CHALLENGES AND OPPORTUNITIES OF ELECTRONIC BANKING SERVICES: EVIDENCE FROM PRIVATE BANKS IN JIMMA TOWN

A Research Report Submitted to the School of Graduate Studies of Jimma University in Partial Fulfillment of the Requirements for the Award of Master of Sciences Degree in Accounting and Finance

By: Ayele Legese

JIMMA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

SCHOOL OF GRADUATE STUDIES

DEPARTMENT OF ACCOUNTING AND FINANCE

JUNE 2021

JIMMA

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Under the guidance of

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DECLARATION

I, the undersigned, declare that this study entitled "**Challenges and Opportunities of Electronic Banking Services: Evidence From Private Banks in Jimma Town"** is my original work and has not been presented for a degree in any other university, and that all sources of materials used for the study have been duly acknowledged.

Declared by:

Name : **Ayele Legese**

Signature: _____

Date:-_____

CERTIFICATE

This is to certify that this study, "**Challenges and Opportunities of Electronic Banking Services: Evidence From Private Banks in Jimma Town"**, undertaken by Ayele Legese for the partial fulfillment of Master of Sciences Degree in Accounting and Finance at Jimma University, is an original work and not submitted earlier for any degree either at this University or any other University.

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JIMMA UNIVERSITY

DEPARTMENT OF ACCOUNTING AND FINANCE

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By Ayele Legese

Approved by the Board of Examiners:

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External Examiner **Signature**

ABSTRACT

This study aims to identify the challenges and opportunities of E-banking services in Ethiopian Banking industry. Population of the study consist of all 16 private commercial banks that have been in operation. The study was conducted based on the data gathered from four private banks (Dashen Bank S.C., Nib International Bank S.C., United Bank S.C. and Wegagen Bank S.C) which are currently in operation. Stratified random sampling method was employed to draw the sample from the population. A mixed research approach and descriptive research design was employed to answer the research questions. A research framework developed based on technology-organization -environment model (TOE) developed by Tornatzky and Fleischer. The study statistically analyzed data obtained from the survey questionnaire. Data was presented through frequency, percentage, mean and standard deviation. The result of the study indicated that, the major challenges Ethiopian banking industry faces in the adoption and development of E-banking technology are; dynamic change in information technology, network failure, lack of customer awareness with E-banking, unability to withdraw large amount of money, absence financial networks that links different banks, electric power interruption, lack of confidence with security and trust, lack of suffient government support and cost of implemention. The study identified the operationla and services benefits from adopting and developing of E-banking technology such as increase speed and efficiency, improve customer satisfaction, reduce paper work and create better relation between bank and clients. The study also indicated existing opportunities for E-banking adoption and growth such as improve in the banking habit of the society, increasing customer attitude from time to time, commitment of government to strengthen the bank and to facilitate ICT infrastructure. In addition the study also identify positive attitude of customer with e-banking such as E-banking technology helps customer for quickly access account, reduces time spending in the bank, for better managing of financial transaction, for the best means to reduce customer loading burden and other services. 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: E-banking, Adoption, Opportunities, Challenges, Private banks

ACKNOWLEDGEMENTS

First, I am most grateful and thankful to Almighty God who through his infinite mercy and love guided me through the duration of the program.

I would like to forward my deepest thanks to my main advisor Abiy Getahun (Asst.Prof) and my co-advisor Temam Abdulahi (Msc) for their unreserved support in advising and guiding me for the development of this thesis.

I am greatly indebted to my family, who supported and encouraged me to succeed in my academic endeavor.

Lastly but not the least, my warmest appreciation and thanks goes to all my friends for their support and encouragement while doing this paper.

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ACRONYMS

ANOVA :- Analysis of Variance

ATM :- Automated Teller Machine

AVR :- Automated Voice Response

CBE :- Commercial Bank Of Ethiopia

CFS :- Critical Succees Factors

DB :- Dashen Bank

E.th. Birr:- Ethiopian Birr

E- Banking :- Electronic Banking

EFT:- Electronic Funds Transfer

GTP :- Gross Transformation Plan

ICT :- Information communication technology

IDT :- Innovation Diffusion Theory

NBE :- National Bank of Ethiopia

NIB :- Nib International Bank

PC :- Personal computer

PDA :- Personal Digital Assistant

POS :- Point Of Sale

S.C :- Share compnay

SMS :- Short Message Service

SPSS :- Statistical Package for the Social Sciences

TAM :- Technology Acceptance Model

TBV :- Televetion based banking,

TOE :- Technology-Organization-Environment

TPB :- Theory of Planned Behavior

TRA :- Theory of Reasoned Action (TRA)

UB:- United Bank

WB:- Wegagen Bank

WWW;- Worl wid web

CHAPTER ONE

INTRODUCTION

The purpose of this study is to identify the challenges and opportunities of adopting and developing E-banking services and recommend appropriate actions to be taken to promote E-banking system in the country. To achieve the overall objective, the study used several techniques in the entire chapter, in this regards in chapter one the study briefly provide the introductory part of the study, such as background of the study, statement of the problem, basic research questions, objective of the study, significance of the study, scope of the study, limitation of the study and organization of the paper sequentially.

1. Background of the Study

In this globalized world information communication technology is playing a great role in the banking industry. To maintain their competitiveness in the market place banks had started to provide electronic banking services to their customers (Annin, Adjepong &Senya, 2013) because advances in electronic banking technology have created new ways of handling banking transactions (Al-Somali, Gholami & Cegg, 2011).

Technological innovations play a crucial role in banking industry by creating value for banks and customers, that it enables customers to perform banking transactions without visiting a brick and mortar banking system. On the other hand E-banking has enabled banking institutions to compete more effectively in the global environment by extending their products and services beyond the restriction of time and space (Turban, 2008). However, mirroring the development of E-commerce, the adoption and diffusion of electronic banking (E-banking) system is not well developed in Ethiopia (Ayana, 2014).

In order to improve the practice of E-banking in developing countries, a better understanding of the challenges as well as opportunities of E-banking is critical (Zhao et al., 2008). By gaining an in-depth understanding of the factors and conditions that influence developing country's ability to fully adopt and realize its benefits, strategic implications can be generated for the researchers and practitioners regarding how to promote the growth of E-banking in the developing countries.

The study was conducted on four selected private banks currently operate in Jimma town which include United Bank S.C, Dashen Bank S.C, Wegagen Bank S.C and Nib International Bank S.C. Those banks selected based on the fact that they are a forerunner in introducing E-banking technology and they have already implemented most of the E-banking systems as part of their operations.

Therefore, this study was designed to identify the challenges and opportunities of adopting and developing E-banking services and recommend appropriate actions to be taken to promote E-banking system in the country.

2. Statement of the Problem

The rapidly growing information and communication technology is knocking the front door of every bank in the world, where Ethiopian banks would never be exceptional. Electronic Banking has been widely used in developed countries and is rapidly expanding in developing countries. In Ethiopia, electronic payment systems are at an evolving stage. In the face of rapid expansion of electronic payment systems throughout the developed and the developing world, Ethiopia's financial sector cannot remain an exception in expanding the use of the electronic banking system (Gardachew, 2010).

Lots of researches on E-banking system have been done in different countries in the world like that of (Rhaman, 2008) and (Jamalluddin, 2013). According to (Rhaman, 2008) in Bangladesh despite huge demand from the business community as well as the retail customers particularly the urban customers, electronic banking (e-banking) is still at a budding state due mainly to a number of constraints such as unavailability of a backbone network connecting the whole country; inadequacy of reliable and secure information infrastructure especially telecommunication infrastructure; sluggish ICT penetration in banking sector; insufficient legal and regulatory support for adopting e-banking and so on.

(Rifat O Shanak, 2013) for e-banking in Jordan the implications are obvious. The infrastructure influences the number of users of the internet; likewise do legal enforcements have a positive impact on behavioral patterns as legal bodies for internet banking reduce the fear of online transactions.

In Africa, an exploratory study that was conducted in Zimbabwe by (Tofara, 2008) indicated that incompatibility with the existing system, cost of implementation, security

concerns, lack of expertise, inadequate legislation and consumer acceptance are the major challenges for the adoption of e-banking in the country's banking industry.

In addition, as investigated by (Alhaji Ibrahim H, 2009) using exploratory study, 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.

As per the knowledge of the researcher a very limited number of researches have been done on E- banking in Ethiopian Banking industry like that of (Wondwosen & Tsegai, 2005), (Gardachew, 2010), (Bultum, 2014), (Beza M, 2015), (Aleyu Chernet, 2015), (Kassahun Girma, 2016), (Abebe Zeleqe, 2016), and (Dr. Akshaya Kumar Mohanty, 2018).

The study of (Bultum, 2014) shows the major barriers that banking industry faces in the adoption of electronic banking are: security risk, lack of trust, lack of legal and regulatory frame work, lack of ICT infrastructure and absence of competition between local and foreign banks.

(Beza M, 2015) studies show frequent network/internet interruption, frequent power interruption, lack of awareness about e-banking service delivery channels, inaccessible ATM and POS machines, fear of security issues, slow banks response to correct erroneous transactions and frequent breakdown of automated teller machine (ATM) are the major challenges that seriously influence users' full adoption of e-banking services in Ethiopia.

(Abebe Zeleqe, 2016) the finding of his study shows that, the infrastructural, legal and regulatory, illiteracy and socio-cultural related challenges of e-banking hinders the adoption of e-banking system in commercial bank of Ethiopia.

The study of (Abduselam Fetu, 2018) shows the major challenges that bank faces in the adoption of electronic banking are Low level of internet penetration and poorly developed telecommunication infrastructure, Lack of suitable legal and regulatory framework for e-commerce and e-payment, Lack of sufficient government support, high rates of illiteracy, Lack of educated and efficient staff in e-banking context, Lack of customer awareness with

E-banking product, Customer low levels of computer literacy, Absence of financial networks that links different banks, and Lack of reliable power supply level of development of society, and Resistance to change.

To sum up, the previously conducted studies in Ethiopia on the issue of E-banking by (Bultum, 2014), (Beza M, 2015) and (Dr. Akshaya Kumar Mohanty, 2018) mainly focused on factors affecting the adoption of E-banking services and the opportunities as well as benefit from the bank perspective only. Nevertheless, it did not consider the individual customers perspective. Therefore, this study focused on different factors affecting not only adoption but also development of E-banking technology in Ethiopian Banking industry. Secondly, this study also conducted following almost all type of E-banking products being provided by commercial banks in Ethiopia. Thirdly, this study also conducted the attitude and benefit of E-banking from individual customer view. This study is, therefore, intending to fill the gap and contributes to the literature by identifying the challenges and opportunities of Ethiopian commercial banks as well as customer in adopting and developing E-banking technology.

3. Research Questions

Based on the objective of the study, the following research questions were answered:

1. What challenges affect adoption and growth of E-banking technology in Ethiopian banking industry?

2. What are the exiting opportunities to adopt E-banking technology in Ethiopian banking industry?

3. What benefits realized by the banks in the adoption of E-banking technology?

4. What is the attitude of the customers about E-banking?

4. Objective of the Study

4.1 General Objective of the Study

- The general objective of the study was to assess and identify the challenges and opportunities in the adoption and development of electronic banking technology in Ethiopian banking industry.

4.2 Specific Objective of the Study

- To identify the challenges encountered in the adoption and growth of E-banking in Ethiopian banking industry;
- To illustrate the existing opportunities for the adoption of E-banking technology in Ethiopian banking industry;
- To find out benefits realized by the banks and customer in the adoption of E-banking technology to complement their service delivery channels; and
- To assess the attitude of customer about electronic banking service.

5. Significance of the Study

The outcomes and results of this research will have potential value to financial institutions, particularly banks to understand the challenges and opportunities related with the practice of E-banking and its advantages in providing service to their customers. In addition, this study expected to help other researchers who will be interested to conduct further study regarding the issue under investigated by providing use full information. Finally based on the factors found to be influencing bankers' decision on E-banking system, the study may provide recommendations for banks about changes needed to accelerate the practice of the system to deliver service to customers through technological innovation

6. Scope of the Study

The study was limited to surveying and documentary analysis of the purposely selected banks. Four private commercial banks were purposely selected and it excluded other banks to explore the intent of the study. Those banks were selected from the total population based on their familiarity with E-banking technology i.e. long years services in providing E-banking products to public. Besides, the study was only to identify the adoption and development of E-banking technology in the Ethiopian banking industry with respect to their;

- Challenges;
- Opportunities;
- Benefit from the bank perspective as well as ;
- Attitude from customer (puplic opinion) prospective. Thus, the study focused on the opinion of bank officials and individual customers but does not include the corporate customers on the subject matter.

7. Limitation of the study

Every research study faces a certain limitations till its end. While conducting this research study, a number of limitations were occurred. The first challenge occurred in this study were getting all necessary data. Due to the relative newness of the e-banking concept and technology in Ethiopia, it was very difficult to get a well experienced and knowledgeable expert on the area that could give the researcher a broader perspective on the matter as well as literature in this area from the bank perspective on the matter. The second challenges is that, paper, books and articles on e-banking in private banks of Ethiopia is very small due to that there is no sufficient data to do. Hence, this paper by no means claim itself complete and exhaustive due to time shortage and insufficient (non-existence) of findings on similar area.

In addition the researcher also faced financial limitation to conduct comprehensive and detail study of opportunities and challenges for the adoption of e-banking service in Ethiopia banking sector by taking large sample.

8. Organization of the Study

The research report was organized into five chapters: In chapter one, general introduction of the study is outlined. 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. Chapter four contained summary of major findings with findings from other research works. Chapter five focuses on conclusions and recommendations of the study.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Theoretical Literature Reviews

2.1.1 Definition of E-Banking

E-banking has a variety of definitions all refer to the same meaning, the following section show some of these definitions.

(Abid & Noreen, 2006) defined it as any use of information and communication and technology and electronic means by a bank to conduct transaction and have interaction with stake holders.

(Magembe et al., 2002) also defined Electronic banking is nothing but E-business in banking industry. E-banking is a generic term for delivery of banking services and products through electronic channels, such as the telephone, the internet, the cell phone and etc.

E-banking is a form of banking service where funds are transferred through an exchange of electronic signal between financial institutions, rather than exchange of cash, checks, or other negotiable instruments (Kamrul, 2009). E-banking, also known as electronic funds transfer (EFT), is simply the use of electronic means to transfer funds directly from one account to another, rather than by check or cash (Malak, 2007).

According to (Singh and Malhotra, 2004) E-banking can be defined as the deployment of banking services and products over electronic and communication networks directly to customers.

The term E-banking often refers to online banking/Internet banking which is the use of the Internet as a remote delivery channel for banking services (Furst & Nolle, 2002). With the help of the internet, banking is no longer bound to time or geography. Consumers all over the world have relatively easy access to their accounts 24 hours per day, seven days a week.

Another definition of E-banking is that, ``E-banking is the use of a computer to retrieve and process banking data (statements, transaction details, etc) and to initiate transactions (payments, transfers, requests for services, etc) directly with a bank or with other financial

service provider remotely via a telecommunications network'' (Yang, 1997). It should be noted that electronic banking is a bigger platform than just banking via the internet.

E-banking can be also defined as a variety of platforms such as internet banking or (online banking), TV-based banking, mobile phone banking, and PC (personal computer) banking (or off-line banking) whereby customers access these services using an intelligent electronic device, like PC, personal digital assistant (PDA), automated teller machine (ATM), point of sale (POS), kiosk, or touch tone telephone (Alagheband, 2006).

In general, E-banking is an umbrella term for the process by which a customer may perform banking transactions electronically without visiting a brick-and-mortar institution.

2.1.2 Types of E-Banking

Among the many e-banking delivery channels to provide banking service to customers, ATM, POS, Mobile & agent banking and internet banking are the most widely used and discussed below:-

Automated Teller Machine (ATM)- is a machine where cash withdrawal can be made over the machine without going into the banking hall. It also sells recharge cards and transfer funds; it can be accessed 24 hours/7 days with account balance enquiry (Fenuga, 2010).

Internet banking is conducted by completing bank transactions by directly accessing the bank through the internet. Nowadays, internet banking customers can access many different services online, which makes physical banks open even after office hours. Internet banking allows customers of a financial institution to conduct financial transactions on a secure website operated by the institution. Internet banking can be conducted either by accessing the internet with a computer or by using a phone that has internet features (Alabar & Timothy, 2012).

Mobile banking- Mobile banking is a service that enables customers to conduct some banking services such as account inquiry and funds transfer, by using of short text message (Malak, 2007).

AGENT BANKING - A banking agent is a retail or postal outlet contracted by a financial institution or a mobile network operator to process clients' transactions. Rather than a branch teller, it is the owner or an employee of the retail outlet who conducts the transaction and lets clients deposit, withdraw, and transfer funds, pay their bills, inquire

about an account balance, or receive government benefits or a direct deposit from their employer. Banking agents can be pharmacies, supermarkets, convenience stores, lottery outlets, post offices, and many more (Wiki for banking agent, 2015).

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).

Tele-banking: - according to (Habibur, Mohammed & 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

Home Banking :-Home banking frees customers from visiting branches and most transactions will be automated to enable them to check their account activities, transfer funds and to open L/C sitting in their desk with the help of a personal computer and a telephone (Rahman, 2006).

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 (Ibid, cited Kasahuun Girma, 2016).

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 involve 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, cited Kasahuun Girma, 2016).

E-Cheque :- is the electronic version or representation of paper cheque.

- The Information and Legal Framework on the E-Cheque is the same as those of the paper cheques.
- It can now be used in place of paper cheques to do any and all remote transactions.
- An E-cheque work the same way a cheque does, the cheque writer "writes —The e-Cheque using one of many types of electronic devices and "gives" the e-Cheque to the payee electronically. The payee "deposits" the Electronic Cheque receives credit, and the payee's bank "clears" the e-Cheque to the paying bank. The paying bank validates the e-Cheque and then "charges" the check writer‘s account for the check

Other Forms Of Electronic Banking

- Direct Deposit
- Electronic Bill Payment
- Electronic Check Conversion
- Cash Value Stored, Etc.

2.1.3 The Evolution of E- Banking System

Electronic innovation in banking industry can be traced back to 1970, when the computerization of financial institutions gained momentum (Malak, 2007). However; a visible presence of this was evident to the customers since 1980, with the introduction of ATM.

Since the late 1990s E-banking has developed from virtual insignificance to tens of millions of users worldwide (Gardachew, 2010). 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 (Kassahun Girma, 2016). 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).

Innovative banking has grown since then, aided by technological developments in the telecommunications and information technology industry. The early decade of the 1990s witnessed the emergence of automated voice response (AVR) technology. By using the AVR Technology, banks could offer telephone banking facilities for financial services. With further advancements in technology, banks were able to offer services, through PC owned and operated by costumers at their convenience, through the use of intranet propriety software. The users of these services were, however, mainly corporate customers rather than retail ones (Sohail & shanmugham, 2003). 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, 7x24 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 cited Kasahun Girma, 2016).

2.1.4 E-Banking System in Ethiopian Banking Industry

The appearance of E-banking in Ethiopia goes back to the late 2001, when the largest state owned, Commercial Bank of Ethiopia (CBE) introduced ATM to deliver service to the local users. In addition to eight ATM Located in Addis Ababa, CBE has had Visa membership since November 14, 2005. But, due to lack of appropriate infrastructure it failed to reap the fruit of its membership. Despite being the pioneer in introducing ATM based payment system and acquired visa membership, CBE Lagged behind Dashen bank, which worked aggressively to maintain its lead in E-payment system. As CBE continues to move at a snail's pace in its turnkey solution for Card Based Payment system, Dashen Bank remains so far the sole player in the field of E-Banking since 2006 (Gardachew, 2010 cited Ewunetu, 2015).

Dashen bank, a forerunner in introducing E-banking in Ethiopia, has installed ATMs at convenient locations for its own card-holders. Currently, Dashen Bank starts to deliver E banking services like ATM, internet banking, mobile banking called Amole mobile, POS, Card service and agent banking (Annual report of the bank, 2019/2020).

United Bank S.C is a pioneer Bank in the country to provide SMS and Internet Banking services to customers. Currently, United Bank starts to deliver E banking services like ATM, internet banking, mobile banking, card baking, POS, Debit card called hiber card and agent banking (United Bank S.C Annual Report, 2019/2020).

Wegagen Bank is introducing a Core Banking System as of July 2000 that helps to connect its Head Office & all branches through network. Through its versatile ISO Standard Core Banking System, the Bank is now delivering more efficient services to its customers. The system has also enabled the Bank to provide technology-based banking services such as Card payment services (through ATM & POS), internet banking as well as mobile banking, internet banking, card banking and agent banking services (Wegagen Bank S.C Annual Report, 2019/2020).

Zemen Bank, the only Ethiopian bank anchored in the idea of single branch banking, by launching full-blown internet banking, a service which is new to Ethiopian banking industry in the year 2010. The bank tested the venture through its first phase of the online service, and now it is already started the full-fledged version, which enable customers to make online money transfer freely (Ewunetu, 2016). Currently, Zemen Bank starts to

deliver E banking services like ATM, internet banking, mobile banking, pre-paid card baking, POS, and door-step banking (Zeman Bank S.C web report, 2019/2020)

2.1.5 Need for E-banking

One has to approach the branch in person, to withdraw cash or deposit a cheque or request a statement of accounts. In true e-banking, any inquiry or transaction is processed online without any reference to the branch (anywhere banking) at any time. Providing e-banking is increasingly becoming a "need to have" than a "nice to have" service. The net banking, thus, now is more of a norm rather than an exception in many developed countries due to the fact that it is the cheapest way of providing banking services. Banks have traditionally been in the forefront of harnessing technology to improve their products, services and efficiency. They have, over a long time, been using electronic and telecommunication networks for delivering a wide range of value added products and services. The delivery channels include direct dial-up connections, private networks; public networks etc. and the devices include telephone, Personal Computers including the Automated Teller Machines, etc. With the popularity of PCs, easy access to Internet and World Wide Web (WWW), Internet is increasingly used by banks as a channel for receiving instructions and delivering their products and services to their customers. This form of banking is generally referred to as Internet Banking, although the range of products and services offered by different banks vary widely both in their content and sophistication (Singer et al., 2001 cited Meaza Wandimmu,2013).

2.1.6 E-banking Risks

Although E-banking has bright prospects, it involves some financial risks as well. The major E-banking risks according to FSA 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 Ebanking risks. Therefore, identification of relevant risks, and formulation and implementation of proper risk mitigation policies and strategies are important for banks while performing E-banking. Among these security risk that affects the network system is the major one FSA.

Strategic Risk:- E-banking is relatively new and as a result there can be lack of understanding among senior management about its potential and implications. People with technological but not banking skills can end up driving the initiatives. E-initiatives can spring up in an incoherent and piecemeal manner in firms. They can be expensive and can fail to recoup their cost. Furthermore, they are often positioned as loss leaders (to capture market share), but may not attract the types of customers that banks want or expect and may have unexpected implications on existing business lines.

Business Risk: - Business risk is also significant in E-banking. Given the newness of Ebanking, nobody knows much about whether E-banking customers will have different characteristics from the traditional banking customers. They may well have different characteristics. This could render existing score card models inappropriate, thus resulting in either higher rejection rates or inappropriate pricing to cover the risk. Banks may not be able to assess credit quality at a distance as effectively as they do in face to face circumstances. It could be more difficult to assess the nature and quality of collateral offered at a distance, especially if it is located in an area the bank is unfamiliar with (particularly if this is overseas).

Security: - Security issues are sources of concerned for everybody more especially as it concerns banking industry. E – banking are prone to security breaches such as fraud, theft of commercially sensitive or financial information, defacement of web sites or denial of service and flaws in system design and/or set up leading to security breaches. All these security breaches have potentially serious financial, legal and reputational implications (Kassahun Girma, 2016).

2.1.7 Innovation adoption

Today the world is witnessing profound transformations and acceleration as a result of the tremendous development of information technology and steady growth of volume of information that has led to the emergence of new types of activities and transactions in various fields (Joseph N, 2005). The banking sector has been one of the first area that adopted different electronic applications to improve performance and gain a competitive advantage strategy. In light of the extensive use of information and communication Today the world is witnessing profound transformations and acceleration as a result of the tremendous development of information technology and steady growth of volume of information that has led to the emergence of new types of activities and transactions in various fields (Joseph N, 2005). The banking sector has been one of the first area that

adopted different electronic applications to improve performance and gain a competitive advantage strategy. In light of the extensive use of information and communication technologies, the financial services industry and banking has provided new systems and applications that maximizes the use of modern technology and are now available (Francis, 2014). According to (Rogers,1983 cited Kasahuun Girma, 2016), the rate of adoption is defined as the relative speed with which members of a social system adopt an innovation. Therefore, it has become necessary for banks to change the concept of traditional banking service to because of the rapid growth of electronic banking services and ever increasing competition among banks to raise efficiency, reduce costs and attract more customers (Francis, 2014 cited Kasahuun Girma, 2016).

2.2 Empirical Literature Reviews

Some related studies are conducted by different researchers in different parts of the world. (Julie & Angela, 2002:1607) investigated that the major benefits of e-commerce adoption not anticipated by the sector are business efficiency, improved image, competitive advantage, increased automation of processes and increased business turnover. Also, the key challenges identified for the sector are the costs of the technology, the lack of knowledge of e-commerce, managing the change, budgeting and issues associated with linking back end systems.

The study conducted by (Daghfous & Toufaily, 2007) on the success and critical factors in adoption of E-banking by Lebanese banks 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.

(Njuguma et al., 2009) conducted a study on internet banking adoption in Kenya between 2010 and 2011. The purpose of the study was to establish the factors that influence adoption of internet banking among the individuals who have accounts with commercial banks in Nairobi County; Kenya. Only 24.82% of the respondents use Internet banking

services. This is despite the high rate of internet access recorded. They concluded that internet banking is still at its nascent stages as demonstrated by the length of usage response. The results also revealed that perceived usefulness, perceived ease of use, self-efficacy, relative advantage, compatibility, and result demonstrability have a significant association with intention to use internet banking, while risk, visibility and trialability are not significant.

Other study conducted by (Gikandi & Bloor, 2010) on adoption and effectiveness of electronic banking in Kenya. The results showed that there was a drastic shift in the importance attached to some E-banking drivers between years 2005 and 2009. In the 2005 survey, the number of other retail banks adopting E-banking was considered as a driver of medium importance by 70% of the banks, however, in the 2009 survey it was ranked among the extremely important drivers by a 100% of the banks. Similar observations were made in the case of competitive forces. Internet security was identified as the most important future challenge in E-banking while customer trust, privacy and awareness were recognized as challenges of great importance. The study concluded that cost reduction and customer related factors have emerged as the main drivers of E-banking adoption in Kenya. Mobile banking growth is expected to continue. It would be good to find out if there has been any change with the increase in competition among commercial banks in Kenya and changes in the regulatory environment.

(Zohra & Kashif, 2011) in their study have shown that the users do not understand about what meant mobile banking is and suggested that it is crucial to create awareness about the usage of mobile device and familiarize people with its benefit in order to increase customer satisfaction.

E-banking challenges and opportunities in Greece were researched by (Angelakopoulos & Mihiotis, 2011). The main findings demonstrate that banks expand to E-banking services in order to remain competitive, to keep track with technological developments and to benefit from the lower cost of E-banking transactions. The major problems they face are the low response rate from customers and the implementation of security and data protection mechanisms. The relatively low Internet usage, the non-familiarity with technologically advanced devices and problems regarding security and privacy are the main factors that have a negative influence on the adoption of E-banking services by customers in Greece.

(Sumra et al.,2011) carried out a study on the impact of E-banking on the profitability of Pakistani banks. The study was qualitative in nature assessing the qualitative factors in determining the impact of E-banking. It also discussed the effect of customers' literacy on provision of services from banks' perspective. The study was conducted in 12 Pakistani banks from three cities. The results showed that E-banking has increased the profitability of banks; it has enabled the banks to meet their costs and earn profits even in the short span of time. The illiteracy of customers is not regarded as a major impediment in provision of their products and services. For banks, the main motive to adopt Ebanking is to increase their clientage and to retain their customers. The profitability of banks has augmented in transitioning to E-banking medium. It would be important to carry out a similar qualitative research in Kenya to determine whether similar results would be obtained.

The study conducted by (Mohammed, 2012) on the Factors Influencing the Adoption of E-banking with the aims to determine e-banking usage level among retail banking clients' and to identify the factors that influence the adoption of E-banking in Sudan. The study results indicate that the majority of retail banking industry clients uses at least one of the e-banking services. Among all e-banking channels, Automated Teller Machine (ATM) is the most popular channel. The results show that high-income clients and those who have current account and computer and internet literate are more likely to use e- banking services. However, the results show that there are no enough evidence of significant associations between e-banking usage with gender, marital status, education, and occupation.

(Simeon & Bamidele, 2012) "Cashless Banking in Nigeria: Challenges, Benefits and Policy implications", have studied the challenges, benefits and policy implications towards the creations of cashless society in Nigeria and have found that the shift towards a cashless Nigeria seems to be beneficial though it comes with high level of concerns over security and management of cost savings resulting from its implementation. Its objective is to examine the implication of cashless banking with a view to exposing the possible challenges and prospects it poses to the Nigerian economy whilst employing aggregated approach. Vis-à-vis the rising doubts with regard to the effectiveness of various economic policies in achieving developmental goals of Nigeria, the study presented significant recommendations: availability of sufficient and well-functioning infrastructural facilities (notably electricity), harmonization of fiscal and monetary policy, regular assessment of the performance of cashless banking channels (individually and collectively), consideration

of the present state and structure of the economy, redesign of monetary policy framework and greater efforts towards economic growth whilst managing inflation.

(Salman & Kashif, 2013) study result showed that the awareness of customers in e-banking was poor that is more number of customers do not know what e-banking meant , E-banking has totally reduced interaction with bank employees and it enabled customers to control their accounts movements more than ordinary banking. Moreover, their study of electronic banking in Pakistan revealed that reliability, learning and feedback are very important for the satisfaction of the customers. This study also revealed those customers are not satisfied by the downloading time of website banks in Pakistan. If clients are not happy with the banking products, prices or services offered by a particular bank, they are able to change their banking partner much more easily than in the physical or real bank-client relationship.

The study conducted by (Mutengezanwa & Mauchi, 2013) on Socio-demographic factors influencing adoption of internet banking in Zimbabwe The paper reports on the findings of a research that was conducted in Harare. The study was triggered by the fact that most banks had introduced internet banking for the benefit of both the customers and the bank but adoption of the technology had remained low. It is worth noting that the adoption of internet banking and other technologies is paramount for sustainable economic growth and development of an economy. Whilst earlier researches established factors that influence internet adoption such as ease of use, security concerns, resistance to change and accessibility among others, there was need to factor in the effects of demographics in the study. The research hypothesized that there was a relationship between internet banking adoption and educational level, occupation, age and income. Data collected from 335 commercial bank customers using questionnaires. Data was analyses using Chi square tests generated from SPSS version 12 and Microsoft excel. Findings of the research supported the hypotheses, supporting the view that indeed age, occupation, income, gender and educational level had positive relationships with internet banking adoption. The study recommended bankers to tailor make their marketing efforts towards the middle aged, high-income earners, the educated and the employed.

However, there are limited numbers of studies conducted in Ethiopia on the adoption of technological innovation. The study conducted by (Wondwosen & Tsegai, 2005)on the challenges and opportunities of E-payments in Ethiopia; their objective was studying of E-payment practices in developing countries, Africa and Ethiopia. The authors employs interview and on site observation to investigate challenges to E-payment in Ethiopia and

found that, the main obstacles to the development of E-payments are, lack of customers trust in the initiatives, Unavailability of payment laws and regulations particularly for E-payment, Lack of skilled manpower and Frequent power disruption. According to (Wondwosen & Tsegai, 2005) an adequate legal structure and security framework could foster the use of E-payments.

Specifically, (Gardachew, 2010) conducted research on the opportunities and challenges of E-banking in Ethiopia. The aim of his study was focused on analyzing the status of electronic banking in Ethiopia and investigates the main challenges and opportunities of implementing E-banking system. The author conducted a survey on the existing operating style of banks and identifies some challenges of using E-banking system, such as, lack of suitable legal and regulatory frame works for E-commerce and E- payments, political instability in neighboring countries, high rates of illiteracy and absence of financial networks that links different banks.

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.

The study conducted by (Mohammed, 2014) on the Ethiopian Banker's Perception of Electronic Banking indicates that traditionally banks are in the fore front in harnessing and using technology to improve their products and services. Over a period, they have been using electronic and telecommunication networks extensively to provide products and services to the customers. The study attempts to understand and identify bankers perception of benefits and risks associated with electronic banking facilities in Ethiopia. Bank employees were the primary source of data and the data so collected was analyzed using mean score analysis. As per the findings of the study it is observed that bankers perceive a means to save time and minimize inconveniences as the most and the least advantage of electronic banking where as need for expertise and training and charge a high cost for services are considered as the most and the least risk associated with electronic banking.

The study conducted by (Ayana, 2014) on identifying factors that affect adoption of E-banking in the Ethiopian banking industry. The study conducted based on the data gathered from four banks in Ethiopia. A mixed research approach used to answer the research questions that emerge through the review of existing literature and the experiences of the

researcher in respect of the E-banking system in Ethiopia. The study statistically analyzes data obtained from the survey questionnaire. A research framework developed based on technology-organization environment model (TOE). 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 suggests a series of measures, which could take by the banking industry and by government to address various challenges identified. These measures include establishing a clear set of legal framework on the use of technology in banking industry, supporting banking industry by investing on ICT infrastructure and banks needs to focused on technological innovation competition rather than traditional bases of retail bank competition.

The study conducted by (Beza M, 2015) on the Assessment of the Practices and Challenges of Electronic Banking Adoption in Ethiopia**;** the main objective of his study is to assess the current practices and challenges of e-banking adoption in Ethiopia from the current users' perspective. The type of research applied in his study was descriptive in nature. A total of 600 users' of e-banking services were used as a sample for the survey from seven commercial banks in Addis Ababa, Ethiopia. A well-structured and randomly administered questionnaire was used to collect the relevant information from those customers who are using at least one form of e-banking systems. Interview was also used to collect supporting data from e-banking department managers of each respective bank. Data gathered from customers were analyzed using descriptive statistics such as mean, frequency, percentage and ANOVA. The entire statistical tests were conducted using SPSS version 21. The findings of his study imply that ATM is the dominant e-banking service delivery channel by which most bank customers' are using. However, other e-banking channels such as mobile and internet banking are in an infant stage in Ethiopia. With regard to the challenges that negatively influence users' effective utilization of e-banking services, the study identified that frequent network/internet interruption, frequent power interruption, lack of awareness about e-banking service delivery channels, fear of security issues and frequent breakdown of automated teller machine (ATM) are the major ones that seriously influence users' full adoption or usage of e-banking services.

(Ewunetu, 2016) also conducted research on determinants of customer adoption of E-banking in Ethiopian Banking industry. The study was conducted based on the data

gathered from the customers of Commercial Bank of Ethiopia Jimma district by classifying them in to three stratums based on their educational and income level. A mixed research approach were used to answer the research questions that emerge through the review of existing literature and the experiences of the researcher in respect to the electronic banking system in Ethiopia. The study analyzes data obtained from the survey questionnaire using the statistical package for social science (SPSS). The result of the study indicated that, from the tested five variables computer experience, income level and educational level have a positive significant influence on the adoption of electronic banking while fear of security have a negative significance influence and the rest variable age doesn't have a significance influence on the adoption of electronic banking.

(Abebe Zeleqe, 2016) the finding of his study shows that, the infrastructural, legal and regulatory, illiteracy and socio-cultural related challenges of e-banking hinders the adoption of e-banking system in commercial bank of Ethiopia.

The study conducted by (Kassahun Girma, 2016) on identifying factors that affect adoption of E-banking in the Ethiopian banking industry. The objective the study was to identify challenges, benefits, driving forces and opportunities for adoption and development of E-banking technology in Ethiopia. The study conducted based on the data gathered from six private Commercial Banks in Ethiopia. A mixed research approach used to answer the research questions that emerge through the review of existing literature and the experiences of the researcher in respect of the E-banking system in Ethiopia. The study statistically analyzes data obtained from the survey questionnaire. A research framework developed based on technology-organization environment model (TOE). 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, low levels of computer literacy, low level of ICT infrastructure, lack of sufficient government support, legal and regulatory differences with cross-country security risk.

(Abduselam Fetu, 2018) 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 staffs and customers on 22 branches of commercial bank of Ethiopia founds in Gurage zone. According to his findings the major challenges includes; Low level of internet penetration and poorly developed telecommunication infrastructure, lack of suitable legaland regulatory framework for e-commerce and e-payment, Lack of sufficient

government support, high rates of illiteracy, Lack of educated and efficient staff in e-banking context, Lack of customer awareness with E-banking product, Customer low levels of computer literacy,absence of financial networks that links different banks, and lack of reliable power supply level of development of society, and resistance to change.

Empirical evidence implies that customers' patronage for and reaction to a particular product depend on their level of understanding of what the product can do and what they stand to benefit there from (Balachandher, 2001).

In general, Review of Empirical studies shows the understanding the practice of E-banking in world, Africa and in the Ethiopias. The study mostly deals about the opportunities and challenges of E-banking practice. Some studies are also deals about the critical success factors (CSFs) in E-banking is important for banking industries because it would potentially help them to improve their strategic planning process. The main obstacles and barriers that oppose E-banking practice are the concerns of security, privacy of information and technology investment cost. Also the literature review indicates that according to the customers there are different factors that influencing the practice of E-banking such as, perceived advantages and other factors related to the services itself & how to be accepted and used by the customers, which differ from country to country, reflecting the economic and technological development in each country. This study will generally tried to assess the general practice, benefits of e-banking for the banks, customers and general economy. Problems related with the implementation of E-banking and also the practice of E-banking by customers. And also try to assess the possible intervention by the government that will promote the development of this service.

The following section, reviews empirical studies related with challenges, benefits and Opportunities of E-banking technology adoption.

2.2.1 Challenges of E-Banking

Electronic banking despite its numerous benefits, there are challenges in the implementation of e-banking applications. Some of the identified challenges as revealed by previous research works include security, infrastructure, regulatory and legal issues and Socio-Cultural challenges.

The study that was conducted by (Isaac,2005 cited Kasaahuun Girma, 2016) 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.

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. 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 competiveness. Lack of reliable trust and redress systems and cross country legal and regulatory differences was also impede e-commerce adoption (Gardachew, 2010). 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).

(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. The socio-political challenges take account of government regulations like privacy and security, lacks of business laws for e-commerce, lacks of legal. Finally, the cognitive hindrances contain a number of factors which lead to a negative cognitive assessment of E commerce of individuals and organizations like inadequate awareness, knowledge, skills, and confidence; a lack of awareness and understanding of potential opportunities; lack of confidence in service providers and the postal network and computer illiteracy.

In addition, a research conducted by (Eze & 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 consumer. The challenges here range from customer details being stolen from the vendors files to the selling up of a fraudulent website by fake customer to deceive other innocent customers.
- Loss of Audit Trail: - Another challenge of E-banking is the loss of audit trail as business processes continue to change with internal 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 authorities which have continued to work to see that the activities of the money launderers and fraudsters are brought under control.
- Systems and Infrastructure Failure: - Systems and infrastructural failure have also a lot of effect on E-banking. Failure results to loss of data. System failure can be caused by software failure either at the entity or at an organization used for outsourced functions. Infrastructure failures are mainly caused by power failure. The system and infrastructural really given a lot of setback to development Ebanking.
- The Potential Risks of E-banking: - Electronic delivery and payments systems involve a wide range of potential risks. The use of an electronic channel to deliver products and services introduces unique risks due to the increased speed at which systems operate and the broad access in terms of geography, user group, applications database and

peripheral systems. The potential risks bring by the e – banking has a lot of implications for the safety and soundness of the nations banking system.

2.2.2 Benefit of E-Banking

Business organizations are trying to uncover the new technologies coming from the E commerce applications which has a lower transaction cost resulted to eliminate association in distributing channels (Salman & Kashif, 2010). The cost can be reduced to zero in some services like information and manufactured goods information. Transaction of low cost and easiness provides to adopt the new trend of technology to trade information among different groups and business parties. Information and Communication technology transformed business to go from local and global.

Businesses 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 feed-back. 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, cited kasahuun Girma,2016).

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.

(Harrison, 2012) suggested that the commercial benefits of E-banking lie in five areas; firstly, firms are able to expand their geographical reach. Secondly, important cost benefits lie in improved efficiency in procurement, production and logistics processes. Thirdly, there is enormous scope for gaining through improved customer communications and management. Fourthly, the internet reduces barriers to entry for new market entrants and provides an opportunity for small firms to reorient their supply chain relationships to forge new strategic partnership. Finally, e-commerce technology facilitates the development of new types of products and new business models for generating revenues in different ways as well as different revenue streams.

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).

Electronic banking services are becoming the preferred way of making transactions in the developed world due to the fact that they understand the benefits very well through long years of using them in their economy (Dawd, 2004). The benefits of having electronic banking system can be seen from different perspectives as follows.

2.2.2.1 Benefit to customers

E-banking is a form of banking service where funds are transferred through exchange of electronic signal between financial institutions, rather than exchange of cash, checks, or other negotiable instruments. In this competitive world, E-banking helps the banks to attract more number of customers and tackle the competition from other banks. Therefore, those banks beyond the benefit they acquire from provision of the service, they provide variety of benefits to their customers that uses the e-banking services.

Therefore, benefit of E-banking is not limited to banks but also to their customers. Thanks to the emergence of the Internet, banking transactions are no longer limited to time and geography. It is very easy for consumers throughout the world to access to their bank accounts 24 hours per day and seven days a week. Customers can enjoy a variety of services, especially services which are not provided by traditional bank branches (Pham, 2010).

It is contended by (Turban, 2008) that E-banking is really beneficial to customers in terms of cost savings, no limit on time and space, quick response to customer complaints, and better services/products. Such benefits are believed to elevate customer satisfaction.

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 study of (Abduselam Fetu, 2018) shows e-banking provides variety benefits to the customers. This includes;

- 24-hour accessibility to the bank services,
- Convenience,
- Ease of use,
- Time saving, and
- Enhancement of customer satisfaction.

2.2.2.2 Benefit to the Bank

E-banking is use of information and communication and technology and electronic means by a bank to conduct transaction and have interaction with stake holders. Understanding e-banking service is also very important for several stakeholders, since it helps them to derive benefits from it. Many banks and other organizations have already implemented e-banking because of the numerous potential benefits associated with it.

The first benefits for the banks offering electronic banking services is better branding and better responsiveness to the market. In this competitive world, E-banking helps the banks to attract more number of customers and tackle the competition from other banks. According to (Olga, 2003) those banks that would offer such services would be perceivedas leaders in technology implementation. Therefore, those banks that provide the service can enhance the customer satisfaction through sophisticated services.

According to (Jayawardhena & Foley, 2000 cited kasahuun Girma, 2016) the primary benefits of E- Banking are as follow:-

Price- In the long run a bank can save on money by not paying for tellers or for managing branches. Plus, it's cheaper to make transactions over the Internet.

Customer Base- the Internet allows banks to reach a whole new market- and a well off one too, because there are no geographic boundaries with the Internet. The Internet also provides a level playing field for small banks who want to add to their customer base.

Efficiency- Banks can become more efficient than they already are by providing Internet access for their customers. The Internet provides the bank with an almost paper less system.

Customer Service and Satisfaction- Banking on the Internet not only allow the customer to have a full range of services available to them but it also allows them some services not offered at any of the branches. The person does not have to go to a branch where that service may or may not be offer. A person can print of information, forms, and applications

via the Internet and be able to search for information efficiently instead of waiting in line and asking a teller. With more better and faster options a bank will surely be able to create better customer relations and satisfaction.

Image- A bank seems more state of the art to a customer if they offer Internet access. A person may not want to use Internet banking but having the service available gives a person the feeling that their bank is on the cutting image.

According to (Kassahun Girma, 2016) the benefits that the Ethiopia banks realized from adoption and extension of E-banking technology were classified as operational and service benefits.

- Operational benefits identified by his study include:-
  - Increase the bank productivity,
  - Reduces paper work,
  - Reduce transaction cost,
  - Generate foreign currency,
  - Increase reliability and
  - Reducing errors.
- Services benefits identified by his study include
  - Facilitates Development Of New Products,
  - Facilitates Marketing And Market Access,
  - Improve Customer Service,
  - Reduce Long Queues In Banking Halls,
  - Increase Accessibility Of The Bank Services,
  - Create Good Relation Among Banks And
  - Clients And Encourages Price Transparency.

The study of (Abduselam Fetu, 2018) shows major benefits the bank derives from provision of E-banking services are;

- Improving Customer Services,
- Facilitating The Work To Be Done Fast,
- Helping To Facilitate Work With Minimum Error,
- Simplifying The Activity Of Employees Of The Bank In The Delivery Of Services To Customers,
- Enhancing The Image Of The Bank,

- Improving Efficiency,
- Reducing Paper Work,
- Reduces Queues In The Banking Hall,
- Increasing Revenues Of The Bank,
- Reduction Of Cost, And
- Improves Relationship With Customers.

2.2.2.3 Benefit to general Economy

As e-banking provide opportunity to banking sector to enlarge their customer base, it has a consequence to increase the volume of credit creation which in turn results in better economic condition. The positive impacts of electronic banking are immense for economic development of a nation. Some of the economic benefits of e-banking as identified by (Dawd, 2009) are as follow:

- Reduction of the cost for printing cash notes and its related distribution
- Enhancement of Aggregate Deposit
- Banking the un-banked
- Increasing the potential for hard currency generation

According to (Pham, 2010) benefits from the economical' point of view E-banking served so many benefits not only to the bank itself, but also to the society as a whole. This include;-

E-banking made finance economically possible:

- Lower operational costs of banks
- Automated process
- Accelerated credit decisions
- Lowered minimum loan size to be profitable.

Potentially lower margins:

- Lower cost of entry
- Expanded financing reach
- Increased transparency.

Expand reached through self-service:

- Lower transaction cost
- Make some corporate services economically feasible for society
- Make anytime access to accounts and loan information possible

2.2.3 Challenges of E-Banking in Ethiopia

According to (Gardachew, 2010) Ethiopian banking industry faces numerous challenges to adopt E-banking system and grab the opportunities presented by ICT applications in general. The Key Challenges for E-banking applications are:

- 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. Most rural areas of the country, where the majority of small and medium businesses are concentrated, have no Internet facilities and thus are unable to engage in e-commerce activities.
- 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 e-commerce concerns including enforceability of the validity of electronic contracts, digital signatures and intellectual copyright and restrict the use of encryption technologies.
- Inadequate banking system.
- 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. Political instabilities inevitably disturb smooth operations of business and free flow of goods and services.
- 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 institutions 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 (Gardachew, 2010).

According to (Ayana, 2014) the major challenges Ethiopian banking industry faces in the adoption of Electronic banking are:

- Security risk,
- Lack of trust,
- Lack of legal and regulatory frame work,
- Lack of ict infrastructure and
- Absence of competition between local and foreign banks.

According to (Kassahun Girma, 2016) major challenges Ethiopian banks facing for adoption and development E-banking technology in Ethiopia inludes;-

- High cost of ICT equipments and network, software and re-organization, lack of customer awareness and resistance to changes in technology.
- Limitation in network infrastructure and internet related support services, low levels of computer literacy, low level of ICT infrastructure, security risk,
- Lack of trust and lack of sufficient government support are considered the basic external challenges facing Ethiopian banks to adopt and develop E-banking technology

According to (Abduselam Fetu, 2018) Ethiopian banking industry faces numerous challenges to adopt E-banking system. This major challenges includes;

- Low level of internet penetration and poorly developed telecommunication infrastructure,
- Lack of suitable legal and regulatory framework for e-commerce and e-payment and sufficient government support,
- High rates of illiteracy,
- Lack of educated and efficient staff in e-banking context,
- Lack of customer awareness with e-banking product, customer low levels of computer literacy, absence of financial networks that links different banks, and

- Lack of reliable power supply level of development of society, and resistance to change.

2.3 Conceptual Frame Work.

Researchers will be used different frameworks in the study of adopting new technological innovation. Among frameworks that have been developed in different studies includes.

- ✓ Technology-Organization-Environment (TOE) framework,
- ✓ Technology -Acceptance -Model (TAM),
- ✓ Theory of Planned Behavior (TPB),
- ✓ Innovation Diffusion Theory (IDT)
- ✓ Theory of Reasoned Action (TRA)

A. Technology- Organization- Environment (TOE) Framework.

TOE framework was developed by Tornatzky and Fleischer; it is designed for studying the likelihood of adoption success of technology innovations. This framework is a comprehensive and well received framework in the context of innovation adoption by organizations and has been used in many studies (Salwani et al., 2006). According to (Tornatzky & Fleischer, 1990) technology adoption within an organization is influenced by factors pertaining to the technological context, the organizational context, and the external environment.

The technological factor refers to adopter's perception of E-banking attributes. Typical characteristics of technology considered in technology adoption studies are based on the assumption of Roger's diffusion of innovation Which include relative advantages (perceived benefits), and relative disadvantages (perceived risks).Technological factors include complexity, compatibility, relative advantage, ease of use and usefulness. The technological factors are related to challenges to technology adoption and its perceived benefits. The perceived benefits for manager could be direct, such as cost savings or income generation, or indirect, such as potential opportunities in new market, marketing, or publicity (Rogers,1983 cited Kasahuun Girma, 2016).

The organizational factor refers to the organizations characteristics that influence its ability to adopt and use of E-banking system. The organizational factors that have been mostly cited in literature include: Information Technology (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).

The environmental factor refers to the external environment in which an organization operates and its condition for supporting the development of Ebanking services. Environmental factors relating to IT adoption (and specifically the adoption of internet technologies) includes pressure from competitors, customers or suppliers; the role of government (incentives); partners, alliances; technological infrastructure; technology consultants; image of internet technology; and users expectations (Harrison, 2012).

B. Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) was introduced by (Davis et al., 1989 cited Kasahuun Girma, 2016) .Technology acceptance model is an adaptation of Theory of Reasoned Action (TRA), developed to specifically deal with modeling user acceptance of information systems. As compared to TRA, Technology Acceptance Model is significantly less general. The model was developed to particularly explain the computer usage behavior. But since, TAM includes findings collected from over a decade of Information System (IS) research, so it is particularly well-suited for modeling computer acceptance.

The Technology Acceptance Model (TAM) defines the casual relationship between perceived usefulness, ease of use, system design features, attitude towards using and actual usage behavior. In general, an informative representation of the mechanisms by which design choices influence user acceptance is provided by TAM. Hence, Technology acceptance model is useful in applied contexts for forecasting and evaluating user acceptance of information technology (Davis, 1993).

According to the model, in explaining the adoption of any information system, perceived ease of use (PEOU) and perceived usefulness (PU) are the two most important determinants.

- Perceived ease of use: - refers to the degree to which a person that using a particular system would be free from effort (Davis, 1986).
- Perceived usefulness: - refers to the degree to which an organization that using a particular system would enhance or improve its job performance.

C. Theory of Planned Behavior (TPB)

TPB is developed originally based on the theory of reasoned action (TRA) which explains almost any human behavior. In predicting and explaining human behavior across various

application contexts, it has been proven successful. According to TRA, a person's behavioral intention guides his actual behavior of performing some certain action and where subjective norm and attitude toward the behavior determine the behavioral intention (Liao et al., 2007).

According to (Ajzen, 1991 quoted in Liao et al., 2007) "behavioral intention is ameasure of the strength of one's willingness to try while performing certain behaviors". As in the original model of TRA, there are some limitations when dealing with behavior for which there is incomplete volitional control of people. Therefore, TPB is proposed to eliminate these limitations; and in fact, TPB differs from TRA because of the addition of perceived behavior control, which potentially effects behavioral intention.

According to (Ajzen, 1991) the theory of planned behavior proposes three independent determinants of intention which are attitude towards the behavior, subjective norm and perceived behavioral control.

D. Innovation Diffusion Theory (IDT)

According to (Rogers, 1995) innovation is defined "an idea, practice, or object that is perceived as new by an individual or other unit of adoption", whereas diffusion is defined as "the process by which an innovation is communicated through certain channels over time among the members of a social system" (Rogers, 1995). Therefore, Innovation Diffusion Theory (IDT) states how new ideas, concepts or technologies spread or become common in a society and adopted by users. Innovation Diffusion Theory (IDT) includes fives characteristics. These characteristics as defined by (Rogers, 1995) are:

- Relative Advantage: "The degree to which an innovation is perceived to be better than the idea it supersedes".
- Compatibility: "The degree to which an innovation is perceived as consistent with the existing values, past experiences and needs of potential adopters".
- Complexity: "The degree to which an innovation is perceived as relatively difficult to understand and use".
- Trialability: "The degree to which an innovation may be experimented with on a limited basis".
- Observability: "The degree to which the results of an innovation are visible to others".

The above mentioned characteristics, defined by (Rogers, 1995) greatly influence adoption. According to (Chen et al., 2000) among five characteristics of IDT, relative

advantage, compatibility and complexity are the only attributes, which are consistently related to innovation adoption.

E. Theory of Reasoned Action (TRA)

The theory of reasoned action (Ajzen & Fishbein, 1980 ; qouted in Belleau et al., 2007) is based on the assumption "that individuals are rational and make systematic use of information available to them".

According to theory of reasoned action, behavioral intention (BI) of an individual is a measure of the strength of one's intention to perform a specified behavior. BI is determined by two factors: 1) Attitude towards the behavior (AB), which is a function of beliefs (bi) that performing the behavior possesses certain attributes and the evaluation of those beliefs (EI) 2) Subjective Norm (SN), which is the perception of social groups i.e. what specific individuals or groups think that a person should or should not perform (Belleau et al., 2007). "An individual's Subjective Norm (SN) is determined by a multiplicative function of his or her normative beliefs (NBI), i.e., perceived expectations of specific referent individuals or groups, and his or her motivation to comply (MCI) with these expectations" (Fishbein and Ajzen, 1975 quoted in Davis et al., 1989).

Apart from the above mentioned factors, (Ajzen & Fishbein, 1980 ; qouted in Belleau et al., 2007) mentioned that some external variables might also have influence on behavioral intention, for instance, demographics, traditional attributes towards targets and personality traits. Some researchers have proposed additional external variables, which could be included in the model for predicting the behavior. Those variables are: past behavior, past experience or involvement ((Bagozzi, Wong, Abe, & Bergami, 2000; Bunce & Birdi, 1998; Shim et al., 1989 quoted in Belleau et al., 2007 cited Kasahuun Girma 2016).

According to (Fishbein and Ajzen, 1975 quoted in Sheppard et al ., 1988) "a behavioral intention measure will predict the performance of any voluntary act, unless intent changes prior to performance or unless the intention measure does not correspond to the behavioral criterion in terms of action, target, context, time-frame and/or specificity".

TRA model predicts consumers' intention and behavior very well. (Armitage and Conner, 2001 quoted in Belleau et al., 2007) state that behavior that is comparatively straightforward i.e. under volitional control can be predicted adequately by theory of reasoned action. As it is understood that an intention to buy a product is volitional and few

constraints are associated with it, so the usage of theory of reasoned action can lead to valid prediction of purchase intention.

However, there is a constraint associated with the TRA model regarding the distinction between a goal intention and a behavioral intention, which has also been acknowledged by Fishbein and Ajzen. The limitation is that they established their model to cope with behaviors, for example, taking weight loss pill, applying for a loan or purchasing a new car; but not with outcomes that result from behaviors, for example, losing 10 pounds, getting a loan or owning a brand new car. Moreover, only those behaviors are dealt by model that is under an individual's volitional control. The conditions of the model can't be fulfilled, whenever the performance of some action needs resources, knowledge, skills or environmental hurdles need to be overcome (Sheppard et al., 1988).

In this study, Technology-organization-environment framework was used to have a more precise forecast on the challenges of adopting and developing E-banking technology in Ethiopian banking industry.

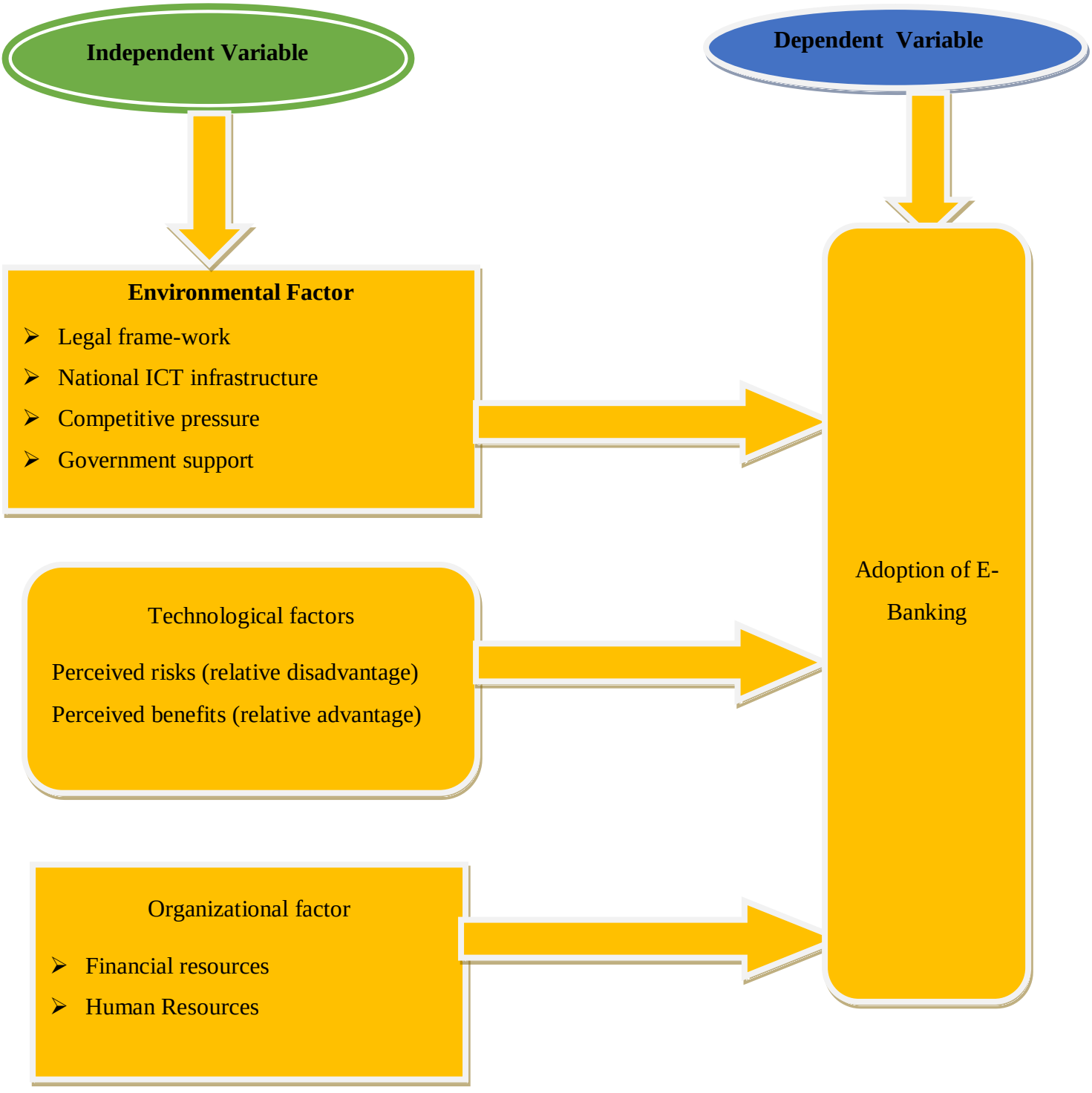

Figure: 2:1. Technology-Organization-Environment framework

Source: (Developed from literature reviews, (Abebe Zeleqe, 2016)

CHAPTER THREE
RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter will present the methodological framework applied to solve the research problem and to answer the research questions. The chapter starts with the chosen study area, research design, research approach, type and source of data, target population, and sampling design. Afterwards, methods of data collection, methods of data analysis and variable of the study will be presented.

3.2 Area of the study

The study was conducted at Jimma town, located 350 km south-west of Addis Ababa. The town's geographical coordinates are 7°41' N latitude and 36° 50' E longitude. The town is found at an average altitude of about 1,780 m above sea level. It lies in the climatic zone locally known as "Woyna Daga" (1,500-2,400 m above sea level) which is considered ideal for agriculture as well as human settlement. The town is generally known by warm climate with a mean annual maximum temperature of 30°C and a mean annual minimum temperature of 14°C. The annual rainfall ranges from 1138-1690 mm. The maximum precipitation occurs during the three months period from June through August, with minimum rainfall occurring in December and January. From a climatic point of view, abundant rainfall makes this region one of the best watered of Ethiopian highland areas, conducive for agricultural production.

3.3 Research design

Research design is a master plan specifying the methods and procedures for collecting and analyzing the needed information. It is a framework of the research plan of action. The decisions regarding what, where, when, how much, by what means concerning a research project constitute a research design.

According to (Ahmed, 2011) the research purpose were identified and selected depending on the problem area and the nature of the phenomenon that it studies and he stated the purpose of the research could be exploratory which deals with unknown problem, descriptive in which there is an awareness of the problem and explanatory where the problem is clearly defined.

Based on the above research purpose, the purpose of this thesis were conduct an explanatory research in order to determine the factors that affects the success and faller of the activity of electronic banking in Ethiopia banking sector by taking the determinants that are already identified by different scholars related to electronic banking. Therefore, the explanatory research was used.

On the other hand, this research were 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 and development of E-banking in Ethiopia. Moreover, this research aims to identify the phenomenon and assess the current practice of E-banking. Therefore, descriptive research design is being used to achieve the research objectives. This is because that it is mainly concerned with describing the nature or condition and the degree in detail of the present situation of E-banking. (Creswell, 2003) stated that the descriptive method of research is used to gather information about the present or existing condition.

3.4 Research approach

Research approach is selected by researcher(s) based on the research purpose, the nature of the research, the problem area, and research questions (Alhamdani et al., 2006). The research approach in this study is chosen based on the purpose and the research questions set out to be addressed. According to (Creswell, 2003) there are three basic types of research approaches:- quantitative, qualitative, and mixed approach. In order to attain the objective of the study and answer the research questions, the research was adopted mixed research approach. Quantitative research approach including questionnaires and Qualitative research approach including document analysis were adopt to achieve the objectives of the study. 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.

3.5 Target population

In research methods, population is the entire aggregation of items from which samples can be drawn (Yahiya, 2011). Currently there are more than 19 banking institutions in Ethiopia, both private and public which are in operation. Only private banks were included in this study. Among the 16 private banks currently under operation, the researcher

selected four banks which means the selection of the banks was made in a way that the researcher could get sufficient data regarding e-banking. Those banks are Dashen Bank S.C., Nib International Bank S.C., United Bank S.C., and Wegagen Bank S.C. The researcher take four private commercial banks as a target population, because it is often impossible or too much expensive to collect data from all the potential units. The procedure (criteria) used for selecting the bank from the available lists was based on their familiarity with E-banking technology i.e long years services in providing E-banking products to the public as well as they are forerunner in introducing E-banking technology. Initially, these banks were selected after considering their service years. Only banks that have been in the banking industry for more than 15 years were considered in this study.

Therefore, the population that was used for this study comprised of 15 branch managers, 17 Customer service manager, 54 customer service officer and 136 active/customers per-day from four private commercial banks. The procedure (criteria) used for selecting the listed target population from the available lists was based on their relevancy with the E-banking products as well as different levels differ in terms of responsibilities as well as opinion. Almost all of the bank included in the study does not have E-banking departments at branch level so the listed are done the E-banking related activity. Therefore, the researcher selected the above listed as atarget population to get sufficient data for the study.

Table 3.1: Population Distribution

Category	Population	Percentage
Branch managers	15	6.7
Customer service manager	17	7.7
Customer service officer	54	24.4
Active customer perday	136	61.3
Total	222	100

Source: Field visit report, 2021

3.6 Sampling design

3.6.1 Method of Sampling

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). Therefore, Sampling technique can be defined as a process of selecting specific entities from the population that will be used for the study (Sauders, Lewis, & Thornhill 2009). This study used stratified random sampling technique. Stratification of the study population is the technique in which the population is divided into homogeneous groups before carrying out the study (Hunt et al., 2001). Unlike other sampling techniques, stratified sampling method has the following advantage, which leads the researcher to use it. First, it improves the accuracy of the sample, i.e. it ensures that any differences between the strata controlled by making sure that each stratum is proportionately represented. Second, Stratified sampling is one tool to reduce selection bias. However, if from stratum's one group is either overrepresented or underrepresented in a sample, selection bias has occurred and the sample were not accurately reflect the larger population. Moreover, simple random sampling method is used for the following advantages. First, the method gives equal chance for all stratums in the study to be included in the sample. Second, it minimizes the existence of sampling biases, and third, the method itself is too easy to use

3.6.2 Determination of sample size

A sample size is the number of individuals or cases in a study (Cramer & Howitt, 2004) According to (Cramer et al., 2004) a sample size is represented by "n". (Mugenda , 2003) considered a sample of 30% to be sufficient enough. However, the study used 64% of the population as the sample for the study.

Table 3.2: Sample Size

Category	Population	Sample size	Percentage
Branch managers	15	10	66.6
Customer service managers	17	11	64.7
Customer service officers	54	35	64.8
Active customer perday	136	86	63.3
Total	222	142	64

Source: Field survey report, 2021

3.7 Type and source of data

Primary data were used in this study. Primary data is recognized as data that is gathered for a specific research in response to a particular problem through interviews and questionnaires. Primary data was collected from the staffs and customer of the four private

commercial banks based on a structurally designed survey questionnaire. It included both closed ended and open-ended questions, which gives the respondents an opportunity for adequate expression of their view on the questions.

3.8 Methods of Data Collection

Mixed research method were used to collect data in this study. Mixed research methods enable to minimize weaknesses and maximize strengths of the study under investigation. A central premise of mixed methods is that "the use of quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach alone" (Creswell & Plano Clark, 2007). It also provides better quality data than a single method. This, in turn, assisted the researcher to have both numeric and non-numeric data with an objective to triangulate results of the study. Thus, both quantitative and qualitative data was collected to fill each other's gap and helped to overcome the problem of missing of necessary data for the study. Generally, Selection of data collection techniques was depending on the types of information needed, and the types of informants. While designing of techniques, attention was given to answer the research questions and to attain the objectives. Thus, the following instruments of data collection were used to collect data for this study.

Questionnaires

According to (Yin, 2003) 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. The questionnaire was 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. The researcher used open and closed-ended type of questionnaires, which gives the respondents an opportunity for adequate expression of their view on the questions. The questionnaire began with an introductory statement, which specified the purpose of the research as purely academic. Respondents were encouraged being objective in their responses since they were assured of confidentiality.

Questions present in the form of affirmative statements, relating to the concepts on Ebanking and to identify their intention on the challenge and opportunities for adoption and development of E-banking technology, in such a way to enable measurement of the respondent's opinions. The respondents were asked to indicate their level of agreement on a five point likert scale with the following ratings. Strongly agree (SA; or 5), agree (A; or

4), neutral (N; or 3), disagree (DA; or 2), and strongly disagree (SD; or 1). The numbers were indicated in the questionnaires to provide a feel of ordinal scale measurement and to generate data suitable for quantitative analysis. The questionnaire was a close ended questionnaire to elicit guided responses and for easy analysis and to obtain additional information, the respondents were requested to provide open-ended responses if they have opinions which they feel the researcher would find useful.

3.9 Method of data analysis

In order to meet the stated research objectives, the collected data was analyzed based on the nature of the objective. Accordingly, the data collected via questionnaires was analyzed with descriptive statistics using statistical package for social scientists (SPSS) V. 20.0. through frequency, percentage, mean and standard deviation. Furthermore, (Wlcott, 1994 cited Creswell, 2003 cited Kasahuun Girma 2016) suggested that qualitative research is fundamentally interpretative i.e. the researcher makes an interpretation of the data. To sum up, the analysis of quantitative data and interpretation of qualitative data combines to seek convergence among the results (Creswell, 2003).

3.10 Definition of Variable

3.10.1 Dependent Variable

The dependent variable is the variable that is the effect or is the result or outcome of other (independent) variables (Neumann, 2007). In this study the dependent variable is the adoption of E banking services in Ethiopian banking industry.

3.10.2 Independent variable

The independent variables are the cause variables or the one that identifies forces or conditions that acts on something else (Neumann, 2007). As TAM has proven to be a theoretical model in helping to explain and predict user behavior of information technology (Legris et al., 2003) this study considers three categories of independent variables that are:-

- Technological factors (perceived usefulness, perceived ease of use, perceived risk)
- Organizational factors (financial and human resources), and
- Environmental factors (Legal framework, National ICT infrastructure, Competitive pressure , Government support).

4. Ethical consideration

An obvious form of student misconduct is plagiarism. Copying or quoting directly from source material without providing quotation marks or crediting the source is a fundamental issue of ethical part of the researcher. A more indirect form, but equally improper is paraphrasing material or using an idea that is not properly introduced and documented (i.e., no reference citation provided) leads the quality of research as well as researcher. Therefore, strong recommendation has been made for effective action against plagiarism and such unethical practices immediately. The researcher following ethical values and approaches while collecting both primary and secondary data for considering thesis. When preparing Questionnaires the researcher clearly explains the purpose of the questionnaire‘s and the right to accept or refuses to participate in any times of the research activity when collecting data. Show the purpose of the study and clearly stating in the introduction of each questionnaires‘‘ also the research was told that the respondents were not written their name or any form of their identity about it.

CHAPTER FOUR

SUMMARY OF THE MAJOR FINDINGS

4.1 Introduction

Data collected through different techniques were analyzed in this chapter. As seen in table 4.1 a total of one hundred forty two (142) questionnaires were randomly distributed to professional staff and customer of four purposely selected private commercial banks (Dashen Bank S.C, United Bank S.C, Nib International Bank S.C and Wegagen Bank S.C). Out of the one hundred forty two (142) questionnaires distributed, one hundred eleven (111) were successfully completed, returned and used for the study. The response rate was approximately 78% of the total questionnaires distributed. In order to analyze the research results, SPSS V. 20.0 tool software was used.

Table 4.1. Distribution of questionnaire and categories of respondents

Category	No. of Questionnaire Distributed	Usable Questionnaire Obtained	Response Rate
Branch manager	10	10	100
Customer service manager	12	12	100
Customer service officer	34	31	91
Customer of the bank	86	58	67
Toatal	142	111	78

Source: Field survey report, 2021

4.2 General Information of Selected Private Banks

This section shows the demographic details of banks based on the respondents response to the question asked to indicate the name of the bank, branch name, type of E-banking services provided to customers and number of employees as a branch and professional staff/ expert involve 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 4.2 General Information of the Banks

Name of the Bank	No. of Branch	No. of questionnaire		E-banking services provided	Total no.of Employee	Expert Involve in Providing E-banking Services	Customer per one day using E-Banking
		Distrubuted	Returned				
NIB	3	18	16	ATM, POS, IB, MB, Debit card, SMS banking and etc	51	16	13
DB	4	49	37		91	25	51
UB	3	34	27		61	18	34
WB	5	41	31		82	27	38
Total	15	142	111		285	86	136

Source: Field survey report, 2021

As shown in the above table four private commercial banks were involved in the study and 56 questionnaires were distributed to professional staffs and 86 questionnaires were distributed to customers of sampled private banks who are directly use E-banking technology and all the banks have already commenced E-banking services.

As in the above table all the banks in the study named Dashen Bank S.C, United Bank S.C, Wegagan Bank S.C and Nib International Bank S.C 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, Internet Banking, SMS Banking and etc.

The above table also shows that respondents' bank have total employees ranging from 51 up to 91. This can show to what extent banks are investing on human resources which has its own repercussion on branch expansion strategy of banks. Thus, E-banking technology has just evolved as a way out as one strategic approach to reduce the investment cost in human resources associated with branch expansion. Out of the total employees professional staffs or E-banking technology experts who are directly or indirectly involved in adopting and running of E-banking services ranging from 16 to 27.

4.3 Demographic Information of the Respondents

4.3.1 Demographic Information of Bank Employees

Demographic profiles of clerical staff of selected private commercial banks who participated in the study were analyzed using descriptive analysis with the help of SPSS.

Table 4.3 Demographic Profile of Respondent Bank Employees

Gender:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	41	77.4	77.4	77.4
	Female	12	22.6	22.6	100.0
	Total	53	100.0	100.0	

Age:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-30	19	35.8	35.8	35.8
	31-40	29	54.7	54.7	90.6
	41-50	5	9.4	9.4	100.0
	Total	53	100.0	100.0	

Educational level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Diploma holder	3	5.7	5.7	5.7
	First degree holder	36	67.9	67.9	73.6
	Masters degree	14	26.4	26.4	100.0
	Total	53	100.0	100.0	

Position on the Bank

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Brach manager	10	18.9	18.9	18.9
	Customer Service Officer (CSO)	31	58.5	58.5	77.4
	Customer service manager	12	22.6	22.6	100.0
	Total	53	100.0	100.0	

Monthly income (in Eth. Birr):

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Above 6000	53	100.0	100.0	100.0

Work Exprience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0- 5years	13	24.5	24.5	24.5
	6-10 years	22	41.5	41.5	66.0
	11-20years	17	32.1	32.1	98.1
	Above 20years	1	1.9	1.9	100.0
	Total	53	100.0	100.0	

Source: Field survey report, 2021

Based on the information from the survey, it can be seen that most of the bank employees working in the selected banks are male and the female are less in number. In this regard, the percentage for male is 77.4% and the female is 22.6%. The male employees are almost more than double in number as compared to female employees. In the case of classification of respondents by age the highest percentage of participants are young between the ages of 31-40 who form 54.7 % of total respondents. Regarding the educational level of the participants, the highest percentage of them have first degree and above that form 94.3% of total bank employee participants. Besides monthly income all of the respondents have monthly income of above 6,000 E.th. Birr. With regard to work experience of employees, about 75.5% of them have a work experience of six years and above in their respective company and only one of them has a working experience of above 20 years.

4.3.2 Demographic Information of Customers

Demographic profiles of customers of sampled private commercial banks who participated in the study were also analyzed using descriptive analysis with the help of SPSS.

Table 4.4. Demographic Profile of Respondent customers

What type of E-banking services you are using

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ATM	44	75.9	75.9	75.9
	Mobile banking	14	24.1	24.1	100.0
	Total	58	100.0	100.0	

Educational level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below diploma	9	15.5	15.5	15.5
	Diploma holder	16	27.6	27.6	43.1
	First degree holder	31	53.4	53.4	96.6
	Masters degree	2	3.4	3.4	100.0
	Total	58	100.0	100.0	

Gender:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	36	62.1	62.1	62.1
	Female	22	37.9	37.9	100.0
	Total	58	100.0	100.0	

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-30	36	62.1	62.1	62.1
	31-40	16	27.6	27.6	89.7
	41-50	4	6.9	6.9	96.6
	51-60	2	3.4	3.4	100.0
	Total	58	100.0	100.0	

Job Title: Government Employee

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Gov't employee	39	67.2	67.2	67.2
	own work	6	10.3	10.3	77.6
	no job	13	22.4	22.4	100.0
	Total	58	100.0	100.0	

How long have you use e-banking services?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Still not use	12	20.7	20.7	20.7
	Less than 1 year	31	53.4	53.4	74.1
	1-3years	7	12.1	12.1	86.2
	More than 3 years	8	13.8	13.8	100.0
	Total	58	100.0	100.0	

What are the best means of knowing new information about electronic banking for you?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	TV advertizing	30	51.7	51.7	51.7
	direct contact with bankers	27	46.6	46.6	98.3
	hearing from your colleague	1	1.7	1.7	100.0
	Total	58	100.0	100.0	

Source: Field survey report, 2021

As it is shown on the table above, the highest percentage of customers participated in this study were males who form 62.1% of respondents. In the case of classification of respondents by age, the highest percentages of participants are youngsters having less than 30 years of age and they form 62.1% of total respondents from customers. Regarding the educational level of the study participants, the highest percentage of them has first degree holder that form 53.4 % of total respondents. The results indicated that almos half of respondents had some level of education and know-how about e-banking banking services. Regarding the job title of the study participants, the highest percentage of them are government employee that form 67.2% of total respondents, regarding years of using e-

banking highest percentages of participants use e-banking for less than 1 years wich form 53.4% of total respondents and TV advertising is the best means of advertising which covers 51.7% from the total advertising mechanism.

4.4 Challenges of Adoption and Growth of E-Banking Technology

As cited in chapter two (literature review), there are so money challenges that negatively affect the adoption and growth of the E-banking technology in Ethiopia. The factors affecting the successful adoption and growth of new technologies, such as E-banking are common in nature wich include cost factors, security and trust factors and lack of adequate ICT infrastructure (particularly in developing countries like Ethiopia). However, reasons vary widely among banks and countries and also important to note that challenges to E-banking technology adoption and development work differently according to organizational type and culture (Kassahun Girma, 2016).

A total of 28 questions on challenges of adopting and developing E-banking technology in Ethiopia 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, mean and standard deviation of the data points. The mean tried to tell the average where the data points fall for each specific variable while the 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 compelement the result obtained 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 into organizational, environmental and technological factors according to (Tornatzky & Fleisher, 1990 cited Kasahuun Girma, 2016).

4.4.1 Organizational Factors

One of the basic issue related with organizational factor is the availability of financial resource to implement the system and human resource or technical as well as managerial skills required to implement E-banking system were considered as organizational factors.

Most cited organizational factors in 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 cited Kassahuun Girma, 2016).

In case of Ethiopian banking industries, many private banks still using old banking system and are not taking full advantage from electronic banking facilities (Kassahun Girma, 2016). In the following sections the researcher has made an effort to analyze the organizational factors that can affect the adoption and growth of e-banking services.

Table 4.5 Organization Factors Affecting Adoption and Growth of E-Banking service

No	Aspects	Distribution of number of response							
		SD	D	Ne	A	SA	N	Mean	Sdt. Dev.
1	Lack of customer awareness with E-banking	1	6	15	19	12	53	3.55	1.018
2	Unable to withdraw large amount of money	3	10	7	23	10	53	3.51	1.171
3	Absence of financial networks that links banks	4	7	11	23	8	53	3.45	1.136
4	High cost of implementation of E-banking	4	7	14	19	9	53	3.42	1.151
5	Lack of sufficient government support	3	7	17	19	7	53	3.36	1.060
6	Lack of law mandating the bank to adopt E-banking	5	3	22	18	5	53	3.28	1.045
7	Resistance to change in technology among board, top management and staff	8	6	13	16	10	53	3.26	1.318
8	Lack of technical and managerial skills in implementation and development of E-banking	6	10	12	18	7	53	3.19	1.226
9	High e-banking services' fees	7	8	13	19	6	53	3.17	1.221
10	Inadequate banking system	6	10	14	20	3	53	3.08	1.124

Source: Field survey report September 2015

Note: SD= Strongly disagree, D= Disagree Ne= Neutral, A= Agree SA= Strongly agree N= Number of response

As cited in tables 4.5, lack of customer awarenees with E-banking is the major organizational challenge for implementation and growth of E-banking technology in which the mean scored 3.55.

The respondent also agreed that unablity to withdraw large amount of money is considered as a factor that negatively affecting the successful adoption and growth of E-banking technology as the average result in the Likert scale (mean) is found 3.51. As a result they are not active enough to use E-banking products or services. The result further revealed that most respondents 15.1 % strongly agree and 43.4% are agreed that absence of financial networks that links different banks 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 3.45.

The result also indicated that most respondents 17 % strongly agree and 35.8 % are agreed that high cost of imlementing 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 3.42.

In addition, the average responses of the participants agreed that lack of sufficient government support will affect customers' willingness to use E-banking product and services with a mean score of 3.36. And also Lack of law mandating the bank to adopt E-banking technology with mean score of 3.28 is organizational challenge for implementation and growth of E-banking technology in Ethiopia.

The result further revealed that most respondents agreed Resistance to change in technology to adopt E-banking technology innovation with mean score of 3.26, lack of technical and managerial skills with mean score of 3.19, high e-banking services fee with mean score of 3.17 , inadequate banking system in E-banking context with mean score of 3.08, are another arganizational factors that hampered adoption and growth of E-banking technology in Ethiopia banking industry.

In general, the result revealed that lack of customer awarness with e-banking, lack of ability to withdraw large amount of money, absence of financial networks that links different banks, high cost of implementation, lack of sufficeint government support are

considered as the major organizational factors that hinders the banks to adopt and develop E-banking technology.

So, the result is inconsistent with the previous findings such (Kassahun Girma, 2016), (Gardachew, 2010), (Wondwosen & Tsegai, 2005), (Abduselam Fetu, 2018), (Ayana, 2014) , (Beza M, 2015), (Abebe Zeleqe, 2016), (Vaithianatham,S., 2010) and (Angelakopoulos and Mihiotis, 2011).

4.4.2 Environmental Factors

According to (Tornatzky & Fleischer, 1990) another factors influencing technology innovation is environmental factors. The basic issue here is legal framework, national ICT infrastructure, competitive pressure and government role required to implement E-banking system were considered as environmental factors and the survey result is shown on table 4.6 as follows:-

Table 4.6 Environmental Factors Affecting adoption and growth of E-Banking

No	Aspects	Distribution of number of response							
		SD	D	Ne	A	SA	N	Mean	Sdt. Dev.
1	The dynamic change in information technology	-	6	12	23	12	53	3.77	0.933
2	Network failure	4	5	5	27	12	53	3.72	1.150
3	Electric (power) interruption are a serious problem to use E-banking	7	5	8	23	10	53	3.45	1.280
4	Language are an obstacle to use E-banking	4	11	8	22	8	53	3.36	1.194
5	Relative high cost of internet	6	7	11	22	7	53	3.32	1.205
6	Lack of adequate coordination, interaction and cooperation between banks	5	8	9	28	3	53	3.30	1.102
7	Lack of available ICT infrastructure	10	4	12	17	10	53	3.25	1.371
8	Lack of suitable legal and regulatory framework	6	10	17	15	5	53	3.06	1.151
9	Political instabilities in countries as well as neighboring countries	9	13	14	11	6	53	2.85	1.262

Source: survey report, 2021

The above table 4.6 highlighted that dynamic change in information technology and network failure is the basic environmental factor or challenges for adoption and growth of E-banking technology were the mean value are 3.77 and 3.72, respectively as per the response of the sampled participants.

The respondent also agreed that electric power interruption in the country is considered as basic challenge for implementation and growth of E-banking technology in Ethiopia in which the mean score was found 3.45.

The top fourth challenge stated by respondents was language are an obstacle for implementation and growth of E-banking technology in the country having a mean score of 3.36 since the E-banking technology requires a generally good command to read and write basic IT literacy. 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. Let alone the adaptability to new technology, in a country like Ethiopia where the adult literacy rate (only read and write in Amharic) is only 39.0% (Unicef, 2013 Cited Kasaahun Girma, 2016) and the rate of technology adoption is low, this factor is a challenge for financial inclusion in Ethiopia.

In addition as a result of the respondents, the Fifth responses of the participants agreed that relative high cost of internet will affect customers' willingness to use E-banking technological innovation with a mean of 3.32. And also lack of adequate cooperation and interaction between bank and other decision making body with a mean of 3.30 is environmental challenge for implementation and growth of E-banking technology in Ethiopia.

As per the response of the sampled participants, the last three factors such as lack of avialable ICT infrastructure, lack of suitable legal and regulatory framework for E-banking technology and polotical instabilities in the countries 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 3.25, 3.06 and 2.85 respectively.

In general, the respondents agreed with the above listed environmental related factors (challenges) such as dynamic change in information technology, network failure, language, high cost of internet, lack of adequate coordination, interaction and cooperation between banks and lack of available ICT infrastructure are considered as the major environmental factors that hinders the banks to adopt and develop E-banking technology.

So, the result is inconsistent with the previous findings such as (OECD, 2004), (Kassahun Girma, 2016), (Gardachew, 2010), (Wondwosen & Tsegai, 2005) and (Abduselam Fetu, 2018).

4.4.3 Technological Factors

The issues raised in this study in relation with technological factor are the perceived relative advantages or benefit that the firm gains from expansion of E-banking system and the relative perceived disadvantages or risk which hinder banking industries from the expansion of new technological innovations. In this study respondent were asked whether security issue is raised with the use of technological facility in the banking industries, and all of them stated that security is the main concern that hinders our bank to use technological facilities similarly example the study of (Sohail & Shanmugham, 2003 cited Kasahuun Girma, 2016) suggests that one of the barriers in the expansion and adoption of electronic banking is fear of security risks. These were also supported by the survey result shown on table 4.7, as follows.

Table 4.7 Technological Factors Affecting adoption and growth of E-Banking

No	Aspects	Distribution of number of response							
		SD	D	Ne	A	SA	N	Mean	Sdt. Dev.
1	Customer fear of risk to use E-banking technology	6	4	11	21	11	53	3.51	1.234
2	Frequent power interruption	5	8	7	25	8	53	3.43	1.201
3	Lack of confidence with the security aspects	2	9	13	23	6	53	3.42	1.027
4	Complexity	6	5	16	21	5	53	3.26	1.129
5	Customer do not trust the E-banking technology provided by bank	10	10	6	19	8	53	3.09	1.390
6	Customer has the access to personal computer and internet	7	11	15	15	5	53	3.00	1.193
7	Slow banks response to correct erroneous transactions	14	6	10	18	5	53	2.89	1.382
8	Lack of experienced and skilled IT professionals to administer latest technologies	14	7	13	13	6	53	2.81	1.374
9	Lack of ICT knowledge	15	13	7	11	7	53	2.66	1.427

Source: survey report, 2021

Responses captured in the above table 4.7 shows that, the respondents asked whether Customer fear of risk to use E-banking technology provided by banks and the descriptive statistics result gives mean value of 3.51, that means the largest number of respondent (20.8% strongly agree and 39.6% agree) were agreed with the idea that Customer fear of risk to use 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.

The result further revealed that the largest number of respondents (15.2% strongly agree and 47.2% agree) were agreed with the idea that frequent power interruption to use E-banking technology is considered as challenge for the adoption and growth of E-banking technology in Ethiopia banking industry, were mean value found 3.43. 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 value found 3.42. Thus, customer fear of risk, power interruption and lack of confidence with the security aspect are the most technological factors that hamper adoption and growth of E-banking technology in the country.

In addition as a result of the respondents, the fourth and fifth responses of the participants agreed that complexity of the technology will affect customers' willingness to use E-banking technological innovation with a mean of 3.26. And also customer trust to use new technology with a mean of 3.09 is another technological factors or challenge for implementation and growth of E-banking technology in Ethiopia.

Lastly the respondent als agreed that customer illeteracy, slow bank response to correct erroneous transaction, lack os skilled IT professitional and lack of ICT knowledge with mean score of 3.00, 2.89, 2.81 and 2.66 respectively is considered as another technological factors or challenge for implementation and growth of E-banking technology in Ethiopia.

To sum up, the respondents agreed with the above listed technological related factors such as customer fear of risk, power interruption, lack of confidence with the security aspects , copmlexity and lack of customer trust are considered as the major technological factors that hinders the banks to adopt and develop E-banking technology.

The above results are consistent with the findings of (Gardachew, 2010), (Tan and Wu, 2002); (Marinson, 2001), (Trappey et al., 2001), (Wondwosen & Tsegai, 2005), (Kumaga, 2010); (Gibbs et al., 2003), (Kassahun Girma, 2016) and (Abduselam Fetu, 2018).

4.5 Opportunities for Adoption and growth of E-banking Technology

The below table contains Opportunities for Adoption and Growth of E-Banking technology in Banking Industry.

Table 4.8 Opportunities for adoption and growth of E-Banking technology

No	Aspec	Distribution of number of response							
		SD	D	Ne	A	SA	N	Mean	Sdt. Dev.
1	Improvement in the banking habit of the society	2	4	6	27	14	53	3.89	1.013
2	Customer attitude towards E-banking is increasing	1	9	3	26	14	53	3.81	1.075
3	Commitment of the governments to strengthen the banking industry	4	1	11	25	12	53	3.75	1.072
4	Commitment of the governments to facilitate ICT infrastructure	1	4	12	27	9	53	3.74	0.902
5	Existence of high demand	3	7	8	22	13	53	3.66	1.159
6	Support from other worldwide organization such as world bank and etc	2	6	12	25	8	53	3.58	1.008
7	Late adopter opportunities	5	3	15	23	7	53	3.45	1.102

Source: survey report, 2021

The above table 4.8 highlighted that improvement in the banking habit of the society and increasing Customer attitude towards E-banking are existing opportunities fostering the adoption and development of E-banking technology in Ethiopia banking were the mean value are 3.89 and 3.81, respectively as per the response of the sampled participants.

The respondent also agreed that Commitment of the governments to strengthen the banking industry is considered as existing opportunities for the adoption and development of E-banking technology were the mean score was found 3.75.

Accordingly, the sampled respondents also agreed with the idea that commitment of the government to facilitate the expansion of ICT infrastructure, existence of high demand,

support from other worldwide organization such as world bank and later adopted opportunities are existing opportunities for the adoption and development of E-banking technology in Ethiopia banking industry. This is evidenced by the data collected from the respondents with mean score of 3.74, 3.66, 3.58 and 3.45 respectively.

To sum up, improvement in the banking habit of the society, increasing in customer attitude towards E-banking, commitment of the governments to strengthen the banking industry and commitment of the governments to facilitate ICT infrastructure are the most existed opportunities for the development of e-banking in Ethiopian banking industry.

The above results are consistent with the findings of (Gardachew, 2010), (Abebe Zeleqe, 2016), (Kassahun Girma, 2016) and (Abduselam Fetu, 2018)

4.6 Benefits Realized from the adoption and growth of E-banking Technology

An advantage that is expected to be gained from the practice of E-banking covers both operational and Service benefits for the banking industries, customers and for the economy. Operational Benefits include speed and efficiency, icrease productivity, reduce paper work, Low transaction cost, increase realiblity and encourage foreign currency generetion. Services benefit include improved customer's satisfaction, create better relation among bank, Overcome geographical limitation, encourage price transparency, facilitate marketing and market access (Lu, 2005 cited Meaza Wandimmu ,2013).

A total of 15 questions on "Benefits" of adoption and growth 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 mean tried to tell the averages where the data points fall for each specific variable while the 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 following section summarizes respondents' views of expectations and perceived benefits for E-banking adoption and development. For analysis purpose perceived benefits are classified into operational efficiency and service benefits ((Futcher, 2003 cited Kasahuun Girma, 2016).

4.6.1 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 4.9.

Table 4.9 Operational Benefits the banks gain from adoption and growth of E-Banking

No	Aspects	Distribution of number of response							
		SD	D	N	A	SA	N	Mean	Sdt. Dev.
1	Increase speed and efficiency	1	-	5	10	37	53	4.55	0.822
2	Reduce paper work	1	1	1	18	32	53	4.49	0.800
3	Increase productivity of the bank	1	-	5	16	31	53	4.43	0.821
4	Low transaction cost	1	3	6	16	27	53	4.23	0.993
5	Enhance foreign currency generation	4	2	9	11	27	53	4.04	1.240
6	Increase reliability and reducing errors	2	4	2	28	17	53	4.02	1.009

Source: Field survey report, 2021

The potential operational benefits of E-banking technology as perceived by the banks identified in this study as captured in the above table 4.9, the respondents strongly agreed that adoption and development of E-banking technology in Ethiopia banking industry will increase speed and efficiency, Reduce paper work and Increase productinvity of the bank. This is evidenced by the data collected from the respondents with mean score of 4.55, 4.49 and 4.43 respectively.

The result further revealed that large number of respondent (50.9% strongly agree and 30.2% agreed) that adoption of E-banking technology low or reduce transaction cost, and also (50.9% stongly agree and 20.8% agreed) that adoption of E-banking technology encourage foreign currency. This agreement is based on the responses of the respondents with mean score 4.23 and 4.04 respectively.

Lastly, the other operational benefit of E-banking technology identified in this study is increase reliability and reducing errors. This agreement is also based on the responses ofthe respondents with mean score of 4.02.

In general, almost all respondents agree and strongly agree with that of the above listed operational benefits of e-banking to the banks. As a result, all are considered as the benefit of the bank resulted from provision of e-banking services in commercial bank of Ethiopia.

This finding is consistent with some existing findings in the literature, such as (Yonas, 2017), (Dawd, 2009), (Olga, 2003), (Shah and Clarke , 1997), (Kassahun Girma, 2016), (Abebe Zeleqe, 2016), (Abduselam Fetu, 2018) and (Cobb, 2005).

4.6.2 Service 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 4.10.

Table 4.10 Service Benefits the banks gain from adoption and growth of E-banking

No	Aspects	Distribution of number of response							
		SD	D	N	A	SA	N	Mean	Sdt. Dev.
1	E-banking improve customer satisfaction	-	1	3	18	31	53	4.49	0.697
2	Create better relation among banks and clients	1	-	3	19	30	53	4.45	0.774
3	Improve transaction speeds	2	1	1	16	33	53	4.45	0.932
4	Reduce the long queue available in banking hall	1	1	5	14	32	53	4.42	0.887
5	No time limit to access bank account and information	2	2	4	15	30	53	4.30	1.030
6	Facilitate marketing and market access	1	-	8	19	25	53	4.26	0.858
7	Facilitate marketing and market access	1	-	8	19	25	53	4.26	0.858
8	Encourage price transparency	3	1	5	17	27	53	4.21	1.081
9	Overcome geographical limitation	1	4	4	19	25	53	4.19	1.001

Source: Field survey report, 2021

The potential services benefits of E-banking technology as perceived by the banks identified in this study as captured in the above table 4.10, the respondents strongly agree and agreed that adoption and development of E-banking technology in Ethiopia banking industry will gives service benefit such as E-banking improve customer satisfaction, create better relation among bank, improve transaction speed, reduce the long queue available in banking hall and reduce time limit to access the bank account and information. This is evidenced by the data collected from the respondents with mean score of 4.49, 4.45, 4.45, 4.42 and 4.30 respectively.

The result further revealed that large number of respondent (47.2% strongly agree and 35.8%agreed) that adoption of E-banking technology Facilitate marketing and market access, and also (50.9% stongly agree and 30.2% agreed) that adoption of E-banking technology, E-Banking is more accessible to users than visiting . This agreement is based on the responses of the respondents with mean score 4.26 and 4.23 respectively.

Lastly, the other services benefit of E-banking technology identified in this study is encourage price transparency and overcome geograhical limitation. This agreement is also based on the responses ofthe respondents with mean score of 4.21 and 4.19 respectively.

To sum up, in the same manner almost all respondents agree and strongly agree with that of the above listed service benefits of e-banking to the banks as well as customers. As a result, all are considered as the benefit of the bank resulted from provision of e-banking services in commercial bank of Ethiopia.

The survey result is consistent with the findings of (Devamohan, 2002), (Dawd, 2004), (Moon and Kim, 2001), (Wang et al., 2003), (Amin et al., 2008), (Pakkarainen et al., 2004)), (Fatima, 2015), (Olga, 2003), (Abduselam Fetu, 2018), (Kassahun Girma, 2016), (Abebe Zeleqe, 2016) and (Gardachew, 2010).

4.7 Attitude of Customers About E-Banking

Table 4.11 Attitude of customer about adoption and growth of E-banking

No	Aspects	Distribution of number of response								Rank
		SD	D	Ne	A	SA	N	Mean	Sdt. Dev.	
1	Customers think that using electronic banking facility saves their time and Money	2	6	4	19	27	58	4.09	1.128	3
2	Customers think that using electronic banking facility reduce space constraint	3	8	2	19	26	58	3.98	1.235	6
3	Customers think that using electronic banking facility support collaboration and sharing of information	2	5	5	22	24	58	4.05	1.083	4
4	Customers are aware of the usefulness of electronic banking services.	3	3	5	34	13	58	3.88	0.993	7
5	I can quick and continuous access to information about my account	3	4	4	20	27	58	4.10	1.135	2
6	E –banking services help me to better manage finance transactions	4	4	4	21	25	58	4.02	1.192	5
7	E-banking service is more accessible to users than visiting a bank branch.	-	4	5	20	29	58	4.28	0.894	1
8	Learning and using electronic banking is easy to use	4	4	3	37	10	58	3.78	1.044	8
9	The services are adapted to disable and elder people who are lacking computer experience	2	32	15	9	-	58	2.53	0.799	13
10	Customers have high degree of trust on the bank and are satisfied with security of electronic banking service provided by the Bank.	-	30	13	8	7	58	2.86	1.067	12
11	Customers are concerned about their private information & security policy	3	20	16	12	7	58	3.00	1.124	11

12	There is a user privacy policy mentioned on the website to strengthen trust of customers	1	37	19	1	-	58	2.34	0.548	14
13	The Bank provides help (demo) on its website to use electronic banking for a new user.	31	13	12	2	-	58	1.74	0.909	15
14	The Bank provides training to enhance awareness of customers to use electronic banking	5	3	24	21	5	58	3.31	1.012	10
15	Customers are fully aware & have enough information about electronic banking services.	-	10	18	29	1	58	3.36	0.788	9
	Average attitudes or means							**3.43**		

Source: Field survey report, 2021

The attitude of customers about e-banking is different with varies condition as well as at various environment. The above table 4.11 highlighted that, the attitude of customer related to "E-banking service is more accessible to users than visiting a bank branch" shows; 29 respondents represent 50% strongly agree, 20 respondents represent 34.5% agree, 5 respondents represent 8.6% neutral, 4 respondents represents 6.9% disagree and there is no respondents strongly disagree which result in a mean of 4.28.

Attitudes of customers related to "E-banking service for quick and continuos access to information about accuount" shows; 27 respondents represent 46.6% strongly agree, 20 respondents represent 34.5% agree, 4 respondents represent 6.9% neutral, 4 respondents, represent 6.9% disagree, and 3 respondents represent 5.2% strongly disagree which scored a mean of 4.10.

E-banking technology helps customers think that using "E-banking facility saves their time and money" shows 27 respondents represent 46.6% strongly agree, 19 respondents represent 32.8% agree, 4 respondents represent 6.9% neutral, 6 respondents represent 10.3% disagree and 2 respondents represent 3.4% strongly disagree which scored a mean of 4.09.

In addittion, in table 4.11 shows 24 respondents represent 41.4% strongly agree, 22 respondents represent 37.9% agree, 5 respondents represent 8.6% neutral, 5 respondents represent 8.6% disagree and 2 respondents represent 3.4% strongly disagree for for

customres that using e-banking facility support collaboration and sharing of information which result in a mean of 4.05.

To sum up, according to data the average respondents attitude is 3.43 this show far greater that an average 2.5 these leads to conclude almost all customers are strong positive attitude about commercial bank of Ethiopia electronic banking lunching Aleyu cherenet, 2015.

The survey result is consistent with the findings (Aleyu Chernet, 2015) and (Meaza W, 2013).

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATION

5.1 Conclusion

The banking industry in Ethiopian is underdeveloped and therefore there is an immediate need to embark on capacity building arrangements and modernize the banking system by employing the state of the art technology being used anywhere in the world. The banks operating in Ethiopia should recognize the need for introducing electronic banking system to satisfy their customers and meet the requirements of rapidly expanding domestic and international trades, and increasing international banking services.

Benefits of E-banking

- The findings of the study reveals that, potential operational efficiency benefits of E-banking adoption and development as perceived by the Ethiopian banks are: increase speed and efficiency, reduce paper work, increase productivity of the bank, lower transaction cost and enhance foreign currency generation. This implies that the bank adopts e-banking services in order to be advantageous from the above variety of benefits as a result of adopting e-banking services.
- Moreover, the banks also realized service benefits like, improving customer satisfaction, create better relation among bank and clients, improve transaction speed, reduce the long queues available in banking hall and limit time acess to bank information. This also implies that the customers are starting using of e-banking products in order to be beneficiary on the e-banking service benefits.

Challenges of E-banking

The finding of this study shows that, the organizational, environmental, and technological related challenges of E-banking that hinders the adoption of E-banking system in Ethiopia.

- This major challenges include; dynamic change in information technology, network failure, lack of customer awareness with E-banking, unability to withdraw large amount of money, absence financial networks that links different banks, electric power interruption, lack of confidence with security and trust and Complexity.

- 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.

Opportunities of the E-banking

- Accordingly, improvement in the banking habit of the society, increasing in attitude of customer towards E-banking, commitment of the government to strengthen the banking industry, commitment of the government to facilitate the expansion of ICT infrastructureand existence of high demand are good opportunities for the adoption and development of E-banking service in Ethiopia.

Attitudes of E- banking :

- Customers of the selected private bank of Ethiopia have good attitude about E–banking services help them to more accessible to users than visiting a bank branch, can quick and continuous access to information about their account, Customers think that using electronic banking facility reduce space constraint and Electronic banking technology support collaboration and sharing of information.
- To sum up, according to data gathered shows that almost all customers have strong positive attitude about E-banking services lunched by the banks.

5.2 Recommendations

Based on the findings, the researcher came up with the following possible recommendations to policy makers, the banks, and the government in order to overcome the challenges, exploit the untapped opportunities in adoption of E-banking technology and to ensure a successful practice of E-banking technology in Ethiopia bank industry.

- The government should support the electronic banking sector by investing a comprehensive regulatory and legal framework for e-commerce and e-payment, by providing incentives for financial institutions to invest rigorously on ICT and use of ecommerce
- The Bank should also create deep awareness to community concerning the E-banking products they offer and the benefits associated with using E-banking services through advertisement on the internet, mass media as well as through organizing public exhibition and talk shows.

- Besides, the bank should attract the community to use the technology by diverse incentive campaigns. This way, customers' interest would be aroused on telecommunication infrastructure development.
- Choice the best means of advertising mechanism for the customers, consider those who live in city and those who live in rural area. More focus on the content of word, and ways of advertising is a sensitive issue for customers. The bank tries to reduce the gap between what the bank says and what actually done about advertising.
- The Ethiopian banks are lacking in skilled man-power that is necessary to extent e-banking services. Sometimes the banks may face resistant from the staff members to establish these services. First all, the banks have to create reliable environment for e banking. It plays a crucial role in developing the e banking. The Ethiopian civil code is not enough to make still Ethiopia hags behind in establishing separate legal framework for e-commerce that includes e banking such as data protection laws, internet laws etc. The government has to give emphasis on establishing comprehensive legal framework in order to facilitate e banking.

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Appendix 1 Questionnaire

Jimma University

College of Business and Economics Department of Accounting and Finance

Questionnaire to be filled by Bank Employees

Research Topic :- Challenges and Opportunities of E-lectronic Banking services in Ethiopa Banking Industry Evidence from Private Banks.

Dear Respondent, I would like to express my sincere appreciation for your time, honest and prompt responses.

Objective

This questionnaire is designed to collect data for examining the challenges and opportunities of electronic banking in Ethiopia Banking industry. The information that you offer me with this questionnaire will be used as a primary data in which I am conducting as a partial requirement of Msc in accuonting and finance. Here I kindly request you to attempt all the questions in the questionnaire to meet the aim of the study. Whatever information is provided will be treated with utmost confidentiality and strictly will be used for academic purpose only. There is no need to write your name. Hence, this research is believed to be evaluated in terms of its contribution towards investigating the challenges and opportunities of e-banking along with its contribution to improvements in the banking industry of Ethiopia.

General Instructions

- There is no need of writing your name.
- In all cases, where answers to options are available, please tick (√) in the appropriate box.
- For questions that demand your opinion, please try to honestly describe your responses on the space provided.

Part I Personal information

1. Name of the bank _____.

2. Brach name _____

3. Gender: Male ☐ Female ☐

4 . Age: 20-30 ☐ 31-40 ☐ 41-50 ☐

5. Educational level: Diploma holder ☐ First degree holder ☐

Masters degree ☐ Above ☐

6. Position on the Bank: Brach manager ☐

Customer Service Officer (CSO) ☐ Customer service manager ☐

7. Monthly income (in Eth. Birr): 2401-3000 ☐ 3001-4000 ☐

4001 - 6000 ☐ Above 6000 ☐

8. Work Exprience :- 0- 5years ☐ 6-10 years ☐ 11-20years ☐

Above 20years ☐

9. What type of E-banking services does the bank provide to its customers.

- ATM ☐ Debit card ☐
- Mobile banking ☐ Credit card ☐
- Internet banking ☐ SMS banking ☐
- Point-of-sale Transfer Terminals ☐ Electronic fund transfer ☐
- Other (please specify)_____

10. Total number of Employee of the Bank as a branch

- ✓ Clerical _____ Non-clerical_____

11. Number of Professional Staff/ Expert Involve in Providing E-banking Services directly or indirectly as a branch _____.

Part II Questions regarding E-banking challenges .

Below are lists of questioners relating to challenges of E-banking services . 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".Each choice is identified by numbers ranged from 1 to 5.

Note:-SA = Strongly agree N = Neutral SD = Strongly Disagree A = Agree D = Disagree

The following are some **challenges faces** the banks, when adopting E-banking system, please indicate level of your choice .		SA 5	A 4	N 3	D 2	SD 1
I Technological Factors						
1	Customer fear of risk to use E-banking technology					
2	Lack of confidence with the security aspects					
3	Complexity					
4	Frequent power interruption					
5	Customer do not trust the E-banking technology provided by bank					
6	Customer has the access to personal computer and internet					
7	Lack of experienced and skilled IT professionals to administer latest technologies.					
8	Slow banks response to correct erroneous transactions					
9	Lack of ICT knowledge					
II Environmental factor						
10	Lack of available ICT infrastructure					
11	Lack of suitable legal and regulatory framework					
12	Lack of adequate cordination, interaction and cooperation beetween banks and other decision making centers in E-banking context.					
13	Language are an obstacle to use E-banking					
14	Network failure are serios problem to use E-banking					
15	The dynamic change in information technology are serious challenges for understanding about E-banking					
16	Electric (power) interruption are a serious problem to use E-banking					
17	Relative high cost of internet					
18	Political instabilities in countries as well as neighboring countries					
III Organizational factor						

19	High cost of implementation of E-banking					
20	Lack of technical and managerial skills in implementation and development of E-banking technology					
21	Resistance to change in technology among board, top management and staff.					
22	Lack of customer awarness with E-banking					
23	Lack of sufficient government support					
24	Lack of law mandating the bank to adopt E-banking technology					
25	Inadequate banking system					
26	Absence of financial networks that links different banks					
27	Unable to withdraw large amount of money					
28	High e-banking services' fees					

Please kindly state any other challenges that the banks faces in the adoption of E-banking into Ethiopia banking industry.

_____

_____

_____

_____.

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

_____

Part II Questions regarding E-banking opportunities.

	What are the Exiting opportunities in the country that initiate E-banking services	SA 5	A 4	N 3	D 2	SD 1
29	Commitment of the governments to strenghen the banking industry					
30	Late adopter opportunities					
31	Existence of high demand					
32	Improvement in the banking habit of the society					
33	Commitment of the governments to facilitate ICT infrastucture					
34	Support from other worlwide organization such as world bank and etc					
35	Customer attitude towards E-banking is increasing					

Please kindly state any other opportunities that initiaties the adoption of E-banking?

_____

_____

_____

_____

_____.

III Questions regarding E-banking benefit

	The following are some of the benefit the derived from the practice of E-banking system, please indicate yuor choice	SA 5	A 4	N 3	D 2	SD 1
	Operational Benefit					
36	Increase speed and efficiency					
37	Increase productivity of the bank					
38	Reduce paper work					
39	Low transaction cost					
40	Increase reliability and reducing errors					
41	Enhance foreign currency generation					
	Service Benefit					
42	Create better relation among banks and clients					
43	E-banking improve customer satisfaction					
44	Overcome geographical limitation					
45	Improve transaction speeds					
46	Encourage price transparency					
47	Facilitate marketing and market access					
48	Reduce the long queue available in banking hall					
49	E-banking is more accessible to users than visiting bank					
50	No time limit to access bank account and information					

Please kindly state any other benefit realized from the adoption of E-banking system.

_____

_____

_____

_____.

Appendix 2 Questionnaire

Jimma University

College of Business and Economics Department of Accounting and Finance

Questionnaire to be filled by Customers

Research Topic: Challenges and Opportunities of Electronic Banking services in Ethiopa Banking Industry Evidence from private banks.

Dear Respondent, I would like to express my sincere appreciation for your time, honest and prompt responses.

Objective

This questionnaire is designed to collect data for examining the challenges as well as opportunities of electronic banking in Ethiopia. The information that you offer me with this questionnaire will be used as a primary data in which I am conducting as a partial requirement of Msc in accuonting and finance. Here I kindly request you to attempt all the questions in the questionnaire to meet the aim of the study. Whatever information is provided will be treated with utmost confidentiality and strictly will be used for academic purpose only. There is no need to write your name. Hence, this research is believed to be evaluated in terms of its contribution towards investigating the challenges as well as opportunities of e-banking along with its contribution to improvements in the banking industry of Ethiopia.

General Instructions

- There is no need of writing your name.
- In all cases, where answers to options are available, please tick (√) in the appropriate box.
- For questions that demand your opinion, please try to honestly describe your responses on the space provided.

Part I Personal information

1. What type of E-banking services you are using .

- ATM
- Debit card
- Mobile banking
- Credit card
- Internet banking
- SMS banking
- Point-of-sale Transfer Terminals
- Electronic fund transfer
- Other (please specify)_____

2. Educational level: Below diploma Diploma holder First degree holder Masters degree Above

3. Gender: Male Female

4. Age: 20-30 31-40 41-50 51-60

5. Job Title: Government Employee Private Employee own work no job

6. How long have you use e-banking services? Still not use Less than 1 year 1-3years More than 3 years

7. What are the best means of knowing new information about electronic banking for you?

- ✓ TV advertizing
- ✓ brusher and pamphlet
- ✓ direct contact with bankers
- ✓ hearing from your colleague
- ✓ sales promotion
- ✓ magazines‘ and
- ✓ news if other‘s

Part II Questions regarding attitude of customer

	Attitudes of customers	SA 5	A 4	N 3	D 2	SD 1
	Perceived Usefulness					
1	Customers think that using electronic banking facility saves their time and Money					
2	Customers think that using electronic banking facility reduce space constraint					
3	Customers think that using electronic banking facility support collaboration and sharing of information					
4	Customers are aware of the usefulness of electronic banking services.					
5	I can quick and continuous access to information about my account					
6	E –banking services help me to better manage finance transactions					
	Perceived Ease of Use					
7	E-banking service is more accessible to users than visiting a bank branch.					
8	Learning and using electronic banking is easy to use					
9	The services are adapted to disable and elder people who are lacking computer experience					
	Trust and security					
10	Customers have high degree of trust on the bank and are satisfied with security of electronic banking service provided by the Bank.					
11	Customers are concerned about their private information & security policy					
12	There is a user privacy policy mentioned on the website to strengthen trust of customers					
	Awarness					
13	The Bank provides help (demo) on its website to use electronic banking for a new user.					
14	The Bank provides training to enhance awareness of customers to use electronic banking					
15	Customers are fully aware & have enough information about electronic banking services.					

Appendix 3 Survey Data

Frequency Tables

Q1. Customer fear of risk to use E-banking technology

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	11.3	11.3	11.3
	Disagree	4	7.5	7.5	18.9
	Neutral	11	20.8	20.8	39.6
	Agree	21	39.6	39.6	79.2
	Strongly agree	11	20.8	20.8	100.0
	Total	53	100.0	100.0	

Q2. Lack of confidence with the security aspects

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	3.8	3.8	3.8
	Disagree	9	17.0	17.0	20.8
	Neutral	13	24.5	24.5	45.3
	Agree	23	43.4	43.4	88.7
	Strongly agree	6	11.3	11.3	100.0
	Total	53	100.0	100.0	

Q3. Complexity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	11.3	11.3	11.3
	Disagree	5	9.4	9.4	20.8
	Neutral	16	30.2	30.2	50.9
	Agree	21	39.6	39.6	90.6
	Strongly agree	5	9.4	9.4	100.0
	Total	53	100.0	100.0	

Q4. Frequent power interruption

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	9.4	9.4	9.4
	Disagree	8	15.1	15.1	24.5
	Neutral	7	13.2	13.2	37.7
	Agree	25	47.2	47.2	84.9
	Strongly agree	8	15.1	15.1	100.0
	Total	53	100.0	100.0	

Q5. Customer do not trust the E-banking technology provided by bank

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	18.9	18.9	18.9
	Disagree	10	18.9	18.9	37.7
	Neutral	6	11.3	11.3	49.1
	Agree	19	35.8	35.8	84.9
	Strongly agree	8	15.1	15.1	100.0
	Total	53	100.0	100.0	

Q.6. Customer has the access to personal computer and internet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	13.2	13.2	13.2
	Disagree	11	20.8	20.8	34.0
	Neutral	15	28.3	28.3	62.3
	Agree	15	28.3	28.3	90.6
	Strongly agree	5	9.4	9.4	100.0
	Total	53	100.0	100.0	

Q.7. Lack of experienced and skilled IT professionals to administer latest technologies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	14	26.4	26.4	26.4
	Disagree	7	13.2	13.2	39.6
	Neutral	13	24.5	24.5	64.2
	Agree	13	24.5	24.5	88.7
	Strongly agree	6	11.3	11.3	100.0
	Total	53	100.0	100.0	

Q.8. Slow banks response to correct erroneous transactions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	14	26.4	26.4	26.4
	Disagree	6	11.3	11.3	37.7
	Neutral	10	18.9	18.9	56.6
	Agree	18	34.0	34.0	90.6
	Strongly agree	5	9.4	9.4	100.0
	Total	53	100.0	100.0	

Q.9. Lack of ICT knowledge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	15	28.3	28.3	28.3
	Disagree	13	24.5	24.5	52.8
	Neutral	7	13.2	13.2	66.0
	Agree	11	20.8	20.8	86.8
	Strongly agree	7	13.2	13.2	100.0
	Total	53	100.0	100.0	

Q.10. Lack of available ICT infrastructure

		Frequency	Percent	Valid Percent	Cumulative Percent

Valid	Strongly Disagree	10	18.9	18.9	18.9
	Disagree	4	7.5	7.5	26.4
	Neutral	12	22.6	22.6	49.1
	Agree	17	32.1	32.1	81.1
	Strongly agree	10	18.9	18.9	100.0
	Total	53	100.0	100.0	

Q.11. Lack of suitable legal and regulatory framework

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	11.3	11.3	11.3
	Disagree	10	18.9	18.9	30.2
	Neutral	17	32.1	32.1	62.3
	Agree	15	28.3	28.3	90.6
	Strongly agree	5	9.4	9.4	100.0
	Total	53	100.0	100.0	

Q.12. Lack of adequate cordination, interaction and cooperation beetween banks and other decision making centers in E-banking context.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	9.4	9.4	9.4
	Disagree	8	15.1	15.1	24.5
	Neutral	9	17.0	17.0	41.5
	Agree	28	52.8	52.8	94.3
	Strongly agree	3	5.7	5.7	100.0
	Total	53	100.0	100.0	

Q.13. Language are an obstacle to use E-banking

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	7.5	7.5	7.5
	Disagree	11	20.8	20.8	28.3
	Neutral	8	15.1	15.1	43.4
	Agree	22	41.5	41.5	84.9
	Strongly agree	8	15.1	15.1	100.0

Q1. Customer fear of risk to use E-banking technology

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	11.3	11.3	11.3
	Disagree	4	7.5	7.5	18.9
	Neutral	11	20.8	20.8	39.6
	Agree	21	39.6	39.6	79.2
	Strongly agree	11	20.8	20.8	100.0
	Total	53	100.0	100.0	

Q.14. Network failure are serios problem to use E-banking

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	7.5	7.5	7.5
	Disagree	5	9.4	9.4	17.0
	Neutral	5	9.4	9.4	26.4
	Agree	27	50.9	50.9	77.4
	Strongly agree	12	22.6	22.6	100.0
	Total	53	100.0	100.0	

Q.15. The dynamic change in information technology are serious challenges for understanding about E-banking

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	6	11.3	11.3	11.3
	Neutral	12	22.6	22.6	34.0
	Agree	23	43.4	43.4	77.4
	Strongly agree	12	22.6	22.6	100.0
	Total	53	100.0	100.0	

Q.16. Electric (power) interruption are a serious problem to use E-banking

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	13.2	13.2	13.2
	Disagree	5	9.4	9.4	22.6
	Neutral	8	15.1	15.1	37.7
	Agree	23	43.4	43.4	81.1

	Strongly agree	10	18.9	18.9	100.0
	Total	53	100.0	100.0	

Q.17. Relative high cost of internet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	11.3	11.3	11.3
	Disagree	7	13.2	13.2	24.5
	Neutral	11	20.8	20.8	45.3
	Agree	22	41.5	41.5	86.8
	Strongly agree	7	13.2	13.2	100.0

Q.18. Political instabilities in countries as well as neighboring countries

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	17.0	17.0	17.0
	Disagree	13	24.5	24.5	41.5
	Neutral	14	26.4	26.4	67.9
	Agree	11	20.8	20.8	88.7
	Strongly agree	6	11.3	11.3	100.0
	Total	53	100.0	100.0	

Q.19. High cost of implementation of E-banking

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	7.5	7.5	7.5
	Disagree	7	13.2	13.2	20.8
	Neutral	14	26.4	26.4	47.2
	Agree	19	35.8	35.8	83.0
	Strongly agree	9	17.0	17.0	100.0
	Total	53	100.0	100.0	

Q.20. Lack of technical and managerial skills in implementation and development of E-banking technology

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	11.3	11.3	11.3
	Disagree	10	18.9	18.9	30.2
	Neutral	12	22.6	22.6	52.8
	Agree	18	34.0	34.0	86.8
	Strongly agree	7	13.2	13.2	100.0
	Total	53	100.0	100.0	

Resistance to change in technology among board, top management and staff.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	15.1	15.1	15.1
	Disagree	6	11.3	11.3	26.4
	Neutral	13	24.5	24.5	50.9
	Agree	16	30.2	30.2	81.1
	Strongly agree	10	18.9	18.9	100.0
	Total	53	100.0	100.0	

Lack of customer awarness with E-banking

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.9	1.9	1.9
	Disagree	6	11.3	11.3	13.2
	Neutral	15	28.3	28.3	41.5
	Agree	19	35.8	35.8	77.4
	Strongly agree	12	22.6	22.6	100.0
	Total	53	100.0	100.0	

Lack of sufficient government support

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	5.7	5.7	5.7
	Disagree	7	13.2	13.2	18.9
	Neutral	17	32.1	32.1	50.9

	Agree	19	35.8	35.8	86.8
	Strongly agree	7	13.2	13.2	100.0
	Total	53	100.0	100.0	

Q.24. Lack of law mandating the bank to adopt E-banking technology

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	9.4	9.4	9.4
	Disagree	3	5.7	5.7	15.1
	Neutral	22	41.5	41.5	56.6
	Agree	18	34.0	34.0	90.6
	Strongly agree	5	9.4	9.4	100.0
	Total	53	100.0	100.0	

Q.25. Inadequate banking system

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	11.3	11.3	11.3
	Disagree	10	18.9	18.9	30.2
	Neutral	14	26.4	26.4	56.6
	Agree	20	37.7	37.7	94.3
	Strongly agree	3	5.7	5.7	100.0
	Total	53	100.0	100.0	

Q.26. Absence of financial networks that links different banks

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	7.5	7.5	7.5
	Disagree	7	13.2	13.2	20.8
	Neutral	11	20.8	20.8	41.5
	Agree	23	43.4	43.4	84.9

	Strongly agree	8	15.1	15.1	100.0
	Total	53	100.0	100.0	

Q.27. Unable to withdraw large amount of money

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	5.7	5.7	5.7
	Disagree	10	18.9	18.9	24.5
	Neutral	7	13.2	13.2	37.7
	Agree	23	43.4	43.4	81.1
	Strongly agree	10	18.9	18.9	100.0
	Total	53	100.0	100.0	

Q.28. High e-banking services' fees

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	13.2	13.2	13.2
	Disagree	8	15.1	15.1	28.3
	Neutral	13	24.5	24.5	52.8
	Agree	19	35.8	35.8	88.7
	Strongly agree	6	11.3	11.3	100.0
	Total	53	100.0	100.0	

Q.29. Commitment of the governments to strenghen the banking industry

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	7.5	7.5	7.5
	Disagree	1	1.9	1.9	9.4
	Neutral	11	20.8	20.8	30.2
	Agree	25	47.2	47.2	77.4
	Strongly agree	12	22.6	22.6	100.0
	Total	53	100.0	100.0	

Q.30. Late adopter opportunities

		Frequency	Percent	Valid Percent	Cumulative Percent

Valid	Strongly Disagree	5	9.4	9.4	9.4
	Disagree	3	5.7	5.7	15.1
	Neutral	15	28.3	28.3	43.4
	Agree	23	43.4	43.4	86.8
	Strongly agree	7	13.2	13.2	100.0
	Total	53	100.0	100.0	

Q.31. Existence of high demand

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	5.7	5.7	5.7
	Disagree	7	13.2	13.2	18.9
	Neutral	8	15.1	15.1	34.0
	Agree	22	41.5	41.5	75.5
	Strongly agree	13	24.5	24.5	100.0
	Total	53	100.0	100.0	

Q.32. Improvement in the banking habit of the society

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	3.8	3.8	3.8
	Disagree	4	7.5	7.5	11.3
	Neutral	6	11.3	11.3	22.6
	Agree	27	50.9	50.9	73.6
	Strongly agree	14	26.4	26.4	100.0
	Total	53	100.0	100.0	

Q.33. Commitment of the governments to facilitate ICT infrastucture

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.9	1.9	1.9
	Disagree	4	7.5	7.5	9.4
	Neutral	12	22.6	22.6	32.1

	Agree	27	50.9	50.9	83.0
	Strongly agree	9	17.0	17.0	100.0
	Total	53	100.0	100.0	

Q.34. Support from other worlwide organization such as world bank and etc

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	3.8	3.8	3.8
	Disagree	6	11.3	11.3	15.1
	Neutral	12	22.6	22.6	37.7
	Agree	25	47.2	47.2	84.9
	Strongly agree	8	15.1	15.1	100.0
	Total	53	100.0	100.0	

Q.35. Customer attitude towards E-banking is increasing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.9	1.9	1.9
	Disagree	9	17.0	17.0	18.9
	Neutral	3	5.7	5.7	24.5
	Agree	26	49.1	49.1	73.6
	Strongly agree	14	26.4	26.4	100.0
	Total	53	100.0	100.0	

Q.36. Increase speed and efficiency

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.9	1.9	1.9
	Neutral	5	9.4	9.4	11.3
	Agree	10	18.9	18.9	30.2
	Strongly agree	37	69.8	69.8	100.0
	Total	53	100.0	100.0	

Q.37. Increase productivity of the bank

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.9	1.9	1.9
	Neutral	5	9.4	9.4	11.3
	Agree	16	30.2	30.2	41.5
	Strongly agree	31	58.5	58.5	100.0
	Total	53	100.0	100.0	

Q.38. Reduce paper work

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.9	1.9	1.9
	Disagree	1	1.9	1.9	3.8
	Neutral	1	1.9	1.9	5.7
	Agree	18	34.0	34.0	39.6
	Strongly agree	32	60.4	60.4	100.0
	Total	53	100.0	100.0	

Q.39. Low transaction cost

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.9	1.9	1.9
	Disagree	3	5.7	5.7	7.5
	Neutral	6	11.3	11.3	18.9
	Agree	16	30.2	30.2	49.1
	Strongly agree	27	50.9	50.9	100.0
	Total	53	100.0	100.0	

Q.40. Increase reliability and reducing errors

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	3.8	3.8	3.8
	Disagree	4	7.5	7.5	11.3
	Neutral	2	3.8	3.8	15.1
	Agree	28	52.8	52.8	67.9

	Strongly agree	17	32.1	32.1	100.0
	Total	53	100.0	100.0	

Q.41. Enhance foreign currency generation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	7.5	7.5	7.5
	Disagree	2	3.8	3.8	11.3
	Neutral	9	17.0	17.0	28.3
	Agree	11	20.8	20.8	49.1
	Strongly agree	27	50.9	50.9	100.0
	Total	53	100.0	100.0	

Q.42. Create better relation among banks and clients

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.9	1.9	1.9
	Neutral	3	5.7	5.7	7.5
	Agree	19	35.8	35.8	43.4
	Strongly agree	30	56.6	56.6	100.0
	Total	53	100.0	100.0	

Q.43. E-banking improve customer satisfaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	1.9	1.9	1.9
	Neutral	3	5.7	5.7	7.5
	Agree	18	34.0	34.0	41.5
	Strongly agree	31	58.5	58.5	100.0
	Total	53	100.0	100.0	

Q.44. Overcome geographical limitation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.9	1.9	1.9
	Disagree	4	7.5	7.5	9.4
	Neutral	4	7.5	7.5	17.0
	Agree	19	35.8	35.8	52.8
	Strongly agree	25	47.2	47.2	100.0
	Total	53	100.0	100.0	

Q.45. Improve transaction speeds

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	3.8	3.8	3.8
	Disagree	1	1.9	1.9	5.7
	Neutral	1	1.9	1.9	7.5
	Agree	16	30.2	30.2	37.7
	Strongly agree	33	62.3	62.3	100.0
	Total	53	100.0	100.0	

Q.46. Encourage price transparency

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	5.7	5.7	5.7
	Disagree	1	1.9	1.9	7.5
	Neutral	5	9.4	9.4	17.0
	Agree	17	32.1	32.1	49.1
	Strongly agree	27	50.9	50.9	100.0
	Total	53	100.0	100.0	

Q.47. Facilitate marketing and market access

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.9	1.9	1.9

	Neutral	8	15.1	15.1	17.0
	Agree	19	35.8	35.8	52.8
	Strongly agree	25	47.2	47.2	100.0
	Total	53	100.0	100.0	

Q.48. Reduce the long queue available in banking hall

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.9	1.9	1.9
	Disagree	1	1.9	1.9	3.8
	Neutral	5	9.4	9.4	13.2
	Agree	14	26.4	26.4	39.6
	Strongly agree	32	60.4	60.4	100.0
	Total	53	100.0	100.0	

Q.49. E-banking is more accessible to users than visiting bank

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	3.8	3.8	3.8
	Disagree	1	1.9	1.9	5.7
	Neutral	7	13.2	13.2	18.9
	Agree	16	30.2	30.2	49.1
	Strongly agree	27	50.9	50.9	100.0
	Total	53	100.0	100.0	

Q.50.No time limit to access bank account and information

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	3.8	3.8	3.8
	Disagree	2	3.8	3.8	7.5
	Neutral	4	7.5	7.5	15.1
	Agree	15	28.3	28.3	43.4
	Strongly agree	30	56.6	56.6	100.0
	Total	53	100.0	100.0	

Appendix 4 Survey Data

Q.1. Customers think that using electronic banking facility saves their time and Money

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	3.4	3.4	3.4
	Disagree	6	10.3	10.3	13.8
	Neutral	4	6.9	6.9	20.7
	Agree	19	32.8	32.8	53.4
	Strongly Agree	27	46.6	46.6	100.0
	Total	58	100.0	100.0	

Q.2. Customers think that using electronic banking facility reduce space constraint

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	5.2	5.2	5.2
	Disagree	8	13.8	13.8	19.0
	Neutral	2	3.4	3.4	22.4
	Agree	19	32.8	32.8	55.2
	Strongly Agree	26	44.8	44.8	100.0
	Total	58	100.0	100.0	

Q.3. Customers think that using electronic banking facility support collaboration and sharing of information

		Frequency	Percent	Valid Percent	Cumulative Percent

Valid	Stronlgy Disagree	2	3.4	3.4	3.4
	Disagree	5	8.6	8.6	12.1
	Neutral	5	8.6	8.6	20.7
	Agree	22	37.9	37.9	58.6
	Strongly Agree	24	41.4	41.4	100.0
	Total	58	100.0	100.0	

Q.4. Customers are aware of the usefulness of electronic banking services.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Stronlgy Disagree	3	5.2	5.2	5.2
	Disagree	3	5.2	5.2	10.3
	Neutral	5	8.6	8.6	19.0
	Agree	34	58.6	58.6	77.6
	Strongly Agree	13	22.4	22.4	100.0
	Total	58	100.0	100.0	

Q.5. I can quick and continuous access to information about my account

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Stronlgy Disagree	3	5.2	5.2	5.2
	Disagree	4	6.9	6.9	12.1
	Neutral	4	6.9	6.9	19.0
	Agree	20	34.5	34.5	53.4
	Strongly Agree	27	46.6	46.6	100.0
	Total	58	100.0	100.0	

Q.6 .E –banking services help me to better manage finance transactions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Stronlgy Disagree	4	6.9	6.9	6.9

	Disagree	4	6.9	6.9	13.8
	Neutral	4	6.9	6.9	20.7
	Agree	21	36.2	36.2	56.9
	Strongly Agree	25	43.1	43.1	100.0
	Total	58	100.0	100.0	

Q.7. E-banking service is more accessible to users than visiting a bank branch.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	4	6.9	6.9	6.9
	Neutral	5	8.6	8.6	15.5
	Agree	20	34.5	34.5	50.0
	Strongly Agree	29	50.0	50.0	100.0
	Total	58	100.0	100.0	

Q.8. Learning and using electronic banking is easy to use

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Stronlgy Disagree	4	6.9	6.9	6.9
	Disagree	4	6.9	6.9	13.8
	Neutral	3	5.2	5.2	19.0
	Agree	37	63.8	63.8	82.8
	Strongly Agree	10	17.2	17.2	100.0
	Total	58	100.0	100.0	

Q.9. The services are adapted to disable and elder people who are lacking Computer Service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Stronlgy Disagree	2	3.4	3.4	3.4
	Disagree	32	55.2	55.2	58.6
	Neutral	15	25.9	25.9	84.5
	Agree	9	15.5	15.5	100.0
	Total	58	100.0	100.0	

Q.10. Customers have high degree of trust on the bank and are satisfied with security of electronic banking service provided by the Bank.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	30	51.7	51.7	51.7
	Neutral	13	22.4	22.4	74.1
	Agree	8	13.8	13.8	87.9
	Strongly Agree	7	12.1	12.1	100.0
	Total	58	100.0	100.0	

Q.11. Customers are concerned about their private information & security policy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Stronlgy Disagree	3	5.2	5.2	5.2
	Disagree	20	34.5	34.5	39.7
	Neutral	16	27.6	27.6	67.2
	Agree	12	20.7	20.7	87.9
	Strongly Agree	7	12.1	12.1	100.0
	Total	58	100.0	100.0	

Q.12. There is a user privacy policy mentioned on the website to strengthen trust of customers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Stronlgy Disagree	1	1.7	1.7	1.7
	Disagree	37	63.8	63.8	65.5
	Neutral	19	32.8	32.8	98.3
	Agree	1	1.7	1.7	100.0
	Total	58	100.0	100.0	

Q.13. The Bank provides help (demo) on its website to use electronic banking for a new user.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Stronlgy Disagree	31	53.4	53.4	53.4
	Disagree	13	22.4	22.4	75.9

	Neutral	12	20.7	20.7	96.6
	Agree	2	3.4	3.4	100.0
	Total	58	100.0	100.0	

Q.14. The Bank provides training to enhance awareness of customers to use Electronic banking

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Stronlgy Disagree	5	8.6	8.6	8.6
	Disagree	3	5.2	5.2	13.8
	Neutral	24	41.4	41.4	55.2
	Agree	21	36.2	36.2	91.4
	Strongly Agree	5	8.6	8.6	100.0
	Total	58	100.0	100.0	

Q.15. Customers are fully aware & have enough information about electroning banking service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	10	17.2	17.2	17.2
	Neutral	18	31.0	31.0	48.3
	Agree	29	50.0	50.0	98.3
	Strongly Agree	1	1.7	1.7	100.0
	Total	58	100.0	100.0	