lack of suitable legal and regulatory framework for e-commerce, poor ICT infrastructure, lack of competitive pressure in the industry), organizational factors (Lack of skilled man power, resistance to changes in technology among staff) and technological factors (security risk and functionality), ((Gardachew, 2010). However, despite the importance of these adoptions and development of E-banking, very limited number of research has been done on the challenges and prospect of E-banking in developing countries like Ethiopia. Therefore, more studies are still required to assess challenges and prospects of E-banking in the country to identify areas in which the country lags behind that inhibit their E banking adoption (Zhao et al., 2008). All banks in Ethiopia are too late to move with technological advancement. Every bank customer is highly dissatisfied by the disappointing status of financial development in Ethiopia. The time wasted in traveling for search of bank branches, power and internet interruption, the long waiting time to access the account, customer awareness and risk of security were the gap or challenges of e-banking service in Ethiopia banking industry. Therefore, the purpose of this study is to identify and assess the challenges and prospects for adoption of E-banking service in banking industry in Ethiopia. Accordingly, the following research questions are drawn from the above

discussed problems.

### 1.3 Research Questions

1. What are the major challenges for e-banking service at wolkite town?
2. What are the benefits of adopting e-banking service from the viewpoint of the bank?
3. What are the driving forces towards e-banking service in the banking industry?
4. What are the existing prospects for the adoption of e-banking service at wolkite town?

### 1.4 Objective of the Study

#### *1.4.1 General objective*

The main objective of this study is to assess the challenges and prospects towards the implementation of E-banking technology in Ethiopian banking industry.

#### *4.1.2 Specific objectives*

1. To identify the major challenges for e-banking service at wolkite town.
1. To find the benefits realized by banks in the adoption of e-banking to compliment their service delivery channels.
2. To identify the driving forces towards the adoption of e-banking service in the banking industry.
3. To identify prospects for the adoption of e-banking service at wolkite town.

### 1.5 Significance of the Study

The purpose of the study was to assess the benefits realized by Banks, driving forces, challenges and prospect for the adoption and development of E-banking technology in Ethiopia. In general the study were the following significance.

- Since E-banking technology was developing stage in Ethiopia, assesing of prospects and challenges for the adoption of E-banking can impact positively on the performance of banks that wish to adopt and/or have adopted E-commerce applications.
- Provide an opportunity for decision-makers and managers of the Bank's to consider and evaluate the opportunities and problems observed in the existing practices, in order

to take appropriate corrective measures in the area or to accelerate the positive factors (if any) for the promotion of E-banking practices.

- The finding would be provide a framework for the Banks for the design of their future directions and to adjust their goals and objectives as per real opportunities and challenges.
- The study were enables government organizations and trade associations to develop banks E-banking assistance programs that are designed to address the factors identified by this research.
- This study also seeks to address the lack of studies on E-banking adoption in developing countries such as Ethiopia. In addition, the study were also provide input for further research on the area, especially with respect to the challenges and prospect related with the adoption and provision of E-banking services to customers or the public at large.

## 1.6 Scope of the Study

The study was confined to assess the prospects and challenges for the adoption of e-banking service of selected commercial banks in wolkite town. For the sake of uniformity and due to their more involvement in retail banking, the study was conducted at five selected commercial banks in Wolkite Town only. The banks were; commercial bank of Ethiopia, Dashin bank, wegagen bank, bank of abisiniya and Nib international bank of Ethiopia.. The banks were selected under assumption that it has better application of E-banking than others private commercial banks in Wolkite Town. Hence, the purposive sampling procedure decreases the generalizability of findings and this study might not be generalizable to all banks Moreover, the study focuses only on the assessment of the prospects and challenges for e-banking from the viewpoint of the bank.

## 1.7 Limitation of the study

The focus of this study was on the assessment of the prospect and challenges for the adoption of e-banking service of commercial banks in Ethiopia. Owing to the initial

stage of e-banking services available in Ethiopia, it was difficult to get literature in this area from the country perspective.

## **1.8 Organization of the study**

The research report was organized into five chapters: Chapter one focuses on the background of the study, problem statement, objectives and significant of the study. In chapter two, a range of literatures review is captured there to gather relevant information concerning E-banking. In chapter three, detail of methodology followed to achieve results is outlined. It includes the sampling design, study area, sampling technique ,target population and data analysis. Chapter four will contain results and discussion from the study supported with findings from other research works. Chapter five focuses on main findings, conclusions and recommendations of the study

# **CHAPTER TWO**

## **Review of related Literature**

### **Introduction**

The purpose of this chapter is to review the literature in the area of E-banking adoption and mainly focused on the challenges, prospect, benefits, drivers and opportunities of adopting E-banking technology. This review of literature establishes a framework, which can guide the study.

### **2.1 Theoretical review**

E-banking is the modern delivery channel for banking services. Banks have used electronic channels for years to communicate and transact business with both domestic and international corporate customers. With the development of the Internet and the World Wide Web (WWW) in the latter half of the 1990s, banks are increasingly

using electronic channels for receiving instructions and delivering their products and services to their customers. This form of banking is generally referred to as e-banking or Internet banking, although the range of products and services provided by banks over the electronic channel vary widely in content, capability and sophistication. E-banking is defined as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels. According to Singh & Malhotra (2004), E-banking can be defined as the deployment of banking services and products over electronic and communication networks directly to customers. These electronic and communication networks include Automated Teller Machines (ATMs), direct dial-up connections, private and public networks, the Internet, televisions, mobile devices and telephones. Among these technologies, the increasing penetration of personal computers, relatively easier access to the internet and particularly the wider diffusion of mobile phones has drawn the attention of most banks to e-banking. E-

banking includes the systems that enable financial institution customers, individuals or businesses, to access accounts, transact business, or obtain information on financial products and services through a public or private network, including the Internet or mobile phone. Customers access e-banking services using an intelligent electronic device, such as a personal computer (PC), personal digital assistant, automated teller machine (ATM), kiosk, or Touch Tone telephone. Or 'e-banking refers to the provision of retail and small value banking products and services through electronic channels. Such products and services can include deposit-taking, lending, account management, the provision of financial advice, electronic bill payment, and the provision of other electronic payment products and services such as electronic money, Singh & Malhotra (2004).

Electronic Banking is transforming the financial services industry through various innovations. The quantity of cross-border trading and other financial activities is increasing geometrically make possible by technology. It has been made possible by technology, particularly information technology to generate, collect and process

information about bank operation and bank customers efficiently and effectively. It provides the ability to create more effective systems of controls in individual institutions and in the market themselves. Compared to the paper based operation, Electronic Banking Systems, in its most proficient form, offer instant verification and transfer and reduces the flow of costly paper in the record keeping process. Application of technology in banking offers opportunity for reduction of both paper and people(Mahmood Shah 2008).

## 2.2 Evolution of E-Banking

Since the late 1990s E-Banking has developed from virtual insignificance to tens of millions of users worldwide (OECD, 2001). However, E-Banking is the product of different generations of electronic transactions. The current web-based internet is the latest of several generations of systems: Automated Teller machine (ATMs), Phone Banking, PC or House Banking. Automated teller machines (ATMs) were the first well-known machines to provide electronic access to customers where as in phone banking, users call their bank's computer system on their ordinary phone and use the phone keypad to perform banking transactions. PC banking superseded phone banking and allowed users to interact with their bank by means of a computer with a dial-up modem connection to the phone network. Phone and PC banking entailed maintenance costs associated with keeping up to date with diverse modems and with avoiding prohibitively complex installation procedures. After those generations Deutsche.

Bank launched the very first Internet banking project in Latin America in 1996 and Citibank has developed a special "e-toolkit" across all its branches worldwide (UNCTAD, 2002). E- Banking uses the web browser for the user interface and the Internet for data transfer and download of software, and so has a potential for reducing maintenance costs. For users, E Banking provides current information, 24-hours-a-day access to banking services. The primary services provided by e-banks are transferring money among one's own accounts, paying bills, and checking account balances. Loans,

brokering, share trading, service bundling, and hosts of other financial services are being added to these primary services). E Banking is widely used in, among other places (Dewan & Seidmann, 2001).

## 2.3 Forms of E-banking

The tools/channels use in executing e-banking include plastic cards (debit cards, credit cards, prepaid cards), personal computers, telephone, mobile phones, internet, ATM's, POS or point of interaction machines (Morufu and Taibat, 2012). The description of the above mentioned tools/channels are as follows:

### A. Plastic cards

**Debit cards:** - Debit card is a banking card enhanced with ATM and POS features so that it can be used at merchant locations. Debit cards allow you to spend only what is in your bank account. It is a quick transaction between the merchant and your personal bank account. A debit card is linked to an individual's account, allowing funds to be withdrawn at the ATM and point of sale without writing a cheque. When using a debit card to pay for goods and services, the purchase amount is deducted from the cardholder's checking account. The types of debit card include online debit card and offline debit card. With offline debit card, debit is not made immediately. Benefits of using a debit card include making the payment process at the checkout counter quicker and more convenient, eliminating the need to carry a cheque book and a lot of cash, using it at

locations where personal cheques are not accepted, and reducing the possibility of loss or theft of cash (Okoye, 2013).

**Prepaid debit cards:** - These are debit cards not usually linked to a customers' account. They must be funded before being used by cardholders. Prepaid debit cards are identified with such names like cash cards, value cards, and Naira cards etc. prepaid cards can be used as gift cards students ID cards, Government payment card, payroll card, Bursary card, insurance cards, travel cards etc. (Okoye, 2013).

**Credit Cards:** - A credit card is different from a debit card in that it does not remove money from the user's account after every transaction. In the case of credit cards, the issuer lends money to the consumer (or the user) to be paid to the merchant. A credit card allows the consumer to revolve their balance at the cost of having interest charged. The parties involved in a credit card transaction include cardholder, card issuing bank, merchant, acquiring bank, independent sales organization, merchant account, credit card association, transaction network, and affinity partner (Ibid).

### **B. Automated Teller Machines (ATM):-**

This is a computerized telecommunications device that provides the customer of a financial institution with space to financial transaction in a public space without the need for a human clerk or bank teller. Using an ATM, customers can access their bank accounts in order to make cash withdrawals and check their account balance. ATM's rely on authorization of a financial transaction by the card issuer or other authorizing institution via the communications network. Many banks charge ATM usage fees for transactions (Okoye, 2013).

### **C. Point-of-Sale Transfer Terminals (POS) –**

The system allows consumers to pay for retail purchase with a check card, a new name for debit card. This card looks like a credit card but with a significant difference. The money for the purchase is transferred immediately from account of debit card holder to the store's account (Malak, 2007).

**D. Internet / extranet banking-**According to Booz, Allen & Hamilton (1999), "Internet banking" refers to systems that enable bank customers to access accounts and general information on bank products and services through a personal computer (PC) or other intelligent device. **E. Mobile banking:-** can be defined as an occurrence when customers access a bank's networks using cellular phones, pagers, personal digital assistants, or similar devices through telecommunication wireless networks (Segun, 2011). It means performing banking activities which primarily consists of opening and maintaining mobile/regular accounts and accepting deposits; furthermore, it includes performing

fund transfer or cash-in and cash-out services using mobile devices (NBE Directive),

**F. Tele-banking:** - according to Habibur, Mohammed and Sayeed (2012) Telephone Banking service is provided by phone. To access an account it is required to dial a particular telephone number and there are several options of services. Options included;. Checking account balance, Funds transfer between current, savings and credit card accounts, Bill payments Stock exchange transaction, Receive statement via fax Loan payment information.

## 2.4 Importance of E-Banking

Understanding e-banking service is important for several stakeholders, since it helps them to derive benefits from it. Many banks and other organizations have already implemented or are planning to implement e-banking because of the numerous potential benefits associated with it. Some of these major benefits according to Shah& Clarke (1997) are briefly described below.

### *2.4.1 From the Banks Point of View*

**Attracting High Value Customers:** E-Banking often attracts high profit customers with higher than average income and education levels, which helps to increase the size of revenue streams. For a retail bank, e-banking customers are therefore of particular interest, and such customers are likely to have a higher demand for banking products. Most of them are using online channels regularly for a variety of purposes, and for some there is no need for regular personal contacts with the bank's branch network, which is an expensive channel for banks to run (Berger & Gensler, 2007).Some research suggests that adding the Internet delivery channel to an existing portfolio of service delivery channels results in nontrivial increases in bank profitability (Young, 2007). These extra revenues mainly come from increases in noninterest income from service charges on deposit/current accounts. These customers also tend to be of high-income earners with greater profit potential.

**Enhanced Image:** E-banking helps to enhance the image of the organization as a

customer focused innovative organization. This was especially true in early days when only the most innovative organizations were implementing this channel. Despite its common availability today, an attractive banking website with a large portfolio of innovative products still enhances a bank's image. This image also helps in becoming effective at e-marketing and attracting young/professional customer base.

**Increased Revenues:** Increased revenues as a result of offering e-channels are often reported, because of possible increases in the number of customers, retention of existing customers, and cross selling opportunities. Whether these revenues are enough for reasonable return on investment (ROI) from these channels is an ongoing debate. It has also allowed banks to diversify their value creation activities. E-banking has changed the traditional retail banking business model in many ways, for example by making it possible for banks to allow the production and delivery of financial services to be separated into different businesses. This means that banks can sell and manage services offered by other banks (often-foreign banks) to increase their revenues. This is an especially attractive possibility for smaller banks with a limited product range. E-banking has also resulted in increased credit card lending as it is a sort of transactional loan that is most easily deliverable over the internet. Electronic bill payment is also on rapid rise (Young, 2007) which suggests that electronic bill payment and other related capabilities of e-banking have a real impact on retail banking practices and rapidly expanded revenue streams.

**Easier Expansion:** Traditionally, when a bank wanted to expand geographically it had to open new branches, thereby incurring high start up and maintenance costs. E-channels, such as the Internet, have made this unnecessary in many circumstances. Now banks with a traditional customer base in one part of the country or world can attract customers from other parts, as most of the financial transactions do not require a physical presence near customers living/working place.

**Load Reduction on Other Channels:** E-Channels are largely automatic, and most of the routine activity such as account checking or bill payment may be carried out using these channels. This usually results in load reduction on other delivery channels, such as

branches.

This trend is likely to continue as more sophisticated services such as mortgages or asset finance are offered using e-Banking channels. In some countries, routine branch transactions such as cash/cheque deposit related activities are also being automated, further reducing the workload of branch staff, and enabling the time to be used for providing better quality customer services.

**Cost Reduction:** The main economic argument of e-banking so far has been reduction of overhead costs of other channels such as branches, which require expensive buildings and a staff presence. It also seems that the cost per transaction of e-banking often falls more rapidly than that of traditional banks once a critical mass of customers is achieved. The research in this area is still inconclusive, and often-contradicting reports appear in different parts of the world. The general consensus is that fixed costs of e-banking are much greater than variable costs, so the larger the customer base of a bank, the lower the cost per transaction would be.

Whilst this implies that cost per transaction for smaller banks would in most cases be greater than those of larger banks, even in small banks it is seen as likely that the cost per transaction will be below that of other banking channels.

**Organizational Efficiency:** To implement e-banking, organizations often have to re-engineer their business processes, integrate systems and promote agile working practices. These steps, which are often pushed to the top of the agenda by the desire to achieve e-banking, often result in greater efficiency and agility in organizations. However, radical organizational changes are also often linked to risks such as low employee morale, or the collapse of traditional services or the customer base. In addition, Electronic banking has also helped banks in proper documentation of their records and transactions

#### *2.4.2 Benefits from the Customers' Point of View*

The main benefit from the bank customers' point of view is significant saving of time by the automation of banking services processing and introduction of an easy maintenance tools for managing customer's money. The main advantages of e-banking for corporate customers as per (BankAway! 2001; Gurău, 2002) are as follows:

- ✓ Reduced costs in accessing and using the banking services.
- ✓ Increased comfort and timesaving – transactions can be made 24 hours a day, without requiring the physical interaction with the bank.
- ✓ Quick and continuous access to information: Corporations will have easier access to information as, they can check on multiple accounts at the click of a button.
- ✓ Better cash management: E-banking facilities speed up cash cycle and increases efficiency of business processes as large variety of cash management instruments are available on internet sites. For example, it is possible to manage company's short term cash via internet banks (investments in over-night, short- and long term deposits, in commercial papers, in bonds and equities, in money market funds).

Private customers seek slightly different kind of benefits from e-banking. In the study on online banking drivers Aladwani (2001) has found, that providing faster, easier and more reliable services to customers were amongst the top drivers of e-banking development. The main benefits from e-banking for private customers are as per Bank Away (2001) are as follows

- Reduced costs: This is in terms of the cost of availing and using the various banking products and services.
- Convenience: All the banking transactions can be performed from the comfort of the home or office or from the place a customer wants to.
- Speed: The response of the medium is very fast; therefore customers can actually wait till the last minute before concluding a fund transfer.
- Funds management: Customers can download their history of different accounts and do a "what-if" analysis on their own PC before affecting any transaction on the web.

This will lead to better funds management.

In addition,

- Beside withdrawing cash customers can also have mini banks statements, balance inquiry at these ATMs
- Through Internet Banking customer can operate his account while sitting in his office or home. There is no need to go to the bank in person for such matter.
- E- Banking has also greatly helped in payment of utility bill. Now there is no need to stand in long queues outside banks for his purpose.
- All services that are usually available from the local bank can be found on a single website.
- The Growth of credit card usage also owes greatly to E-banking. Now a customer can shop worldwide without any need of carrying paper money with him and
- Banks are available 24 hours a day, seven days a week and they are only a mouse click away.

#### *2.4.3 Benefits to General Economy*

Electronic Banking as already stated has greatly serviced both the public and the banking industry. This has resulted in creation of a better enabling environment that supports growth, productivity and prosperity. Besides many tangible benefits in the form of reduction of cost, reduced delivery time, increased efficiency, reduced wastage, banking electronically controlled and thoroughly monitored environment and discourage many illegal and illegitimate practices associated with banking industry like money laundering, frauds and embezzlements. Further E-banking has helped banks in better monitoring of their customer base. This is a useful tool in the hand of the bank to device suitable commercial packages that are in conformity with customer needs. As e-banking provide opportunity to banking sector to enlarge their customer base, a consequence to increase the volume of credit creation which results in better economic condition. Besides, E-banking has also helped in documentation of the economic activity of the masses (Mahdi Salehi, 2004).

## 2.5 E-Banking Risks

Although e-banking has bright prospects, it involves some financial risks as well. The major e-banking risks according to FSA (2010) include:

**Operational risks** .Banks faces three main types of operations risk: such as volume forecasts, management information systems and Outsourcing.

Accurate volume forecasts have proved difficult - One of the key challenges encountered by banks is how to predict and manage the volume of customers that they will obtain. Many banks going on-line have significantly misjudged volumes. When a bank has inadequate systems to cope with demand it may suffer reputational and financial damage, and even compromises in security if extra systems that are inadequately configured or tested are brought on-line to deal with the capacity problems. The second type of operations risk concerns management information systems. Again, this is not unique to E-banking. Banks may have difficulties in obtaining adequate management information to monitor their eservice, as it can be difficult to establish/configure new systems to ensure that sufficient, meaningful and clear information is generated. Such information is particularly important in a new field like e-banking. Finally, a significant number of banks offering e-banking services outsource related business functions, e.g. security, either for reasons of cost reduction or, as is often the case in this field, because they do not have the relevant expertise in-house. Outsourcing a significant function can create material risks by potentially reducing a bank's control over that function

**Security risk:** Security issues are a major source of concern for everyone both inside and outside the banking industry. E-banking increases security risks, potentially exposing hitherto isolated systems to open and risky environments. Security breaches essentially fall into three categories; breaches with serious criminal intent (e.g. fraud, theft of commercially sensitive or financial information), breaches by 'casual hackers' (e.g. defacement of web sites or 'denial of service' - causing web sites to crash), and flaws in systems design and/or set up leading to security breaches (e.g. genuine users seeing /

being able to transact on other users' accounts). All of these threats have potentially serious financial, legal and reputational implications.

**Reputational risk:** This is considerably heightened for banks using the Internet. For example, the Internet allows for the rapid dissemination of information, which means that any incident, either good or bad, is common knowledge within a short space of time. Internet rumors can easily become self-fulfilling prophecies. The speed of the Internet considerably cuts the optimal response times for both banks and regulators to any incident. Banks must ensure their crisis management processes are able to cope with Internet related incidents (whether they be real or hoaxes).

Any problems encountered by one firm in this new environment may affect the business of another, as it may affect confidence in the Internet as a whole. There is therefore a risk that one rogue e-bank could cause significant problems for all banks providing services via the Internet. This is a new type of systemic risk and is causing concern to e-banking providers.

Overall, the Internet puts an emphasis on reputational risks.

In addition, legal risks (e.g. without proper legal support, money laundering may be influenced); Strategic risks; credit risks; market risks; and liquidity risks are also e-banking risks. Therefore, identification of relevant risks, and formulation and implementation of proper risk mitigation policies and strategies are important for banks while performing ebanking. Among these security risk that affects the network system is the major one FSA(2010).

## 2.6 BANKING IN ETHIOPIA

### *2.6.1 Banking History in Ethiopia*

A reference to the Ethiopian history reveals that the first bank in the country, Bank of Abyssinia was founded during the regime of Emperor Menelik II in February 1905. Due to a foreign domination of its management (mainly the British), the then Bank of Abyssinia was forced to dissolve and in its place was established the Bank of Ethiopia

in 1931 whose management was still left to foreigners due to the then lack of skilled manpower in the country. The Bank of Ethiopia was later replaced by the State Bank of Ethiopia soon after the war with Italy. The latter was the first bank in the country fully controlled and owned by the Ethiopian government. In the mean time, however, a number of foreign banks had opened their branches in the country, most of them with an interest to have control over the nation's economy. It was the State Bank of Ethiopia that gave rise to the present Commercial Bank of Ethiopia (CBE) and National Bank of Ethiopia (NBE). During the Dergue reign, CBE had remained as the only participant in the country's commercial banking sector. However, following the 1991 takeover by the present government and accompanying encouragement of private investment, a number of private banks have emerged in the country's financial sector. Accordingly, Monetary and Banking proclamation No.83/1994 and the Licensing and Supervision of Banking Business No.84/1994 laid down the legal basis for investment in the banking sector. Consequently, shortly after the proclamation the first private bank, Awash International Bank was established in 1994. (NBE, 2009).

### *2.6.2 E-banking Challenges in Ethiopia*

Banking and Finance is an important sector for establishing e-commerce. There are some roles of banking sector in ecommerce such as, online corporate banking, electronic fund transfer, automated teller machines (ATM), debit card, credit card etc. Bank is the only authorized organization which can store and transact money. Technological developments in banking sector make trading activities much easier and cheaper for customers. It provides convenience in terms of the capital, labour, time and all the resources needed to make a transaction (Uppal, 2008). Banking in Ethiopia faces numerous challenges to fully adopt E-banking. Research result studied by Wondwossen & Tsegai (2005) forward the following challenges: Low level of internet penetration and poorly developed telecommunication infrastructure: Lack of infrastructure for telecommunications, Internet and online payments impede smooth development and improvements in e-commerce in Ethiopia. Lack of suitable legal and regulatory framework for e-commerce and e-payment: Ethiopian current laws do not accommodate electronic contracts and signatures. Ethiopia has not yet enacted

legislation that deals with ecommerce concerns. Political instabilities in neighboring countries: Political and economic instabilities in Somalia, Southern Sudan, and Eritrea are threatening traits that do not provide a very conducive environment for E-banking in Ethiopia. High rates of illiteracy: Low literacy rate is a serious impediment for the adoption of E-banking in Ethiopia as it hinders the accessibility of banking services. For citizens to fully enjoy the benefits of E-banking, they should not only know how to read and write but also possess basic ICT literacy. High cost of Internet: The cost of Internet access relative to per capita income is a critical factor. Compared to the developed countries, there are higher costs of entry into the e-commerce market in Ethiopia. These include high start-up investment costs, high costs of computers and telecommunication and licensing requirements. Absence of financial networks that links different banks (Banks are not yet automated): Most of the banking-transactions currently taking place use credit and debit cards supplied by Visa and MasterCard. For conducting E-banking, the use of credit or debit cards is mandatory thus requiring the need for specialized systems which are not currently available. Frequent power interruption: Lack of reliable power supply is a key challenge for smoothly running E-banking in Ethiopia.

### *2.6.3 Prospects of E-Banking*

According to M.s, M Rahman (2008) in Bangladesh e-banking is now a global phenomenon. Apart from the developed countries, the developing countries are experiencing strong growth in e-banking. The government's emphasis on setting up ICT park, raising allocation for developing ICT infrastructure, waiving taxes on computer peripherals and other measures including the automation program of banking sector and competition among the scheduled banks in improving customer services have accelerated the prospects of e-banking. The fact that the over all commercial banks branch in Ethiopia compared to the size of the population and the area of the country is very minimal, it creates a good advantage to expand E banking facilities and reach the wide spread population of the country through virtual banking system.

#### *2.6.4 knowledge gap*

Much documentation on E-banking services has been carried out elsewhere. However, in developing countries like Ethiopian, there is little evidence concerning E-banking. As far as E-banking is concerned, a lot of researches on internet banking, mobile banking and modern service delivery channels have been done in different countries in the world. As per the knowledge of the researcher only a very limited number of researches have been done on Ebanking in Ethiopian Banking like that of (Ayana, 2012), (Gardachew,2010) and (Wondwossen and Tsegai, 2005). Therefore, more studies are still required to assess challenges and prospect of E-banking in the country to identify areas in which the country lags behind their E-banking adoption and diffusion. The previous studies focused on factors influencing adoption of E-banking technology. This study focused on different factors affecting a Banking industry. Secondly, this study also conducted following almost all type of E-banking products is being provided by almost all commercial banks in Ethiopia. This study is, therefore, intending to fill the gap by describing the challenges and opportunities of Ethiopian commercial banks in adopting and developing E-banking technology.

### **2.7 Empirical Studies Related with E-banking Adoption**

A lot of related studies were conducted by different researchers in different countries. Nevertheless, there are limited numbers of studies were conducted in Ethiopia on the adoption and development of the technological innovation particularly on E-banking services. Specifically, Gardachew (2010) conducted research on the opportunities and challenge of challenges of E-banking in Ethiopia. The aim of his study was focused on analyzing the status of E-banking in Ethiopia and investigates the main challenges and opportunities of implementing E-banking system. The author conducted a survey on the existing operating style of banks and identifies some challenges of using E-banking system, such as, lack of suitable legal and regulatory frame works for E-commerce and E- payments, political instability in neighboring countries, high rates of illiteracy and

absence of financial networks that links different banks. According to Gardachew (2010), Opportunities offered by ICT through e-learning programs and Commitment of the governments on development of ICT infrastructures is considered as drivers of using E-commerce and E-payment systems. Ayana, (2012) also conducted research on factors affecting adoption of E-banking System in Ethiopian Banking industry. The study was conducted based on the data gathered from four banks in Ethiopia. The result of the study indicated that, the major barriers Ethiopian banking industry faces in the adoption of Electronic banking are: security risk, lack of trust, lack of legal and regulatory framework, Lack of ICT infrastructure and absence of competition between local and foreign banks. The study also identified perceived ease of use and perceived usefulness as a driver of adopting E-banking system. Study conducted by Khalfan et al., (2006) on 'Factors influencing the adoption of internet banking in Oman. Data, used in their study were collected using semi structured interviews and survey questionnaire as well as reviewing some bank documents. The results of their study provide a Pragmatic picture about the adoption of E-Commerce applications in the core financial sector domain of Oman. One of the main findings is that security and data confidentiality issues have been a major challenge. The banking sector was reluctant to use E-commerce applications as they felt that transactions conducted electronically were open to hackers and viruses, which are beyond their control. Lack of top management support is the other inhibiting factor in the adoption of electronic commerce applications as per their finding. Siam (2006) investigated the role of electronic banking services on the profits of Jordanian banks. He investigated the reasons behind providing electronic banking services through the internet and their impact on banking services in general and banks profitability. The study was done in 20 commercial banks operating in Jordan. The sample period was between 2003 to 2006 and they interviewed 98 managers. Accounting data was used to measure banks performance using regression analysis. He concluded that the effect of electronic banking services on banks profitability is negative in the short run because of costs and the investments the bank carry in order to have the technical and electronic infrastructure in place, training the employees to be skilled and competent but will be positive on the long run.

The study conducted by Daghfous and Toufaily (2007) on factors affecting adoption of E-banking technology in Lebanese banks. The study was conducted on the factors that can lead to success the adoption of E-banking and the other factors that can constitute as challises to its adoption, it focus on the organizational, structural and strategic factors. Data, used in their study were collected using semi structured interviews and survey questionnaire that was given to E-banking managers all the banks on the official list of institutions operating on the Lebanese market, with a total of 57 banks, 31 of them operate internationally and 26 are strictly local were used to gather data. The results of the study revealed that the organizational variables (bank size, functional divisions, technical staff, technical infrastructure, perceived risks, decision makers` international experience and mastery of innovation) are variables which exert significant impact on the adoption of E-banking, among the structural characteristics, the result revealed that internal technological environment of the bank is a very important factor in determining the adoption of E-banking, also the result shows that banks which are developing in the international scale are more likely to adopt E-banking innovations. Finally the result of the study indicated that extent of penetration of E-banking in the growth phase of an emerging market has an important correlation with the improvement of commercial performance.

### *2.7.1 challenges of E-banking*

According to Harrison (2012), it is hypothesized that many of the factors affecting the successful adoption of new technologies such as e-commerce and E-banking are generic in nature and that the successful adoption of internet technologies in part depends on how these are used in conjunction with the other technologies and management practices that form a technology cluster. However, the most critical challenges can be ascribed to the very limited information and communication infrastructure available in most developing countries. Reasons vary widely among sectors and countries and are most commonly related to lack of applicability to the business, preferences for established business models, (OECD, 2004). Common challenges includes; enabling factors (availability of ICT skills, qualified personnel, network infrastructure); cost factors (ICT equipment and networks, software and

re-organization); security and trust factors (security and reliability of ecommerce systems, uncertainty of payment methods, legal frameworks and intellectual property right); and challenges in areas of management skills, technological capability, productivity and competitiveness.

Lack of reliable trust and redress systems and cross country legal and regulatory differences was also impede e-commerce adoption (OECD, 2004). It is however important to note that challenge to e-commerce adoption work differently according to organizational type and culture. Areas of training and people development need to be addressed Harrison (2012). The study that was conducted by Isaac (2005) indicated that the challenges for the adoption of E-banking in Africa are security, human face i.e. customers still value personalized and responsive services from their bankers, poor and/or lack of technological infrastructure especially in the rural areas, lack of proper legislation governing e-transactions and preference to paper money, as opposed to “virtual” cash in transactions etc. Ziad et al., (2009) also analyzed E-commerce challenges in terms of three categories: economic, socio-political and cognitive. The economic obstacles include several factors that affect the diffusion of e-commerce such as slow internet diffusion, unavailability of credit cards, unavailability of a physical delivery system, and low bandwidth availability.

Japhet and Usman (2010) identified the following specific challenges hindering the adoption of e-commerce in developing countries.

- Lack of convenient payment means, poor distribution system, imperfect legal system, and lack of large scale telecommunication transmission capability (broadband), Internet security are problems face these countries.
- Another most pressing limitations are access to technology (computers, connectivity, and gateway to Internet), limited bandwidth, which reduces the capacity to handle audio and graphic data; poor telecommunications infrastructures and unreliable electricity supply.
- The cost of the Internet access makes it inaccessible to most users in developing countries. The cost of accessing the infrastructures also influences the growth of

ecommerce. The priority for most developing countries is to put in place the necessary infrastructure and a competitive environment and regulatory framework that support affordable Internet access. The monthly connection cost of the Internet far exceeds the monthly income of a significant portion of the population.

- Confidence and trust is also an essential requirement for secure electronic trading. The geographical separation of buyers and sellers, often coupled with a lack of real-time visual or oral interaction, creates a barrier to ecommerce adoption in developing countries. Language is another important hindrance to ecommerce adoption. Most people in developing countries are illiterates and uneducated. Moreover, English is a primary language used in many Western countries where new technologies originate. It is the predominant language for development of IT and ecommerce and it is the main language used on the Web.

Exploratory study conducted by Alhaji Ibrahim H. (2009) the following are among the critical challenges for the adoption of E-banking in Nigeria:-

**Lack of Technological Infrastructure** – the implementation of e-payment is been impeded by unavailability of ICT infrastructure. Most rural areas where majority of small and medium scale industries are concentrated have no access to internet facilities

**ICT Equipment Costs** – where available, the cost of ICT is a critical factor relative to per capital income. This makes the cost of entry higher compared to developed countries.

**Regulatory and Legal Issues** – inexistence of proper legal and regulatory framework. **Non-readiness of banks and other stake holders (acceptability)** – even though some have shown impressive willingness, some banks are still not fully ready to for this new payment regime. **Resistance to changes** in technology among customers and staff due to: Lack of awareness on the benefits of new technologies, fear of risk among banks, lack of trained personnel in the organization and tendency to be content with the existing structures.

**People are resistant to new payment mechanisms;**

Security – where disclosure of private information, counterfeiting and illegal alteration of payment data may be rampant. Frequent connectivity failure in telephone lines. Frequent power interruption.

In addition, a research conducted by Eze and Nwankwo (2012) stated that the following as major challenges for adoption and development of E-banking technology in Nigeria:-  
Legal and Regulatory framework: -

- ❖ The absence of a proper legal and regulatory framework for internet constitutes one of the major challenges of E-banking. The existing banking laws do not address the issue of E-banking as a new banking system.
- ❖ Consumer Protection: - Another major challenge of the development of E-banking is the issues of adequate protection for consumers of banking products from the various risks to which they are exposed to. The risks include financial loss, malfunctioning of terminals or cards as well as the possibility of unauthorized disclosure of information without the

Consent of the customer.

- ❖ Loss of Audit Trail: - Another challenge of E-banking is the loss of audit trail as business processes continue to change with internet banking, personal computer and telephone banking. Audit trail basically allows for the tracing of transactions through banking environment facilitates the work of supervisors in ascertaining the reliability or otherwise of the information contained in the master file.
- ❖ Security of Financial Transactions: - There are numerous threats to the security of internet banking. One of such threats is the fear of insecurity and trust associated with on-line banking which can only be tackled by a good online developer that can put in place the required firewalls whereby only the authentic users can gain access. Security breaches in E-banking are most frequently discussed in terms of the dangers that hackers may intercept messages, misuse the information on modify the content of the message.
- ❖ Money Laundering and other Financial Crimes: - Another major challenge is that under E-banking the financial system is prone to criminal abuse such as money laundering

and other financial crimes. Money laundering and other financial crimes are easily facilitated through E-banking. This has given a lot of work to monetary

### *2.7.2 Benefits of E-banking*

Banks just like other businesses are tuning to information technology to improve business efficiency, service quality and attract new customers. Farshad et al., (2013) aver that the most important factors encouraging consumers to use online banking are lower fees followed by reducing paper work and human error. Subsequently electronic channels can lead to lower transaction costs which are very competitive (Claessens and Kliengbiel, 2000). Farshad et al., (2013) is of the view that disputes can be minimized between the employees as there is a clear flow of processes. Conducting business outside the normal branch working hours has also been a factor that has been considered convenient for bankers, inexpensive access to the bank 7x24 and seven days a week. Increased availability and accessibility of more self service distribution channels help bank administration in reducing the expensive branch network and associated staff overheads. A reduction in the percentage of customers visiting the banks with an increase in alternative channels of distribution will also minimize the queues in branches (Thornton and White, 2001). According to Thornton and White (2001) this ultimately leads to improved customer satisfaction. Jayawardhena and Foley (2000) observe that electronic banking increases competition within the banking system and also from non-bank financial institutions. Electronic banking also increases the power of the customer to make price comparisons across suppliers quickly and easily and as a consequence this pushes prices and margins downward. Kerem (2003) observed that banks are responding to electronic banking differently and that those which see electronic banking as a complement and substitute to the traditional channels achieved better communication and interactivity with the customers. Other benefits that have accrued because of the adoption of electronic banking in developed countries include the ability to attract new customers and widening the customer database, improving bank marketing and communication, and having the ability to retain high profit customers (Farshad et al., 2013). According to Harrison (2012), companies can gain two fundamental types of benefits from E-banking. These are generally

described as: Value creation or value enhancement for one or more of a company's stakeholder's groups, and lower cost of providing goods and services to the market place.

Value creation includes; improvement in internal and external communication through effective e-marketing, increment of sales through an ecommerce website integrated with a back office systems and improvement in supplier relations and productivity through collaborative work spaces. Lower costs are: reduction in communication and travel cost using online meeting tools; shared workspaces and; benefit from license free open source alternatives to proprietary software. Businesses also see tremendous opportunities for cost saving, revenue generation, increased market share, marketing and market access, and improving customer service through direct links that facilitate speedy enquiry and feedback. Similarly, consumers can inter alia, access the world market through the virtual economy on the internet, choose from a wider variety of products, and shop in the comfort of their homes. Globalization and specifically liberalization of communication networks have all facilitated this breakthrough that further presents a massive boost for international trade. (Ibid)

## **2.8 Perceived advantages that Initiate Banks to Adopt E-Banking**

The study that was conducted in Omani banks by Al-Sabbagh, I., & Molla, A. (2004) using exploratory research found that bank manager' perceptions of four concepts: perceived relative advantage, Perceived organizational performance, perceived customer/organizational relationship and perceived ease of use provided a broader understanding of e-banking adoption in the banking industry.

The first construct: Perceived Relative Advantage construct relates to the degree to which bank managers think that Internet technology might help their bank gain advantages in the industry. From the literature, three major issues emerged relating to the perception of relative advantage: convenience of services; innovative use of IT; and management of banking services

The second construct: Perceived Organizational Performance is associated with how much a bank manager thinks Internet technology could improve their organizational performance.

Three issues: profitability; market environment and employee productivity were utilized to explore this construct in depth. From the broad question related to profitability, two impediments are indicated: high technology investment cost and the need for economies of scale for Internet technology use are inhibiting the rate of E-banking adoption. Productivity of employees was another issue of interest. Most respondents expected that their business efficiency could be improved on the Internet.

The third construct: Perceived Customer/Organizational Relationship relates to how a bank manager perceives Internet technology adoption in terms of improving the relationship with their customers. In the literature, three major issues emerge related to the perception of customer/organizational relationship: customer trust, customer commitment, and customer satisfaction. The final construct: Perceived Ease of Use measures how easy a bank manager believes that Internet technology is to use. The literature suggests that if technology is perceived to be easy to use then the rate of adoption will increase. The research threw up three major issues related to perceived ease of use: easy to navigate, easy to learn and easy to manage. The last issue related to management of financial transactions on the Internet.

## **2.9 Drivers and Barriers of E-Banking Adoption**

An exploratory research conducted by Mahdi Salehi (2004) in Iran indicate that the adoption status of e-banking is the transition of pre-development to development phase and the main drivers for adopting e-banking are downsizing, gaining competitive advantage, increasing market share and improving bank's image. The analysis further reveals that inefficient ICT infrastructure, political challenges and traditional organizational culture are barriers for adoption of e-banking. In addition to the above factors, the case study that was conducted in china by Sherah Kurnia, Fei Peng, Yi Ruo Liu (2005) suggests that the government support is also a strong driver for e-banking

adoption. The government support is manifested in two ways. Firstly, the Government is establishing an electronic commerce (EC)-friendly environment in the country. The government in recent years to revamp the national ICT and logistic infrastructures has committed heavy investments. New EC laws and regulations have also been passed and adjusted to provide legal protections for EC activities in general. Secondly, the government also directly offers financial incentives to promote e-banking adoption.

## **CHAPTER THREE**

### **3. RESEARCH METHODOLOGY**

#### **Introduction**

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

#### **3.1 Research Design and Research Approach**

Descriptive research is a type of research that is mainly concerned with describing the nature or condition and the degree in detail of the present situation. Creswell (2003) stated that the descriptive method of research is used to gather information about the present or existing condition. This study would be focused on describing the current situation of the problem and answer the research questions which are in the form of

“what”, and to highlight the most important factors that can negatively or positively affect the adoption of E banking in Ethiopia. Moreover, this research aims to explain the phenomenon and assess current practice of E-banking. There for Descriptive research design would be applied. In order to attain the objective of the study and answer the research questions, the researcher would be adopt mixed research approach. The rationale of using a mixed approach is to gather data that could not be obtained by adopting a single method (Creswell, 2003). Hence, the basis of such approach helps to neutralize the limitations of applying a single approach in connection with the qualitative and quantitative nature of the research questions.

### **3.2 Sources of Data**

The study was conducted by collecting data from both primary and secondary sources. Primary data would be collected from the staffs of the commercial banks based on a structurally designed questionnaire. Structured questioners are important method for collecting primary data and that it further allows the researcher to be well focused on the specific research topic. Secondary data was collected from different documents, from web site and books

### **3.3 Target Population**

In research methods, population is the entire aggregation of items from which samples can be drawn. Both private and public commercial banks are included as a target population. Purposive sampling technique were used to select the target population for this study that means all those commercial banks that are currently providing the service and all those commercial banks which used the technology. The populations of the present study consist of wolkite town of the selected banks. From five selected banks there are 200 total clerical staff, from those the researcher planed 170 sampled population who have work experience of two years and above to assesses the challenge and prospects of E-banking service. The rest of staffs are less than two years

and not included from the study.

### 3.4 Sampling Design

Sampling is the process of choosing, from a much large population, a group about which wish to make generalized statements so that the selected part represent the total group (Leedy, 1989). Commercial banks have been operating and banks which make an initial public offering to begin their operation would be taken as population, and purposely draw a sample from the total to got rich evidence. According to Access Capital (2017), the total number of Commercial Banks which have been operated in the year 2017 is 16 private banks and 1 state-owned banks. Moreover, looking ahead Ethiopian banking industry enjoying high growth, high profits, and high dividends. However, to undertake this research paper, the researcher purposely sampled Five banks, which are currently, adopted some technological innovation. Those banks are commercial bank of Ethiopia, Dashin bank, wegagen bank, bank of abisiniya and Nib international bank of Ethiopia. The procedure used for drawing the sample from the available lists is based on the banks currently use different technological instruments to deliver service to customers. Thus, this research paper used purposive sampling method to draw the sample from the population. Samples are chosen to represent the relevant attributes of the population. The researcher also notes the caution by Graziano and Raulin (1997) where the samples are not perfect representative of the population from which they are drawn, therefore the researcher unlikely to be able to generalize the conclusions to the entire population. From above five selected commercial banks there are 200 total populations. From thus, research paper were used 170 sample population is selected purposively who have work experience of two years and above to address questionnaires that can be based on the managers responsible for E-banking and bank staff, are sampled to see their intention on the challenges and prospect of adopting E-banking system in wolkite town selected commercial banks. The logic behind selecting purposively two years and above experienced clerical staff is in order to get real data and finally, helps to have a clear picture of e-banking challenges and prospects..

<b>s/N</b>	<b>Name of commercial banks</b>	<b>No of employee</b>	<b>Two year experienced Clerical staff</b>
<b>1</b>	commercial bank of Ethiopia	<b>90</b>	<b>72</b>
<b>2</b>	Nib International bank	<b>50</b>	<b>46</b>
<b>3</b>	Wegagen bank	<b>19</b>	<b>14</b>
<b>4</b>	Bank of Abisiniya	<b>21</b>	<b>19</b>
<b>5</b>	Dashen bank	<b>20</b>	<b>19</b>
<b>Total</b>		<b>200</b>	<b>170</b>

Number of population in selected commercial bank at wolkite town.

Source from each commercial banks 2018

### **3.5 Data collection Methods**

In order to collect sufficient data so as to answer the research questions, researcher designed self-administered questionnaires to get quantified results. To collect sufficient data researcher distribute 170 questionnaire to selected commercial bank's two years

experienced clerical staff. The questionnaire were used because the researcher considered it to be more convenient as respondents could answer at their convenience. The questionnaire was developed by the researcher based on the research questions and the literature by consulting supervisor. Open-ended and closed –ended questions were used. The questionnaire began with an introductory statement, which specified the purpose of the research as purely academic. Respondents were encouraged to be objective in their responses since they were assured of confidentiality and The questions were prepared in the form of Likert Scale used to measure the respondent's priority of statements and their responses. It was used 5 scales to rank the features where the respondents told to give 5 for the most important feature and 1 for the least. The Primary data was collected using questionnaires. As pilot test initially 30 questionnaires were distributed to selected branch employees and collected. After collecting the data, the researcher arranged discussion session with the respondents in order to test and get conformation with **reliability, and validity** of the proposed instrument. The result of the pilot test result was encouraging that the proposed questionnaires were reliable and the researcher ensured that had consistent measurement of the instrument. In addition to this, stability and consistency of the instrument were tested. The other result confirmed that, validity tests are used to test the goodness of measurement of instrument for the sake of clarity and it had adequate coverage and representativeness.

### 3.6 Data Analysis

Data from the structured self administered questionnaire would be properly organized through data coding, cleaning and entering. Data processing is by statistical package for social sciences (SPSS V. 16.0) Descriptive statistics by percentages and tables would be generated from the software to establish relationship among variables. The relevant information will be obtained in a standard form using tables, mean, mode and standard deviation to analyze and interpret the information. The results would be inally presented in tables. These was used to ensure easy understanding of the analysis.

## CHAPTER FOUR

### 4. Data presentation, analysis and Discussions

#### Introduction

This chapter deals with the presentation, interpretation and analysis of data gathered from both primary and secondary sources. The chapter has seven sections. Section.4.1 Response rate of this chapter, section 4.2 general information of selected commercial banks, section 4.3 presents the result and discussion regarding the challenges of adoption of E-banking in Ethiopia banking industry. Results and discussions regarding the benefits realized and driving factors that initiate for adoption and expansion of E-banking in Ethiopia are presented in section 4.4. Results and discussion regarding existing prospects that initiates the Ethiopia banks to adopt E-banking is presented in section 4.5.

#### 4.1 Response rate

Data collected through different techniques were analyzed in this chapter which are questionnaires and observation. In the analysis, a total of one hundred seventy (170) questionnaires were distributed to professional staff of five purposely sampled commercial banks. Out of the one hundred seventy (170) questionnaires distributed, one hundred fifty eight (158) were successfully completed, returned and used for the study. The response rate was approximately 93% of the total questionnaires distributed and twelve(12) were not returned. Besides, other documents regarding to E-banking technology were reviewed In order to analyze the research results, SPSS V. 16.0 tool software was used. Descriptive measures of each questions response conducted with tow and above experienced clerical staff of selected commercial banks results are presented in the following sections.

#### 4.2 General Information of the Banks

This section shows the demographic details of financial institutions based on the

respondents response to the question asked to indicate the name of the institution, establishment date, commencement date of offering E-banking services, type channels or tools use in providing E-banking services and number of employees and professional staff in providing E-banking services available in each organization. The results are illustrated in the subsequent tables below. Banks' profile was asked with the intention of associating the overall profile of each bank with the subject matter of the study under consideration.

**Table 4.1 General Information of the Banks**

Name of the bank	No. of Questionnaire		Established Date	Commencement Date of Offering E-Banking Services	E-Banking Services Provided	Total Number of Employees	Number of Two year clerical Staff Involve in Providing E-banking Services
	Distributed	Returned					
CBE	72	70	1963	2001	ATM, debit card, mobile bank, internet	90	72

					& POS		
DB	19	17	1995	2006	ATM, debit card, mobile bank, internet & POS	20	19
NIB	46	41	1999		ATM, debit card, mobile bank, internet & POS	50	46
BA	19	16	1996	20011	debit card, mobile bank, internet & POS	21	19
WB	14	12	1997	2008	ATM, debit card, mobile bank, internet	19	14

					& POS		
Total	170	158				200	170

Source: Field survey report and the respective banks web site 2018.

As shown in the above table, five commercial banks were involved in the study and 170 questionnaires were floated to tow year experienced or professional staffs of sampled banks who are directly engaged in E-banking technology and all the banks have already commenced E-banking services. The main practice of e-banking among those banks that are providing the service have been for, balance inquiry, cash withdrawal, statement printing, PIN change, purchase goods or services, accessing his/her accounts 24\*7 and funds transfers among others. Adoption of e-banking service have the benefit of attracting high value customers, enhanced image, larger customer coverage, improvement of organizational efficiency, and load reduction etc from the view point of the bank.

As revealed in the above table almost all sampled banks have an age of more than fifty years. In Ethiopia, commercial bank of Ethiopia being the pioneer in introducing ATM based payment on 2001 and Dashen bank is a former in introducing E-banking from the sampled private commercial banks on 2006. "Dashen Bank is the first bank in Ethiopia to provide a full-fledged payment card service as a principal plus member of Visa International card, MasterCard, the world leader card association". Wegagen Bank , NIB International Bank, bank of Abysinya were started E-banking services in 2008, 2009, and 2011 respectively as shown above table. Hence, more than ten years elapsed since E-banking technology introduced in Ethiopia banking industry and it also show that the sampled commercial banks have an experience of providing e-banking services ranging from seven and ten years.

Commercial bank of Ethiopia is the pioneer to introduce e payment system in 2003 by eight Automatic teller machines (ATMs) services for the 74 branches connected through integrated banking solutions (Core Banking) now day CBE provide e-banking service at more than 1200

branches . The bank will offer the service to individual customers as well as to companies. four banks named commercial bank of Ethiopia(CBE) Dashen Bank, Wegagan Bank and NIB International Bank are providing E-banking services to their customer through almost all E-banking channels or tools such as Automated Teller Machine (ATM), Mobile Banking, Point of Sale (POS) Terminals, debit card, Mobile Banking and Internet Banking while Bank of Abyssiniya is providing E-banking services through E-banking channels of internet banking, Debit card and Point of Sale (POS) Terminals and they have no Automated Teller Machine (ATM). the Ethiopia banks offered different type of E-banking products or services to their customers except credit, international and prepaid cards this can be show that almost all type of E-banking tools or channels are adopted in Ethiopia banking industry. However there is number of E-banking channel currently providing the service is ATM card, which is the first generation of electronic banking channel, so from this even banks that are providing the service did not sufficiently adopted the latest e-banking channel such as internet and mobile banking. The following section discusses the challenges, prospect, driving forces and opportunities of adopting and extending of E-banking technology in Ethiopia banking industry.

### **4.3 Challenges of Adoption E-banking service in Ethiopia**

As cited in chapter two, there are so money challenges that negatively affect adoption and growth of the E-banking technology. The factors affecting the successful adoption and growth of new technologies, such as E-banking are common in nature. Such as cost factors, security and trust factors and lack of adequate ICT infrastructure (particularly in developing countries like Ethiopia). A total of 170 questions on challenges of adopting and extending of E-banking technology obtained from different literatures were asked to indicate the extent to which each respondent agrees to corresponding closed ended statements rated on a five-point Likert type scales ranging from '1' "Strongly Disagree" to '5' "Strongly Agree". Statistical results are presented under each section of the factors considered using the table including the number of frequencies, the Mean, Mode and Standard Deviation of the data points. The "Valid" column shows the number of respondents who provided answer for each corresponding variables. On the other hand,

the “Missing” column depicted the variables which were not answered by respondents. The mean tried to tell the average where the data points fall for each specific variable, Mode indicated most frequently answered points for each specific variable while the standard deviation column shows the variability of the data points for each variable under consideration. Accordingly, the researcher tried to interpret the Mean and the Mode of the data points. The researcher tried to triangulate and complement the result obtained from the open ended questions with the results obtained from the Likert type statements pertaining to similar variables, when found appropriate. For analysis purpose challenges are categorized in to organizational, environmental and technological factors according to Tornatzky and Fleisher (1990).

#### *4.3.1 Organizational Factors*

Most cited organizational factors in the different literature are; IT users’ community; organizational structure, firm’s process, firm size; technological capabilities of the organization’s members, the technological and financial resources available, process of selecting and implementing the IT, management backing and support for the project (Harrison, 2012). In this study costs related to implementation and running of E-banking technology, resistance to changes in technology, customer awareness, technical and managerial skills required to implement E-banking technology are considered as organizational factors and the survey result is shown on table 4.2 as follows:

**Table 4.2 Organization Factors that challenge Adoption(implementation) of E-Banking Technology.**

Challenges	N		Mean	Mode	Std.diviasion
	valid	Misssed			

Lack of customer awareness with E-banking product;	158	0	4.06	4	0.82
Lack of technical and managerial skills in implementation and development of E-banking technology ;	158	0	3.72	4	0.98
High cost of implementation of E-banking. (such as cost of ICT equipment and network, software and reorganization;	158	0	3.78	4	0.89
Resistance to changes in technology among by Board, top Management and staff ;	158	0	3.753	4	0.87

Source: Owen survey, 2018

Tables 4.2 shows that lack of social awareness regarding E-banking services provided by banks is considered as a factor that negatively affecting the successful adoption and growth of E-banking, in which the mean score and mode were found 4.06 and 4.00 respectively and high cost of implementing of E-banking technology such as cost of ICT equipment and network, software and re-organization is the major organizational challenge for implementation and growth of E-banking technology in Ethiopia, in which the mean score and mode were found 3.78 and 4.00 respectively. The respondent also agreed that technology as the average result in the Likert scale is found 3.75. Similarly, which all indicted that, the non- familiarity with E-banking technology products and services by customers is the main factor that has a negative influence on the adoption

and growth of E-banking technology. The result further revealed that most respondents strongly agree and agree, please refer Appendix .Lack of technical and managerial skills in implementation and development of E-banking technology is considered as factor that has a negative influence on the adoption and growth of E-banking technology in Ethiopia with a mean score of 3.72. The finding is in line with Vaithianathan, S. (2010) where lack of skilled human in E-banking context is considered as hurdles that prevent pervasive e-commerce adoption in developing countries. The respondent also agreed that resistance to changes in technology by Board, Top Management and staff is considered as challenge for the adoption and growth of E-banking technology.

In general, the result revealed that high cost of implementation of E-banking technology, customers unfamiliarity with the E-banking products and their benefits, lack of technical and managerial skills in implementation and development of E-banking technology and resistance to changes in technology are considered as organizational factors that hinders Ethiopia banks to adopt and develop E-banking technology.

#### *4.3.2 Environmental Factors*

According to Tornatzky and Fleischer (1990) another factors influencing technology innovation is environmental factors. The issues raised in this study in relation with environmental factors are infrastructure, role of government, regulation and law, and other are considered as organizational factors and the survey result is shown on table 4.3 as follows:-

**Table 4.3 Environmental Factors Affecting Adoption of E-Banking Technology.**

Challenges	N		Mean	Mode	Std.diviasion
	Valid	Misssed			

Lack of sufficient government support affect customers' willingness;	158	0	3.82	4	0.82
Lack of legal framework for E-banking;	158	0	4.08	4	3.43
Limitation in network infrastructure and internet related support services;	158	0	4.15	4	0.91
Limitation in ICT infrastructure ;	158	0	4.18	4	0.828
Lack of adequate coordination, interaction and cooperation between banks and other decision making centers in E-banking context;	158	0	3.9	4	0.94
Absence of financial networks that links different banks;	158	0	3.96	4	0.89
Frequent power disruption;	158	0	4.22	4	0.76
Lack of Uniform Platform by Banks i.e. lack of law mandating the banks to use common software platform	158	0	4.07		0.89
Relative high cost of internet	158	0	3.98	4	0.96

Source: Owen survey, 2018

The above table 4.3 implies that power interruption were the main factor the mean and mode value of 4.22 and 4 respectively and limitation in network infrastructure and internet related support services is the basic challenge for adoption and growth of E-banking technology in Ethiopia, were the mean and mode value are 4.15 and 4.00, respectively as per the response of the sampled participants. other top challenge stated by respondents was low level ICT infrastructure development in the country having a mean score of 4.18 since the E-banking technology requires a generally good infrastructure in terms of communication and information technology. Unless there is a transformation in infrastructural development in Ethiopia, E-banking technology would not serve its purpose as a successful propagator for financial inclusion. The average responses of the participants agreed that lack of sufficient government support will affect customers' willingness to use E-banking technological innovation (mean=3.8), external challenge for implementation and growth of E-banking technology in Ethiopia. As per the response of the sampled participants, lack of legal framework for E-banking technology is considered as a challenge that will have a negative impact on the implementation and growth of E-banking technology in Ethiopia with the Mean value of 4.08. Therefore, lack of legal frame work for E-banking technology is one challenge for Ethiopian banking industry. This result is consistent with the findings reported earlier by Ziad et al., (2009) and Wondwossen and Tsegai (2005). Absence of financial networks that links different banks (Mean = 3.96), lack of adequate coordination, interaction and cooperation between banks and other decision making centers in E-banking context (Mean = 3.96), and lack of law mandating the banks to use common software platform (Mean = 4.07) are another external factors that hampered adoption and growth of E-banking technology in Ethiopia banking industry. Finally, with regard to ideas that high internet cost considered as a challenge on average the respondents were found indifferent as the mean resulted in 3.98.

### *4.3.3 Technological Factors*

Even though there are many benefits associated with adoption of new technology, there

are many hindrance technological factors that affect effective implementation and extending of the technology. The issues raised herein under the technological factors were relative disadvantages that hinder banking industries from adoption and development of E-banking technology such as customer fear of risk, security risk, lack of trust with the technology all of the respondents participated in this study were asked that such factors are consider as challenges that the banks faced while adopting and extending of E-banking technology and the survey result is shown on table 4.4 as follows:-

**Table 4.4 Technology Factors Affecting Adoption and Growth of E-Banking Technology..**

Challenges	N		Mean	Mode	Std.diviasion
	valid	Misssed			
Lack of confidence with the security aspects	158	0	3.92	4	0.93
Money laundering and other financial crimes are easily facilitated through e- banking;	158	0	3.99	4	0.92
Users do not trust the E-banking technology provided by banks	158	0	3.94	4	0.98
Customer fear of risk to use E-banking technology;	158	0	4.1	4	0.85

Source: Owen survey, 2018

Responses captured in the above table 4.4 shows that, the respondents asked whether

customers do not trust the E-banking products provided by banks and the descriptive statistics result gives mean value of 3.94, that means the largest number of respondent were agreed with the idea that lack of customers trust with E-banking technology is one technological factor that have a negative impact for adoption and growth of E-banking technology. This result is in line with the finding of Ziad et al., (2009) where lack of confidence in service providers is cognitive hindrance in adoption of ecommerce. According to Delali (2010) consumer's confidence, trust in the traditional payments system has made customers less likely to adopt new technologies and new technologies will not dominate the market until customers are confident that their privacy will be protected and adequate assurance of security is guaranteed and also new technologies also requires the test of time in order to earn the confidence of the people, even if it is easier to use and cheaper than older methods. The result further revealed that the largest number of respondents (37% strongly agree and 56% agree, please refer Appendix) were agreed with the idea that customer fear of risk to use E-banking technology is considered as challenge for the adoption and growth of E-banking technology in Ethiopia banking industry, were mean and mode value found 4.1 and 4.00, respectively. Likewise, lack of confidence with the security issue is considered as another challenge for the adoption and development of E-banking technology, were mean score and mode value found 3.92. result is consistent with the findings of (Okoye, 2013), Ziad et al., (2009), Khalfan et al., (2006) were security risk as hindrance factor for the adoption of E-banking. Thus, customer fear of risk and lack of confidence with the security aspect are other technological factors that hamper adoption and growth of E-banking technology in the country. E-banking system is prone to illegal abuse such as money laundering and other financial crimes considered as challenges in adoption and development of E-banking technology in Ethiopia banking industry as the Mean value is 3.99. Therefore, from the above discussion it is possible to conclude that there are challenges for the adoption of e-banking service among those banks that are not yet adopted the system and for the sufficient adoption of the service from the viewpoint of those banks that are currently providing the service in the town.

#### **4.4 Benefits Realized from the Adoption and Development of E-banking**

## Technology in Ethiopia Banking Industry

Perceived benefits are the gains or improvements derived from existing traditional ways of operating business transactions using E-banking technology applications. The following section summarizes respondents' views of expectations and perceived benefits for E-banking deployment. Benefits expected to be gained from E-banking as an option is a big deciding factor for a Bank's decision to adoption and growth E-banking technology. Some of these benefits include facilitate development of new products and new business, improvement productivity, cost saving, increased market share, speed and efficiency of doing business, improvement in customer service and others. A total of 12 questions on "Benefits" of adoption and development of E-banking were asked to indicate the extent to which each respondent agrees to corresponding closed ended statements rated on a five-point Likert type scales ranging from '1' "Strongly Disagree" to '5' "Strongly Agree". Statistical results on the variables under the benefits of E-banking including the number of frequencies, the Mean and Standard Deviation of the data points. The "Valid" column shows the number of respondents who provided answer for each corresponding variables. On the other hand, the "Missing" column depicted the variables which were not answered by respondents. The mean and mode tried to tell the averages where the data points fall for each specific variable. standard deviation column showed the variability of the data points for each variable under consideration. Accordingly, the researcher tried to interpret the mean of the data points. The researcher tried to triangulate and complement the result obtained from the open ended questions with the results obtained from the Likert type statements pertaining to similar variables, when found appropriate. The following section summarizes respondents' views of expectations and perceived benefits for E-banking adoption and development. For analysis purpose perceived benefits are classified in to operational efficiency and service benefits (Futcher , 2003).

### *4.4.1 Operational Benefits*

Despite different challenges faced by adopting and extending of E-banking technology in Ethiopia banking industry, there are enormous benefits expected from adoption and growth of E-banking technology which includes operational and services benefits. Operation benefits covered in the survey are presented here below in the table 4.5

**Table 4.5 Operational Benefits that the Ethiopian Banks Gained From Adoption and Growth of E-Banking Technology**

Operational Benefits	N		Mean	Mode	Std. diviasion
	valid	Misssed			
Reduced paper work;	158	0	4.36	5	0.79
Low transaction cost;	158	0	4.66	4	0.93
Enhance productivity in the banking industry;	157	1	4.34	4	0.64
Increase reliability and reducing errors;	158	0	4.33	4	0.71

Source: Owen survey, 2018

The potential operational efficiency benefits of E-banking technology as perceived by the banks identified in this study as captured in the above table 4.5, the respondents strongly agreed that adoption and development of E-banking technology in Ethiopia banking industry will Low transaction cost, reduces paper work, increases productivity of the Bank, transaction cost and Increase reliability and reducing errors. This is evidenced by the data collected from the respondents with mean score of 4.66, 4.36, 4.34 and 4.33 respectively and these implies that it minimizes the cost of processing

transactions i.e. no need to have too much clerks and cashiers and expenditures on paper slips, forms and other bank stationery have also gone down and reduces the number of branches required to service an equivalent number of customers, this lead the bank profit margin to boost.

#### *4.4.2 Services Benefits*

In addition to operational benefits, there are also services benefits that the banking industry can attain from adoption and development of E-banking technology. Such services benefits covered in the survey are presented here below in the table 4.6

**Table 4.6 Services Benefits that the Ethiopian Banks Gained From Adoption and Growth of E-Banking Technology**

Service Benefits	N		Mean	Mode	Std.diviasion
	valid	Misssed			
Facilitates development of new products and new business in the banking industry;	158	0	4.42	4	0.59
E-banking is convenient, in terms of 7 days and 24 hours services i.e. accessibility;	158	0	4.2	4	0.54
Enhance accessibility of the bank's services(in	158	0	4.45	5	0.61

terms of place);					
Improve customer service;	158	0	4.4	4	0.59
Improving transaction speeds	158	0	4.3	4	0.65
Reduce queues in the banking hall;	158	0	4.3	4	0.62
Facilitates marketing & market access;	158	0	4.3	4	0.65
Create better relationship among banks and clients;	158	0	4.27	4	0.72

Source: Owen survey, 2018

As portrayed in the Table 4.6 the respondent strongly agreed that E-banking technology enhances accessibility of the bank to users in terms of time with services to both existing and new customers having mean value of 4.45. This implies that E-banking system allows an account holder to access and manage bank account and information through their personal computer or mobile phone any time and place. Similarly, open ended question conducted with sample banks supported that in light of advancing the motif of financial inclusion in Ethiopia, E-banking technology plays great role to finance through mobile and internet banking. Taking in to account the gap on the demand and supply side on financial access and the untapped potential market ahead, strategic implementation of the E-banking service will gave the way to enhance access to financial service and thereby brings financial inclusion in Ethiopia. Another the highest benefit is E-banking is convenient, in terms of 7 days and 24 hours services i.e. accessibility with the mean value of 4.42 this implies that e-banking give full days service to its customer even at Sundays and holidays, to account transfer, balance enquiries money withdrawal, bill payment. "Electronic payment systems can help the unbanked join the banking system with significant benefits to them and to the societies

in which they live” (Commonwealth Business Council & Visa, 2004). Next to this benefit entailed towards accessibility, E-banking increase customer base as per the questionnaires. Another most ranked service benefits identified in this study are adoption and development of E-banking technology in Ethiopia improve customer service, facilitate market and market accesses, facilitates development of new products and new business in the banking industry, reduce customers queue at bank hall and transaction speeds. This is evidenced by the data collected from the respondents with mean score of 4.4, 4.42, 4.3, 4.3 and 4.3 respectively. The respondents also agreed that adoption and development of E-banking technology The result services benefits perceived from adoption and development of E-banking technology in Ethiopia included create better relationship among banks and clients (Mean 4.2).

Lastly but not least, another service benefit of adoption and development of E-banking technology in Ethiopia banking industry is overcome geographical limitations i.e. it removes the traditional geographical limitation as it could reach out to customers of different location. Table 4.6 it can be concluded that banks have better perception of service benefit relative to operational efficiency benefits of adopting E-banking technology in Ethiopia banking industry. As reported in the above table, all of the banks (100%) believe that providing banking products to the customer by using electronic channels have the benefit of building good image, load reduction that enables bank employees to focus on strategic issues instead of focusing on traditional activities and improvement of organizational performance through cost reduction (by avoiding paper work and by reducing the number of employees required).

## 4.5 Driving Forces

A total number of 9 questions on “driving forces” for adoption and extension of E-banking services in Ethiopia banking industry were asked to indicate the extent to which each respondent agrees to corresponding closed ended statements rated on a five-point Likert type scales ranging from ‘1’ “Strongly Disagree” to ‘5’ “Strongly Agree”. The summary of the results for all statements or variables under the research study and the result with respect to each statement is indicated below. Accordingly, the

researcher tried to interpret the Mean value. The researcher also tried to triangulate and complement the result obtained from the open ended questions and the respective associated other literatures findings with the results obtained from the Likert type statements pertaining to similar variables, when found appropriate.

**Table 4.7 Driving Forces that Initiate Ethiopian Banks for adoption and Development of E-Banking Technology**

Driving forces	N		Mean	Mode	Std.diviasion
	Valid	Misssed			
Desire to improve organizational performance and productivity;	158	0	4.39	4	0.55
Desire to improve the relationship with customers;	158	0	4.4	4	0.57
Desire to cover wide geographical area;	158	0	4.39	5	0.62
Desire to build organizational reputation;	158	0	4.5	4	3.2
Desire to reduce transaction cost;	158	0	4.3	4	0.65
Desire to improve customer service;	158	0	4.36	4	0.61
Existence of high	158	0	4.28	4	0.65

competition in the banking industry;					
Desire to satisfy rapid change of customer needs and preferences	158	0	4.1	4	0.69
Legal frame works that enforce banking industries to adopt technological innovation	158	0	4.1	4	0.66

Source: Owen survey, 2018

The driving forces that initiate for the adoption of e-banking service in each bank, the existence of high competition in the banking sector, rapidly changing customers' needs and preferences, desire to improve organizational performance, desire to improve the relationship with customers, desire to reduce transaction cost, desire to build organizational reputation and desire to satisfy customers are the major common driving forces that initiate banks for the adoption of e-banking as a means of service delivery to their customers. There are factors influencing adoption of E-banking technology products in sampled commercial banks. As depicted in the above Table 4.7 indicated that most respondents agreed that desire to build organizational reputation ,desire to improve relationship with customers, desire to improve bank performance and customer services were the main influencing factors for adoption and development of E-banking technology, in which mean score are founded 4.5, 4.4, and 4.4, respectively are found as the main drivers for adoption and development of E-banking technology in Ethiopia. The result further revealed that most respondents asserted that desire to cover wide geographical area, desire to improve customer service, desire to reduce transaction cost and existence of high competition in the banking industry with the mean value of 4.39, 4.36, 4.3 and 4.28 respectively. Last but not least, other driving factors that initiate the Ethiopia banks for adoption and development of E-banking technology in Ethiopia are desire to satisfy rapid change of customer need and

preference, and legal frame works that enforce banking industries to adopt technological innovation. This agreement is based on the responses of the respondents with mean score 4.1 and 4.1, respectively. Therefore, from this it is possible to conclude that it is due to the existence of some driving forces in which banks are initiated to provide modern banking services to the customer. In addition, the table also implied that there are common driving forces that lead all banks to provide e-banking services.

#### 4.6 Prospect for Adoption and Development of E-banking Technology in Ethiopian banking industry

According to Garedachew worku (2010) study the following points are prospects of e-banking development:- Opportunities offered by ICT through e-learning programs, World bank and other responsible organizations are helping developing countries to design national e-banking strategies, Commitments of the governments, The Ethiopian governments consider ICT as an indispensable tool to alleviate poverty and facilitate a state transformation aiming an effective and efficient service delivery, Create awareness on the society regarding to e-payment, Enhance ICT infrastructure, Sharing of experience developing countries regarding to e-payment, Promote how e-payment makes life easier.

**Table 4.8 prospect for Adoption of E-Banking technology in Ethiopian Banking**

**Industry.**

Driving forces	N		Mean	Mode	Std.diviasion
	Valid	Misssed			
Late adopter opportunities;	158	0	3.96	4	0.76
Commitment of the	158	0	4.17	4	0.78

government to strengthen the banking industry;					
The existence of high demand;	158	0	4.17	4	0.76
Improvement in the banking habit of the society	158	0	4.17	4	0.62
Commitment of the government to facilitate the expansion of ICT infrastructure	158	0	4.10	4	0.70

Source: Owen survey, 2018

Respondents were asked whether they ‘Strongly agreed, Agreed, Neutral, Disagreed or Strongly disagreed’ based on the five questions shown in the table 4.8 above to confirm the existence of the prospect for adoption and development of E-banking technology in Ethiopia, Accordingly, the sampled respondents agreed with the idea that the existence of high customers demand, improvement in the banking habit of the society, commitment of the government to strengthen the banking industry, commitment of the government to facilitate the expansion of ICT infrastructure and late adopter. This is evidenced by the data collected from the respondents with mean score of 4.17, 4.17, 4.17, 4.1 and 3.96, respectively. In addition, in order to cope with the fast growth in the complexity of networks, services and their customer base, ETC has realized the need of a centralized National Network Operation Center (NNOC) that can improve the network performance and lower the time needed to locate and maintain faults. Furthermore, it is able to ensure customers experience service quality and perceive the value of delivered service, and it also improves operational market of new innovative services (Ma Zhiyong, Tewodros Hailemeskel, Li Xiaojin, 2008). Therefore, from the above discussion it is possible to conclude that there are good opportunities for the adoption of e-banking

service in Ethiopia.

## CHAPTER FIVE

### 5 Summary of Finding, Conclusions and Recommendations

Information technology is considered as the key driver for the changes taking place around the world. Due to a pervasive and steadily growth of information and communication technology, the world banking industry is entering into new phenomena of unprecedented form of competition supported by modern information and communication infrastructure. The rate at which e-banking technology is adopted by banks constitutes an important part of technological change. With this regard currently, our banks are in an infant stage.

#### 5.1 Summary of Findings

The objective of the study was to identify challenges and prospects for adoption and development of E-banking technology in Ethiopia. Accordingly, this part of the research summarizes the major findings of the study from the challenge and prospect perspectives. Despite the numerous benefits that E-banking technology brings to the nation, banks and individuals, it also has its own challenges.

- The challenges as discussed in the study can be categorized into three main groups i.e. Organizational, environmental and technological. High cost of implementation of E-banking such as cost of ICT equipment and network, software and re-organization, lack of customer awareness with E- banking service provided, and lack of skills and trained staff in implementation and running of E-banking system are described in the

study as organizational challenges for adoption and growth of E-banking in Ethiopia banking industry.

Limitation in network infrastructure and internet related support services, lack of ICT infrastructure, lack of sufficient government support and legal are the basic external(environmental) challenges for adoption and development of E-banking technology in Ethiopia. Besides, lack of law mandating the banks to adopt E-banking technology, lack of adequate coordination, interaction and cooperation between banks and other decision making centers in E-banking context, absence of financial networks that links different banks, frequent power disruption and lack of uniform platform by banks are another environmental challenges for adoption and growth of E-banking technology in Ethiopia. In connection with technology factors, lack of customer trust with E-banking services provides by the banks, customer fear of risk to use E-banking technology and security risks are consider as technological factors negatively affect the adoption and growth of E-banking technology in Ethiopia.

- Finally, high customers demand, improvement in the banking habit of the society, late adopter of E-banking in technology in Ethiopia, commitment of the government to facilitate the expansion of ICT infrastructure and commitment of the government to strengthen the banking industry are among the major existing prospects for the adoption and growth of E-banking technology in the country.

## 5.2 Conclusion

The findings of the study revealed that adoption and development of E-banking technology in Ethiopia banking industry stretches wide across the two extremes of the challenges and prospects where the concerted effort by stakeholders to overcome the challenges will bring about immense opportunities to the dominant players in the field with the ultimate result of transforming the country towards financial inclusion. Accordingly, a number of conclusions can be drawn from these results. The study shows that high cost of ICT equipments and network, lack of customer awareness and resistance to changes in technology are the major challenges Ethiopian banks facing for adoption and development E-banking technology in Ethiopia. The prevailing technical and managerial skills available in the Ethiopian banking industry towards adopting and extending of E-banking technology are found to be limited to influence the technological development rate. Limitation in network infrastructure and internet related support services, power interruption, low level of ICT infrastructure and lack of sufficient government support are considered the basic external challenges facing Ethiopian banks to adopt and develop E-banking technology. Besides, Security risks and lack of

trust on the technological innovations are another challenges faced by the Ethiopian banks in adoption and development of E-banking in the town. Therefore, from the above discussion it is possible to conclude that E-banking technology is not well adopted and developed in Ethiopian banking industry and considering adoption and development of E-banking technology in the rest of the world, E-banking and its related technologies are still in its infancy stage in Ethiopia. Last, but not the least, attempt was made to see if there is any associated opportunities for adoption and development of E-banking technology in Ethiopia banking industry. Accordingly, high demand, improvement in the banking habit of the society, late adoption of E-banking, commitment of the government to facilitate the expansion of ICT infrastructure and commitment of the government to strengthen the banking industry are good opportunities for the adoption and development of E-banking service in Ethiopia.

### 5.3 Recommendations

E-banking system is a new financial evolution in Ethiopia, but it's an important issue, because it has a great impact on the whole banking system, at the same time it's difficult and need a lot of efforts to be adopted and accepted by the banking industry, so it need a lot of efforts to succeed. Based on the above conclusion, the researcher recommends the following points:

- ❖ The Banks should create deep awareness to community concerning the E-banking products they offer and the benefits associated with using E-banking services through advertising their products and services on the internet, mass media as well as through organizing public exhibition. Besides, the bank should attract the community to use the technology by diverse incentive campaigns. This will help to create a cashless society, reduce risk of being lost or stolen, and mitigate long queues in transacting business among others. .

- ❖ In order to survive, Ethiopian banking industry need to move away from traditional bases of retail bank competition to a new technology based form of competition by focusing on cost reduction, customer retention, awareness, credibility, security, ease of use, and wider scope of products and services.
- ❖ In collaboration with banks, Government should educate and inform the community on the workability and effectiveness of E-banking technology. This will increase the customer confidence levels.
- ❖ The banks should facilitated proper and continuous training courses for their employees to have adequate understanding of the E-banking technology so as to achieve the desired objectives and to create awareness for its customer.
- ❖ Government should support banking sector by facilitating development of sufficient ICT infrastructure for the successful implementation and development of E-banking services.
- ❖ Banks should work to improve customers' confidence by providing adequate security of transaction back up of critical data files and alternative means of processing information.
- ❖ Another important factor related to the e-banking infrastructure is the reliable supply of electric power. The frequent interruption of electric power is a challenge by itself. So that, each banks should have standby generators which provide service when there is no power to provide effective and efficient service to its customers.
  
- ❖ The bank should work strongly in collaboration with Ethio telecom to develop alternative network lines rather solely relying on telecommunication networks which have frequent link failure.
- ❖ All banks should provide all E-payment channels in order to provide full service for the societies to processes its account and to attract un banked public especially Bank of abisiniya.
- ❖ As analisation above, all of the banks (100%) believe that providing banking products to the customer by using electronic channels have the benefit of building good image,

customer satisfaction, load reduction that enables bank employees to focus on strategic issues instead of focusing on traditional activities and improvement of organizational performance through cost reduction (by avoiding paper work and by reducing the number of employees required).

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# APPENDIX

## Appendix A

# Questioners Regarding challenge and prospects of E-banking



**Wolkite University**

**College of Business and Economics**

**Department of management**

Dear Sir/Madam:

I am Dires Endale MBA student in Department of Management at Wolkite University. I am undertaking a research on the topic "Challenges and prospect of Electronic Banking in Ethiopian Banking Industry" for the partial fulfillment of the requirements of the degree of Master of business Administration. This questionnaire is designed to be conducted with the five purposely selected commercial banks staffs at Wolkite town. The aim of this questionnaire is to identify the challenges and prospect of adopting E-banking service in banking industry. The results of the study will have a paramount important to the institutions, to owners, to clients, to concerned government offices and policy makers and others. To this end, this questionnaire is prepared to gather pertinent information. I sincerely assure you that the information you provide will be used only for academic purposes. Your involvement is regarded as a great input to the quality of the research result. Your honest response is valuable. Please put the

tick mark (√) on the appropriate space as per your choice for each closed-ended question and the appropriate reason for open-ended questions. Thank you in advance for your participation.

Yours faithfully

Direse Endale

Telephone No

0920446235

### Part I. General information

1. Name of the Bank; -----
2. Year of the Bank establishment -----.
3. Commencement date of offering E-Banking service;-----
4. Work experience;-----years
5. What type of e-banking services does your Bank provide to its customers? Please make ticking (√) on the box provided below.
  - A. ATM
  - B. Mobile Banking
  - C. Internet Banking
  - D. Point-of-Sale Transfer Terminal /POS
  - E. Debit card

### Part III. Questions regarding E-banking challenges and prospects

Below are lists of questioners relating to Adoption of E-banking. Please indicate whether you agree or disagree with each statement by ticking (√) on the spaces that specify your choice from the options that range from "strongly agree" to "strongly disagree".

Key

Strongly agree(SA)=5 Agree(A)=4 Neutral (N)=3

Disagree(D) =2 Strongly Disagree(SD)=1

Factors	S.No	1) Please indicate the extent you agree or disagree of the Potential challenges to adoption or use of E-banking technologies.	SA 5	A 4	N 3	D 2	SD 1
Organizational Factor	1.1	Lack of customer awareness with E-banking product;					
	1.2	Lack of technical and managerial skills in implementation and development of E-banking technology ;					
	1.3	High cost of implementation of E-banking. (such as cost of ICT equipment and network, software and reorganization;					
	1.4	Resistance to changes in technology among by Board, top Management and staff ;					
Environmental Factor	1.5	Lack of sufficient government support affect customers' willingness;					
	1.6	Lack of legal framework for E-banking;					
	1.7	Limitation in network infrastructure and internet related support services;					
	1.8	Limitation in ICT infrastructure ;					
	1.9	Lack of adequate coordination, interaction and cooperation between banks and other decision making centers in E-banking context;					
	1.10	Absence of financial networks that					

	1.10	Absence of financial networks that links different banks;					
	1.11	Frequent power disruption;					
	1.12	Lack of Uniform Platform by Banks i.e. lack of law mandating the banks to use common software platform					
	1.13	Relative high cost of internet					
Technological Factor	1.14	Lack of confidence with the security aspects					
	1.15	Money laundering and other financial crimes are easily facilitated through e- banking;					
	1.16	Users do not trust the E-banking technology provided by banks					
	1.17	Customer fear of risk to use E-banking technology;					

Please kindly state any other Barriers or challenges that the Banks faces in the adoption E-banking into Ethiopia banking industry.

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If you agree on most of the above challenges, what measures should be taken to reduce these challenges?

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Benefits	S.N	2) The following are some of the benefits the Banks realized from adoption of E-banking system, please indicate your choice.	SA	A	N	D	SD
	o		5	4	3	2	1
Operational Benefits	2.1	Reduced paper work;					
	2.2	Low transaction cost;					
	2.3	Enhance productivity in the banking industry;					
	2.4	Increase reliability and reducing errors;					
Service Benefits	2.5	Facilitates development of new products and new business in the banking industry;					
	2.6	E-banking is convenient, in terms of 7 days and 24 hours services i.e. accessibility;					
	2.7	Enhance accessibility of the bank's services(in terms of place);					
	2.8	Improve customer service;					
	2.9	Improving transaction speeds					
	2.10	Reduce queues in the banking hall;					
	2.11	Facilitates marketing & market access;					
	2.12	Create better relationship among banks and clients;					

Please kindly state any other benefits the banks gained from the adoption of E banking system (ATM, internet banking ,POS and mobile banking system) in the delivery of

service to  
customers?

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No	3) Do you think that the following are among the driving forces for the adoption of E-banking services in Banking Industry?	SA 5	A 4	N 3	D 2	SD 1
3.1	Desire to improve organizational performance and productivity;					
3.2	Desire to improve the relationship with customers;					
3.3	Desire to cover wide geographical area;					
3.4	Desire to build organizational reputation;					
3.5	Desire to reduce transaction cost;					
3.6	Desire to improve customer service;					
3.7	Existence of high competition in the banking industry;					
3.8	Desire to satisfy rapid change of customer needs and preferences					
3.9	Legal frame works that enforce banking industries to adopt technological innovation					

Please kindly state any other Driving forces for adoption E-banking into Ethiopia banking industry.

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No	4) What are the existing prospects in the bank that initiates the adoption of E-banking?	SA 5	A 4	N 3	D 2	SD 1
4.1	Late adopter opportunities;					
4.2	Commitment of the government to strengthen the banking industry;					
4.3	The existence of high demand;					
4.4	Improvement in the banking habit of the society					
4.5	Commitment of the government to facilitate the expansion of ICT infrastructure					

Please kindly state any other prospect/opportunities in the country that initiates the adoption of E-banking?

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What ways do you think that E-banking can be enhanced in Ethiopia Banking Industry?

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Any suggestions regarding the adoption of E-banking service in the banking industry?

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