

**CHALLENGES AND PROSPECTS OF ELECTRONIC BANKING IN
COMMERCIAL BANK OF ETHIOPIA (A CASE OF JIMMA TOWN
BRANCHES)**



BY

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DECLARATION

I, **Arega Workineh**, declare that this study entitled as “**Challenge and prospect of E-banking service in Ethiopia**”, is my own work. I have carried out the research work independently with the guidance and support of the research advisor. This study had not been submitted to any degree/diploma in this or any other institution. It is done in partial fulfillment MBA.

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CERTIFICATE

This is to certify that **Arege Workineh** has carried out his research work on the topic entitled “**Challenges and prospect of E-banking service in Ethiopia**”. This work is original in nature and is suitable for submission to the award of MBA.

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ABSTRACT

Despite the growth of e-banking adoption worldwide, Ethiopian banks continue to conduct most of their banking transactions using traditional methods. The purpose of this study is to examine adoption of E-banking in the commercial bank of Ethiopian banking industry with respect to the challenges which can influence firms from taking advantage of E-banking system and expected opportunity derived by adopting the system. The research framework developed based on technology-organization environment model (TOE).The study used explanatory research approaches to gather data from a total of 154 employees. The study targeted a selected Jimma town branch including the district with total population of 250 from which 154 were selected using simple random sampling. Data from the respondents were collected using questionnaire. 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 frame work, Lack of ICT infrastructure and absence of competition between local and foreign banks. The study suggests a series of measures which could be taken 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 be focused on technological innovation competition rather than traditional bases of retail bank competition.

Keywords: - *(E-Banking, opportunity and challenges, Technology organization environment, chance of risk, perceived usefulness, perceived ease of use).*

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CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

E-banking is a product designed for the purposes of online banking that enables you to have easy. The business environment has globally changed and it has been characterized by stiff competition and this is not an exception to banks. Competition has pushed commercial banks towards becoming more innovative. These innovations include credit cards, ATMs, internet banking, mobile banking, youth oriented accounts, and women oriented banking, Interest free banking and agency banking which are most recently introduced in the banking sector (Bold, 2011).

Like all other social entities financial institutions in Ethiopia are being constantly expanding with technological innovations. For instance, till recently bank customers were used to stand in line to get financial services, but now because of the multi-channel service outlets they can perform it from anywhere at any time. Funds are transferred electronically between financial institutions and individual accounts, and between individual accounts using e-banking system (Shyamapada *et al.*, 2011)

Some banks also allow services such as stock market transactions, and the submission of standardized accounting payment files for bank transfers to third parties (Claessens *etal.*, 002). It had been projected that more than 32 million households globally were banking online by 2003 (Simpson, 2002). Banks and other financial institutions have moved to e-banking in their efforts to cut costs while maintaining reliable customer service (Kolodinsky and Hogarth, 2001).

It is evident that banks and other financial institutions in developed and developing countries are embracing e-banking. As technology evolves, different kinds of electronic banking systems emerge, each bringing a new dimension to the interaction between user and bank. They include Automated Teller Machine (ATM), mobile and Internet (online) banking, electronic funds transfer, direct bill payments and credit card (Gikandi and Bloor, 2010; Liaoa and Cheung, 2002).

The use of these facilities is on the increase. For example, in Kenya and Singapore a recent survey indicates that there is steady increase in use of E-banking technologies such as

Automated Teller Machine (ATM), mobile and Internet (online) banking, electronic funds transfer, direct bill payments and credit card (CBK 2008; Liao& Cheung, 2002). Among these E-banking facilities, the Automated Teller Machine (ATM) is the first well known and widely adopted system that was introduced to facilitate the access of the user to his banking activities (Nyangosi et al. 2009; Claessens et al., 2002).

In Ethiopia, Online banking is in its infant stage. Even though, the concept of online banking implemented in Ethiopia with a single service of SMS message during late 2008. It does not show that much improvement as its age. Now a day almost all banks are adopting e-banking system which is the state - of- the art. This is evident that the selected branches in Jimma are using the technologies.

In addition, the selected banks are making what seem like huge investments in technology to maintain and upgrade their infrastructure, in order not only to provide new electronic information based services, but also to manage their risk positions and pricing. The earliest forms of electronic and communications technologies used mainly in those banking offices were automation devices. However, Telephones, telex and facsimile were employed to speed up and make more efficient the process of service.

1.2. Statement of the problem

In a relatively short period of time, the Internet has moved from an occasional tool to one of the principal ways we communicate, entertain ourselves, and do work. And all that time we spend online has to come at the expense of something else. One main advancement technology has brought to us is the introduction of online banking or E-banking (Banji& Catherine 2004). Traditional banking is characterized by physical decentralization, with branches scattered around populated areas to give customers easy geographical access (Ainin et al., 2005). E- Banking does away with the need for most visits to the bank. However, according to Locket and Littler (1997), physical banks assure customers that their banks has substantial resource and guarantee the security of their savings.

A study indicated that electronic banking has been available in the UK since the early 1980s. It is not clear whether all customers want or are comfortable with electronic banking (Daniel and Storey, 1997). Technology is changing at a rapid pace making it difficult for both the customer and the bank to determine the best approach. Particular problems arise with trying to integrate new channels with legacy channels. It is for these reasons that academic research is needed in this newly emerging delivery channel (Daniel & Storey, 1997).

Similarly, in Ethiopia, most banks practicing online banking are also facing challenges such as customer preference of the online banking facility, Very poor Connection, Trust of the people in the modern tools, convenience of clients to utilize and adopt online banking facilities (Million 2013).

While numerous studies have been undertaken to examine issues in the wider context of Economic and Financial implication online banking, problem and prospect, comprehensive research in the area of online banking issues in the specific context of Ethiopia has been rather limited.

Sintayehu (2015) conducted a study on impact of E banking service on customer satisfaction on two private banks (wegagen & Dashen Bank) and CBE in Addis Ababa city. The researcher adopts explanatory approach so as to explain the relation between variables. However in taking sample the researcher does not consider the size of the bank rather he took 100 samples from each bank. As the researcher stated the proportion of CBE from the population of the study were about 58.2% whereas the sample were selected equally from the

three banks. In addition in measuring satisfaction he used a model developed for e retail not for e banking.

Similarly Million(2013) conducted a study on the impact of E banking on customer satisfaction by taking samples from Dashen and Wegagen banks at Gonder city. However the researcher only considers ATM as E- banking since there was no other E banking products at the time. More over the study limited on two branches and do not include the largest bank (i.e. CBE) that own largest portion of the country's bank customers. This study attempted to identify prospects and influencing challenges inhibiting acceptance of online banking in Ethiopian Commercial Banks with selected branches in Jimma town.

1.3. Research Questions

Based on the problem stated in this study, researcher develops the following research question.

To gain a comprehensive understanding of the phenomenon under investigation, and in order to be able to provide a sufficient justification for answering that question, the following specific questions needs to be addressed. For the purpose of the present research, these questions are:

1. What are the challenges of electronic banking service in CBE Jimma city branches?
2. What are the prospects of electronic banking service in CBE Jimma city branches?
3. What are the effects of technological, environmental and organizational factors on E banking dimension?
4. What are the relationship of those factors with E-banking service in CBE Jimma city branches?

1.4. Objective of the study

1.4.1. General objective

The main objective of the study is to assess the prospect and challenges of adoption of E-banking at Jimma Commercial Bank of Ethiopia city branches

1.4.2. Specific objectives

1. To assess the challenges of electronic banking service in CBE Jimma city branches
2. To identify the prospects of electronic banking service in CBE Jimma city branches
3. To identify the effects of technological, environmental and organizational factors on E banking dimension
4. To identify the relationship of those factors with E-banking service in CBE Jimma city branches

1.5. Significance of the study

For the organization (bank) it is important to show its strength and weakness as well as the satisfaction level of customers. This means that, after the completion of the study the bank will use the researchers finding as an input to understand the satisfaction level of customers and take corrective actions for the customers complain or dissatisfaction. It is also important to develop the researcher's knowledge and skill on how to conduct research and also it is important to develop the researcher's knowledge with regard to assessing challenges and prospects on the bank. In addition to this, the study is important to the students as the pre-request for graduation and to understand the ATM service on customers satisfaction and used to adapt different challenges when conducting another study for the future. Not only is this but, the study useful resource for other researchers as a reference and for better improvement of the study for the future.

1.6. Delimitation/Scope of the study

For the reason that, the research on a large basis needs much funds as well as time and manpower to survey all outlay branches of commercial bank of Ethiopia but for the sake of the study precision, constraint on the above mentioned resources, this study will be restricted to Commercial Bank of Ethiopia Jimma city branches. Also the study is only concerning the assessment of prospect and challenges of using e-payment service within Jimma town using technological, environmental and organizational factors. The method of the research focused more on quantitative approach which depends on questionnaire to collect data. The study used both quantitative and qualitative research design with selected samples of 154 out of 250 target population using simple random technique. The number of interviewees in the focus interview can be a few and this has its own effect in the study. The targets of the study involve those district e-payment managers, officers. And also in the study respondents who are outside of jimma town were not including in the study because of the boundary of the study is only confined with jimma city

1.7. Organization of the Paper

The study is organized into four chapters. The chapters are organized as follows: Chapter One deals with the introduction of the study. It includes the background to the study, statement of the problem, objectives of the study and the research questions. It also considers

the significance of the study, delimitations and limitations of the study and definition of terms. Chapter Two covers review of related literature to the study. Chapter Three focuses on methodology of the study. It covers research design used in the study. It also describes the instrument used, pilot-testing as well as the procedure for the collection of the data and analysis of the data. It should also include: sources of data, the study population, sampling techniques and sample size, and data processing and analysis. Chapter Four presents data analysis and discussion of research findings.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Terms and Concepts

The definition of Electronic banking (E-banking) varies amongst researchers partially because Electronic banking refers to several types of services through which bank customers can request information and carry out most retail banking services via computer, television or mobile phone (Daniel, 1999; Mols; 1998; Sathye, 1999).

Different authors have defined it in different ways based on their understanding of the application of electronic banking. According to Daniel (1999), electronic banking is electronic connection between the bank and customer in order to prepare, manage and control financial transactions. Sathye (1999) also asserted that electronic banking can be defined as a variety of the following platforms: (a) Internet banking (or online banking), (b) telephone banking, (c) television-based banking, (d) mobile phone banking, and (e) PC bank (or offline banking).

In the opinion of Daniel (1999), E-banking is online banking (or Internet banking) which allows customers to conduct financial transactions on a secure website operated by their retail or virtual bank, credit union or building society. This implies that E-banking is a service that allows an account holder to obtain account information and manage certain banking transactions through a personal computer via the financial institution web site on the internet. For many consumers, electronic banking means 24-hour access to cash through an Automated Teller Machine (ATM) or Direct Deposit of pay checks into checking or savings accounts (FTC, 2006). But electronic banking now involves many different types of transactions.

Electronic banking, also known as Electronic Funds Transfer (EFT), is simply the use of electronic means to transfer funds directly from one account to another without the physical involvement of the bank personnel, rather than by cheque or cash. By using Electronic fund transfer an account holder can use:

- ❖ Salary deposited directly into bank or credit union account
- ❖ Withdraw money from account through an ATM machine with a personal identification number (PIN), at any convenience, day or night

- ❖ Settle utility bills and other regular payments
- ❖ Transfer money between accounts
- ❖ Order payment to government offices like tax and pension
- ❖ Conduct transactions at the point-of-sale, using a credit/debit card rather than cash, credit or a personal check
- ❖ Use computer and personal finance software to coordinate total personal financial management process, integrating data and activities related to income, spending, saving, investing, recordkeeping, bill-paying and taxes, along with basic financial analysis and decision making.

2.2. Importance of E-banking

Electronic banking systems provided easy access to banking services. The interaction between user and bank has been substantially improved by deploying ATMs, Internet banking, and more recently, mobile banking (Claessens et al. 2002). Electronic banking (E-banking) reduces the transaction costs of banking for both Small and Medium Enterprises (SMEs) and banks. SMEs need not visit banks for banking transactions, providing round the clock services (Cheng, 2006).

Customers prefers E-banking for conveniences, speed, round the clock services and access to the account from any parts of the world (Cheng, 2006). E-banking offers benefits to banks as well. Banks can benefit from lower transaction costs as E-banking requires less paper work, less staffs and physical branches (Cheng, 2006). E-banking leads to higher level of customers' satisfaction and retention (Poatoglu&Ekin, 2001).

E-banking reduces loan processing time as borrowers loan application can be viewed by loan processing and loan approval authority simultaneously (Smith & Rupp, 2003). Typically, loan applications received at branch level and send to head office for approval. This documents transfer to and from branch to head office consume much time and delay loan sanction period (Riyadh et al., 2009).

The benefits of E-banking identified from the current literature are classified in two main categories - tangible and intangible.

Tangible benefits: The tangible benefits are: Increase automation process, Transformation of traditional market chain, Retained and expand customer base, reduced operational costs, Acquisition of each market and Increase business efficiency.

Intangible benefit: The intangible benefits are: Enhance wellbeing and education of customers, Competitive advantage and convenient banking.

2.3. Benefit from the Bank's point of View

According to a survey by booz, Allen and Hamilton, an estimated cost providing the routine business of a full service branch in USA is \$1.07 per transaction, as compared to 54 cents for telephone banking, 27 cents for ATM (Automated Teller Machine) banking and 1.5 cents for Internet Banking (Nathan 1999; Pyun et al., 2002). In Nordea, Finland, one online transaction costs the bank an average of just 11 cents, compared to \$1 for a transaction in a branch (Echikson, 2001). Average payment in internet bank or via direct debit cost 4 times less than payment in branch. On actual cost side (cost side in the bank point of view) direct debit payment cost 16 times less and payment in internet bank 7 times less than payment in branch. This indicates that E banking contribute a significant financial benefit to banks to which implement E banking. In addition to this E banking reduce the capital expenditure and staff cost of the bank.

2.4. Benefit from the customer point of View

The main benefit from the bank customer's point of view is significant saving of time by the automation of banking service processing and introduction of an easy maintenance tools for managing customer's money. The main advantages of E banking for corporate customers' are: Reduce costs in accessing and using the banking service, increased comfort and time serving and Transaction can be made even after banking hour without the physical interaction of the bank 24 hours a day. This increase the productivity of both the bank and the company quick and continuous access of information and corporation will have easier access to information as, check multiple accounts at the click of a button, better cash management (Bank Away! 2001; Guru, 2002).

2.5. Economic Benefit

The impact of the new economy on the entire economy growth has been studied in several research projects. For example (Pohjola, 2002) shows that the contribution of the use of information communication technology to growth of output in the Finnish market sector has increased from 0.3 percent in early 1990's to 0.7 percent in late 1990's. Similarly, research conducted in Estonia (Arm and Vensel, 2001), bank customers use bank office on average 1.235 times per month, and wait in queue in bank office on average for 0.134 hours. Simple calculation shows that making payments using E banking facilities rather than in the banks office create overall economy savings in the amount of 0.93% of GDP (average distance to nearest bank office is 4.14 km (Arma and Vensel, 2001), which takes approximately 0.21 hours to travel.

2.6. Types of E-banking

Over the past years, two types of electronic banking services have emerged in the banking sector; internet and telephone banking (Adriana, 2006)

2.6.1. Internet banking

Internet banking is a new age banking concept. It uses technology and brings the bank closer to the customer. Internet banking refers to systems that enable bank customers to get access to their accounts and general information on bank products and services through the use of banks website, without the intervention or inconvenience of sending letters, faxes, original signatures and telephone confirmations (Thulani et al, 2009).

For those that have access to the internet and a computer all you need to do is proceed to your banks website and login. From there you have access to all of your accounts that you have at that bank. Transfer funds between your accounts with ease. You can also use online banking to see how much money you have in your accounts and where the money you have spent has gone. Broadly, the levels of banking services offered through internet can be categorized in to three types:

1. The Basic Level Service is the banks' websites which disseminate information on different products and services offered to customers and members of public in general. It may receive and reply to customers' query through e-mail.

2. In the next level are Simple Transactional Websites which allows customers to submit their instructions, applications for different services, queries on their account balances, etc, but do not permit any fund-based transactions on their accounts.

3. The third level of Internet banking services are offered by Fully Transactional Websites which allows the customers to operate on their accounts for transfer of funds, payment of different bills, subscribing to other products of the bank and to transact purchase and sale of securities. The above forms of Internet banking services are offered by traditional banks as an additional method of serving the customer. There are also banks that deliver banking services primarily through Internet or other electronic delivery channels. Some of these banks are known as virtual banks or Internet- only banks and may not have any physical presence in a country despite offering different banking services (Adriana, 2006).

2.6.1.1. Advantages of Internet Banking

1. It removes the traditional geographical barriers as it could reach out to customers of different countries/legal jurisdiction.

2. It has added a new dimension to different kinds of risks traditionally associated with banking, heightening some of them and throwing new risk control challenges.

3. It poses a strategic risk of loss of business to those banks who do not respond in time, to this new technology, being the efficient and cost effective delivery mechanism of banking services.

4. A new form of competition has emerged both from the existing players and new players of the market who are not strictly banks.

5. Another advantage of Internet banking is that it is cost-effective. Thousands of customers can be dealt with at once. There is no need to have too many clerks and cashiers. The administrative work gets reduced drastically with Internet banking. Expenditures on paper slips, forms and even bank stationery have gone down, which helps raise the profit margin of the bank by a surprisingly large number.

2.6.2. Telephone Banking (Tele banking)

Tele banking (telephone banking) can be considered as a form of remote or virtual banking, which is essentially the delivery of branch financial services via telecommunication devices

where the bank customers can perform retail banking transactions by dialing a touch-tone telephone or mobile communication unit, which is connected to an automated system of the bank by utilizing Automated Voice Response (AVR) technology (Balachandher et al., 2001). It allows consumers to phone their financial institutions with instructions to pay certain bills or to transfer funds between accounts (FTC, 2006).

2.7. Delivery channels of E-banking

E- Banking services are delivered through various electronic means collectively called electronic delivery channels. Electronic Banking is really not one technology, but an attempt to merge several different technologies. Each of these evolved in different ways, but in recent years different groups and industries have recognized the importance of working together (Abor, 2004). The various delivering channels for E-banking are discussed as follows:

2.7.1. Automated Teller Machines (ATMs)

ATM is also called 24-hour tellers are electronic terminals which give consumers the opportunity to bank at almost any time (FTC, 2006). ATM banking is one of the earliest and widely adopted retail E-banking services in Kenya (Nyangosi et al. 2009). It is described as a combination of a computer terminal, record-keeping system and Cash vault in one unit, permitting customers to enter the bank's book keeping system with a plastic card containing a Personal Identification Number (PIN) or by punching a special code number into the computer terminal linked to the bank's computerized records 24 hours a day (Rose, 1999).

To withdraw cash, make deposits or transfer funds between accounts, a consumer needs an ATM card and a personal identification number. Once the customer login, access to transactions are displayed on the screen. It offers several retail banking services to customers. They are mostly located outside of banks, and are also found at airports, malls, and places far away from the home bank of customers. They were introduced first to function as cash dispensing machines (Abor, 2004). Some ATMs charge a usage fee for this service, with a higher fee for consumers who do not have an account at their institution. If a fee is charged, it must be revealed on the terminal screen or on a sign next to the screen Rose (1999).

ATM services have a lot of advantages. They include increase in productivity during banking hours if the service is available in addition to the human tellers. They are cost-effective way of achieving higher productivity per period of time. According to Rose (1999), an ATM

transaction is an average of about 6,400 per month compared to 4,300 for human tellers. Furthermore, it saves customers time in service delivery as alternative to queuing in bank halls, customers can invest such time saved into other productive activities (Abor, 2004). In addition, ATMs continue to serve customers while human tellers in the banking hall have stopped work, thereby increasing productivity for the banks.

PC-Banking is a service which allows the bank's customers to access information about their accounts via a proprietary network, usually with the help of proprietary software installed on their personal computer. Once access is gained, the customer can perform a lot of retail banking functions. The increasing awareness of the importance of computer literacy has resulted in increasing the use of personal computers.

This certainly supports the growth of PC banking which virtually establishes a branch in the customers' home or office, and offers 24-hour service, seven days a week. It also has the benefits of Telephone Banking and ATMs (Abor, 2004). It offers consumers the convenience of conducting many banking transactions electronically using a personal computer. Consumers can view their account balances, request transfers between accounts and pay bills electronically from home.

2.7.3. Electronic Funds Transfer at Point of Sale (EFT PoS)

An Electronic Funds Transfer at the Point of Sale is an on-line system that allows customers to transfer funds instantaneously from their bank accounts to merchant accounts when making purchases (at purchase points). A POS uses a debit card to activate an Electronic Fund Transfer Process (Chorafas, 1988). Point-of-Sale Transfer Terminals allow 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 your account to the store's account.

Increased banking productivity results from the use of EFT PoS to service customers shopping payment requirements instead of clerical duties in handling cheques and cash withdrawals for shopping. Furthermore, the system continues after banking hours, hence continual productivity for the bank even after banking hours. It also saves customers time and energy in getting to bank branches or ATMs for cash withdrawals which can be harnessed into other productive activities (Abor, 2004).

Some banks issued international cards (such as Visa, MasterCard etc.) to their customers. Such cards can be used wherever accepted, and payment on the cards can only be done through an ordinary domiciliary account of the cardholder, or any other account that may be permitted. Some of these cards are credit or debit cards.

2.7.4. Credit Cards

A credit card is a small plastic card issued to users as a system of payment. It allows the holder to buy goods and services based on the holder's promise to pay for these goods and services. The issuer of the card creates a revolving account and grants a line of credit to the consumer (or the user) from which the user can borrow money for payment to a merchant or as a cash advance to the user (Mavri&Ioannou, 2006).

A credit card is different from a debit card in that it does not withdraw money from the user's account after every transaction. The issuer lends money to the consumer to be paid to the merchant. Holders of a valid credit card have the authorization to purchase goods and services up to a predetermined amount, called a credit limit. The vendor receives essential credit card information from the cardholder, the bank issuing the card actually reimburses the vendor, and eventually the cardholder repays the bank through regular monthly payments. If the entire balance is not paid in full, the credit card issuer can legally charge interest fees on the unpaid portion.

2.7.5. Debit Cards

A debit card (also known as a bank card or cheque card) is a plastic card that provides an alternative payment method to cash when making purchases. Functionally, it can be called an electronic cheque, as the funds are withdrawn directly from either the bank account or from the remaining balance on the card. In some cases, the cards are designed exclusively for use on the internet, and so there is no physical card (Mavri & Ioannou, 2006).

In many countries the use of debit cards has become so widespread that their volume of use has overtaken or entirely replaced the cheque and, in some instances, cash transactions. Like credit cards, debit cards are used widely for telephone and Internet purchases and, unlike credit cards, the funds are transferred immediately from the bearer's bank account instead of having the bearer pay back the money at a later date. Debit cards may also allow for instant

withdrawal of cash, acting as the ATM card for withdrawing cash and as a check guarantee card.

2.8. Characteristics of E-banking

E-banking includes the systems that enable bank customers to access accounts, transact business, or obtain information on financial products and services through a public or private network, including the Internet. Customer's access E-banking services using an intelligent electronic device, such as a Personal Computer (PC), Personal Digital Assistant (PDA), Automated Teller Machine (ATM), telephone (Ibrahim et al 2006).

2.9. Challenges of E-banking

Banking organizations have been delivering electronic services to consumers' and businesses remotely for years. Electronic funds transfer, including small payments and corporate cash management systems, as well as publicly accessible automated machines for currency withdrawal and retail account management, are global fixtures. However, the increased world-wide acceptance of the Internet as a delivery channel for banking products and services provides new business opportunities for banks as well as service benefits for their customers (BCBS, 2001). Notwithstanding the significant benefits of E-banking and its capabilities, it carries risks and challenges as which are recognized and need to be managed by banking institutions in a prudent manner.

The speed of change relating to technological and customer service innovation in e-banking is unprecedented. Historically, new banking applications were implemented over relatively long periods of time and only after in-depth testing. Today, however, banks are experiencing competitive pressure to roll out new business applications in very compressed time frames, often only a few months from concept to production.

This competition intensifies the management challenge to ensure that adequate strategic assessment, risk analysis and security reviews are conducted prior to implementing new e-banking applications (BCBS, 2001).E-banking increases banks' dependence on information technology, thereby increasing the technical complexity of many operational and security issues and furthering a trend towards more partnerships, alliances and outsourcing arrangements with third parties, many of whom are unregulated. This development has been

leading to the creation of new business models involving banks and non bank entities, such as Internet service providers, telecommunication companies and other technology firms (BCBS, 2001).

The Internet is ubiquitous and global by nature. It is an open network accessible from anywhere in the world by unknown parties, with routing of messages through unknown locations and via fast evolving wireless devices. Therefore, it significantly magnifies the importance of security controls, customer authentication techniques, data protection, audit trail procedures, and customer privacy standards (BCBS, 2001). Other E-banking related problems are user error, bad internet connections, access problems and security issues. Most of these problems happen less to outweigh its benefits.

2.9.1. E-Banking Fraud

Convenience is the key reason of why millions of people are opting out of traditional banking for online banking. Banks also enjoy providing the option of online banking because they can save on operating costs. Most internet banking fraud occurs in a two-step process. Firstly, the offender must get their hands on the customer's account information, like their username and password. Secondly, the offender will use that information to move his victim's money to another account or withdraw it to make fraudulent purchases. For the first step, offenders often employ one of the many popular fraud schemes to obtain personal information. These fraud schemes include, but are not limited to:

“Over the shoulder looking” scheme: involves the offender observing his potential victim making financial transactions and recording the personal information used in the transaction.

"Phishing" scheme: stems from the two words "password" and "fishing." It entails sending e-mail spams and mail supposedly from the consumer's bank as away to obtain the consumer's personal information, social insurance number, and in this case their online banking username and password (Kaleem& Ahmed,2008).

2.9.1.1. Security Measures to Avoid E-banking Fraud

Kaleem and Ahmad (2008) argued that in undertaken E-banking transactions, customers are always concerned about hackers and anti-social elements. Hacking enables the unethical hackers to penetrate the accounts of online bankers, and spend their money. Availability of confidential information which is just secured by a username and password makes it

vulnerable to such threats. Most of the banks try to make their sites secured by implementing latest network security software. Learn to keep your cards, documents and passwords safe, and monitor your accounts to safeguard yourself from bank fraud committed through identity theft. Most importantly, find out how to protect your personal information to avoid identity theft from happening to you (BSP, 2006).

E-bankers should install virus scanners and keep them and their systems up-to-date especially PC banking. They should avoid practices that easily lead to security hazards in particular they should not start up arbitrary executable attachments received via electronic e-mail. Users should check fingerprints of certificates against the fingerprints that are (should be) given by the bank on official paper documents (Claessens et al., 2002; BSP, 2006).

2.10. Banking in Ethiopia

2.10.1. Banking History in Ethiopia

A reference to the Ethiopian history reveals that the first bank in the country, Bank of Abyssinia was founded during the regime of Emperor Menelik II in February 1905. Due to a foreign domination of its management (mainly the British), the then Bank of Abyssinia was forced to dissolve and in its place was established the Bank of Ethiopia in 1931 whose management was still left to foreigners due to the then lack of skilled manpower in the country.

The Bank of Ethiopia was later replaced by the State Bank of Ethiopia soon after the war with Italy. The latter was the first bank in the country fully controlled and owned by the Ethiopian government. In the meantime, however, a number of foreign banks had opened their branches in the country, most of them with an interest to have control over the nation's economy. It was the State Bank of Ethiopia that gave rise to the present Commercial Bank of Ethiopia (CBE) and National Bank of Ethiopia (NBE). During the Dergue reign, CBE had remained as the only participant in the country's commercial banking sector.

However, following the 1991 takeover by the present government and accompanying encouragement of private investment, a number of private banks have emerged in the country's financial sector. Accordingly, Monetary and Banking proclamation No.83/1994 and the Licensing and Supervision of Banking Business No.84/1994 laid down the legal basis for investment in the banking sector. Consequently, shortly after the proclamation the first private bank, Awash International Bank was established in 1994. (NBE, 2009).

2.10.2. Review of Commercial Banking Practices in Ethiopia

In Ethiopia, 16 private and three state owned banks are operating till the end of Nov.2015. Despite a rapid increase in the number of financial institutions since financial liberalization, the Ethiopian banking system is still under developed compared to the rest of the world. The use of checks is mostly limited to government institutions, NGOs and some private businesses. The common banking functions provided by public and private banks in Ethiopia are deposit mobilization, credit allocation, money transfer and safe custody. Banks in Ethiopia are unable to improve customer service, design flexible and customized products, and differentiate themselves in a market where product features are easily cloned. Ethiopian banking is unable to come from long way of being sleepy to a high proactive and dynamic entity.

The Ethiopian banking industry as a whole has a network of 2,502 branches (Birittu, No.120), which is the lowest compared to the size of the country (1.1 million square km) and number of population (more than 100 million) and this shows that the number of population being served by a single branch stood at around 34,373 (Birittu No. 120). With such highly scattered branch network and disintegrated working system it is hard to ensure efficient flow of financial resources and optimize the contributions of the entire financial system to the development processes. All banks in Ethiopia are too late to move with technological advancement and they should clearly chart out the time schedule for their integration and technological advancement.

Some of the banks even today do not have information websites, which can help them to provide at least the information on financial services offered by them (NBE, 2008/09). The giant state owned commercial bank of Ethiopia had been issued only 1,806,876 debit cards, and has mobile banking user of 290,383 and internet banking user 9,781.00 till Dec. 2014 (Birittu no. 120). This is a very small number compared to the population size of the country and very scattered physical branch of the banks.

According to IMF data Ethiopia lag far behind from sub-Saharan African countries in terms of access of finance. (Birittu No.120) Product of the Ethiopian Banking sector did not fully benefit from the current technology advancement. Out of nineteen fully operating commercial banks there are only six of them commence mobile banking as per the directive No FIS/01/2012. This shows that how far the banking industry in Ethiopia is backward in comparison with the current world banking industry advancement and out late offerings.

2.10.3. Technologies Used in the Banking Sector

Nowadays, banks can use advanced technologies and internet, networks, payment cards, Automated Teller Machine (ATMs) and so on. This is one of the prospects that enables banks to increase the efficiency and productivity. The banking business has continued realizing the advantages of the cutting-edge information and communication technology. It has become essential to effectively implement the appropriate technology to have faster decision support and effective data integration in the financial intermediary process and also to look for other avenues to augment income.

Concerning the sectoral outlook, there are emerging initiatives to invest in electronic multi-service channels and also a tendency to optimally utilize the available resources in a consortium, which partly supports the effective implementation of the envisaged national payment system. Additionally, the ongoing efforts of enacting the electronic laws focusing on the retail banking business are expected to have a positive effect on the growth of the payment card business. These are other opportunities for banks to expand their activities and ultimately realize a second-generation reform in the Ethiopian financial sector (Dashen, 2009/10).

In this regard, commercial Banks are still at the early stage to implementing modern banking technology and value-added service provision. Withstanding the prevailing long attachment of branch-based service channel, which is perceived to lead the society to only value human interaction, Dashen Bank are succeeding in effectively implementing both the branch-based and impersonal banking service channels. Though the bank have gone through various challenges in popularizing and penetrating the market through electronic delivery channels, we are now at the level of encouraging recognition and flexibility to adopt the new habits as alternate service channels. The bank is able to reap better returns by way of increasing non-interest income from diversified service offerings and total solutions to the customers. (Dashen, 2009/10)

Anticipating a further reduction in the processing time and upholding service efficiency, Dashen bank attempting to continue introducing modern banking services and further leverage our technologies to provide the highest level of customer services and convenience, while keeping cost of access to the minimum. The bank resolutely pursue taking unique

initiatives to reach for all relevant modern financial services and to uphold the delivery of convenience banking on a 24/7 base.

Ethiopian banking system is one of the most underdeveloped compared to the rest of the world. In Ethiopia cash is still the most dominant medium of exchange and electronic banking is not well known, let alone used for transacting banking business. All banks in Ethiopia are too late to move with technological advancement and they should clearly chart out the time schedule for their integration and technological advancement. Butun like other E banking delivery channels all most all banks has installed ATMs at convenient locations for their cardholders. Currently, debit service only gives for Visa and master cards and clients of respective banks can withdraw cash and can buy goods and services by using the debit card. (Worku, 2010).

To realize high quality service delivery standards, Dashen Bank has kept on playing a leading role in the adoption of appropriate modern banking technologies. Accordingly, the Bank has launched its mobile banking service 'Modbirr'. The service will entitle customers to conduct banking transactions using their mobile phones anytime, anywhere. (Dashen, 2009/10). In addition to Dashen bank, Commercial bank of Ethiopia, Wegagen bank, united bank also implement Mobile banking. Commercial bank of Ethiopia starts internet banking to its customers in 2012 with the service of view report, check balance and print report. Till date this service does not have any improvement.

Electronic Banking has been widely used in developed countries and is rapidly expanding in developing countries. In Ethiopia, however, cash is still the most dominant medium of exchange, and electronic payment systems are at an embryonic 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 system. Currently most of the commercial banks in Ethiopia start to offer some of the futures of E banking to its customers. Even the internet banking offered by the commercial bank of Ethiopia serves only within the bank's branch. Still cross bank transaction through E banking not yet starts in Ethiopia. But there is a start in relation to ATM service which offers by five private commercial banks jointly.

2.10.4. Challenges and prospects of E-Banking

2.10.4.1. Challenges

According to M. M. Rahman (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.

The concept of e-banking includes all types of banking activities performed through electronic networks. It is the most recent delivery channel of banking services, which is used for both business-to-business and business-to-customer transactions. However, in true sense, e-banking includes activities like payment of bills and invoices, transfer of funds between accounts, applying for a loan, payment of loan installments, sending funds to third parties via emails or internet connections regardless of where the client is located.

Leow, Hock Bee (1999) state that the terms PC banking, online banking, Internet banking, telephone banking or mobile banking refers to a number of ways in which customer can access their banks without having to be physically present at the bank branch. Therefore, e-banking covers all these ways of banking business electronically. Since e-banking offers some smart services benefiting both banks and customers compared with traditional banking system, it has become imperative to make necessary room for banks to flourish e-banking.

Among others, attractiveness of e-banking includes: it lowers transaction cost; provide 24-hour services; ensure increased security and control over transactions; reduces fraud risk; performs higher volume of transactions with less time; increases number and volume of value payment through banks; allows remote transactions facilities that replace physical presence of a customer in a bank branch and; increases transaction speed and accuracy. On the other hand, traditional banking is time-consuming and more costly and therefore, e-banking is replacing traditional banking all over the world.

In addition, an exploratory study that was conducted in Zimbabwe by Chitura 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 of e-banking in the country's banking industry. The same changes may also face by Ethiopian banking industries to implement the E banking facilities. But the good thing is that the benefit out weighted the challenges in many parameters. Specially country like Ethiopia which have a huge potential customers for such service coupled with a fast growing economy will be the main advantages of the banking service to offer different products with the help of technology to their customers. In addition, as investigated by Alhaji Ibrahim H. (2009) using exploratory study, the following are among the critical challenges of e-banking.

Lack of Technological Infrastructure – the implementation of electronic 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 and ICT Equipment:

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

Regulatory and Legal Issues: inexistence of proper legal and regulatory framework.

Non-readiness of banks and other stake holders (acceptability) – even though some have shown impressive willingness, some banks are still not fully ready to for this new payment regime.

Resistance to changes in technology among customers and staff due to: Lack of awareness on the benefits of new technologies, Fear of risk among banks, Lack of trained personnel in key organizations and Tendency to be content with the existing structures People are resistant to new payment mechanisms; Security – where disclosure of private information, counterfeiting and illegal iteration of payment data may be rampant, Frequent connectivity failure in telephone lines, Frequent power interruption and Wide spread Problem of internet connection

2.10.4.2. Prospects of E-Banking

According to M.s, M Rahman (2008) in Bangladesh e-banking is now a global phenomenon. Apart from the developed countries, the developing countries are experiencing strong growth in e-banking. The government's emphasis on setting up ICT park, raising allocation for developing ICT infrastructure, waiving taxes on computer peripherals and other measures including the automation program of banking sector and competition among the scheduled banks in improving customer services have accelerated the prospects of e-banking.

The fact that the overall commercial banks branch in Ethiopia compared to the size of the population and the area of the country is very minimal, it creates a good advantage to expand E banking facilities and reach the wide spread population of the country through virtual banking system.

2.11. Empirical Literature

The researchers conducted on The Cashless Policy in Nigeria (2013): Prospects and Challenges, in many developing countries, cash is the main mode of payment. This makes the country to be heavily cash- based economy. However, the cost of cash to Nigeria financial system is high and increasing. It is in this regard that the Central Bank of Nigeria (CBN) introduced the cashless policy with the objective of promoting the use of electronic payment channels instead of cash. This study seeks to point out the prospects and challenges of such policy, in a developing economy like Nigeria. The study presented useful recommendations for policy makers. In conclusion, the study posits that the move towards a cashless Nigeria brings with it numerous benefits but there is still the need to create more awareness to entice the numerous unbanked Nigerians into the banking system.

The research studied by Ayana (2014) factors that affect adoption of E-banking in the Ethiopian banking industry. The study was conducted based on the data gathered from four banks in Ethiopia; three private banks (Dashen bank, Zemen bank and Wegagen bank) and one state owned bank (commercial bank of Ethiopia). A mixed research approach was 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) developed by Tornatzky and Fleischer. 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 research studied by Suh (2002) shown the effects of trust on customer acceptance of internet banking found that trust is one of the most significant beliefs in explaining a customer's attitudes towards using internet banking. As suggested by the technology acceptance model, customer perception of the usefulness and ease to use also affects attitude

significantly. This result implies that customers rely on that in on line environment processing sensitive information

Another research conducted on investigating the Factors Influence Adoption of Internet Banking in Malaysia in 2013 the main purpose of this research is to investigate the factors that influence adopters to take up the Internet banking services in Malaysia. The sampling units in this survey are the adopters of Internet banking who were using it for at least six months. The regression results showed that Complexity, Security and customer Experience were the influencing factors of Internet banking services. However, Individual Characteristics was found to be partially influencing the adopters in their decision to adopt the Internet banking facilities.

Some related studies are conducted by different researchers in different parts of the world. However, there are limited numbers of studies conducted in Ethiopia on the adoption of technological innovation. Wondwossen and Tsegai (2005) also studied 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.

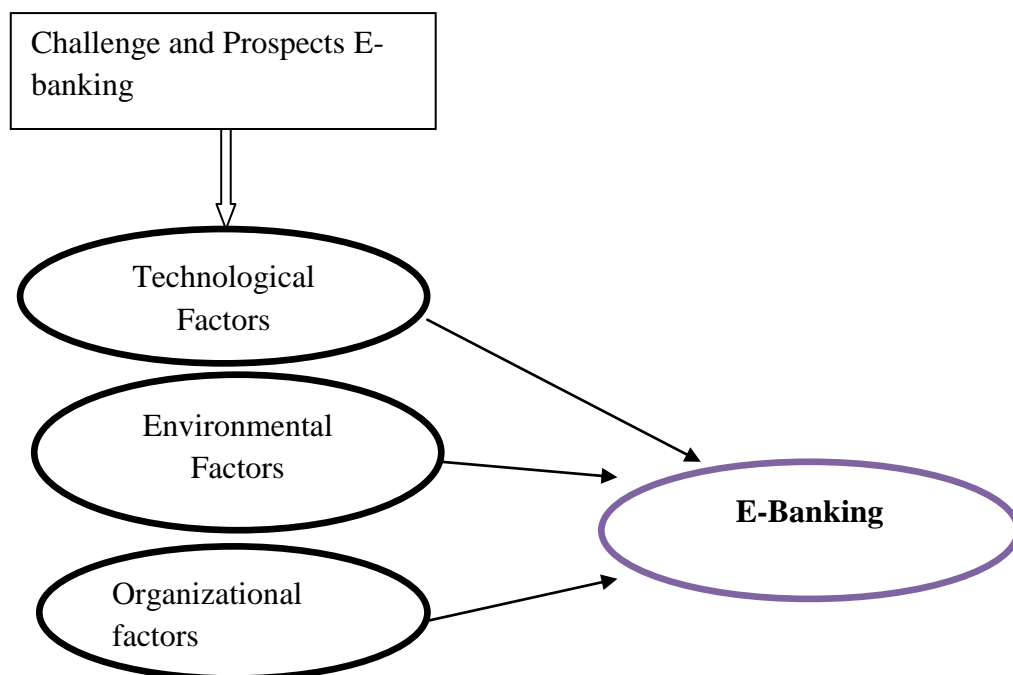
On the other hand the study conducted by Daghfous and Toufaily (2007) on the success and critical factors in adoption of E-banking by Lebanese banks. The research was conducted on the factors that can lead to success the adoption of E-banking and the other factors that can constitute as barrier to its adoption, it focus on the organizational, structural and strategic factors which can accelerate or, on the contrary, slow the adoption of this electronic mode of distribution and communication by the banks, through analyzing .

Factors Influencing Adoption of Electronic Payment by Small and Medium Hotel Enterprises in Kisii Town, Kisii County, Kenya OGOTI ELIJAH SOKOBE. The purpose of this study was to investigate on the factors that influence adoption electronic payment among the hotel SMEs, Kisii town, Kenya. The findings of the study confirmed that entrepreneur background characteristics in measured in terms of education levels, age and skills influenced electronic payments highly. With technological advancement, it was imperative that banks and their customers switch to the new ways of banking called e-banking.

Research conducted on Internet Banking Challenges among Customers in Selangor, Malaysia (2016); this study aims to investigate if factors such as security, price, perceived ease of use and customer resistance to change influences customers adoption of internet banking services. Questionnaire survey approach for data collection was adopted in this study. The results of this study showed that hypotheses pertaining to security, price and perceived ease of use were supported but customer resistance to change was not supported. The findings presented in this research can be of assistance to customers especially those non-adopters of internet banking by providing them a deeper understanding of internet banking services and it would also help banks to identify the customer's perception and the level of customer's satisfaction towards internet banking

2.12. Conceptual Framework

Based on the above theoretical and empirical literatures the researcher has developed the following conceptual framework relation between E-banking and factors that affect



Independent Variables

Figure 1: Conceptual Framework

2.2. Empirical Evidences

Summary of the Research Gap Since studies (e.g. Nguyen and Huynh, 2018; Barkhordari et al, 2017) exist that comprehensively investigate specific issues in e-payment adoption, the research herein explores e-payment issues holistically/broadly because e-payment is one of the intertwined factors that hinder adoption of electronic service delivery. Thus, the preceding section presents a literature-based synthesis of success factors on technology adoption in general in order to holistically understand how TAM and other success factors on technology adoption can inform efforts or interventions towards increasing adoption of e-payment (as summarized in figure 2). However, the synthesis in figure 2 is implicit on actors responsible for specific aspects in order to properly inform efforts towards adoption and implementation of success factors for e-payment efforts. To resolve this, there is need to use figure 2 to further derive an action-oriented taxonomy that gives insight into specific categories of actors that are responsible for ensuring that a specific success factor in figure 2 (that is relevant for e-payment) is adopted and implemented. Thus, factors in figure 2 have been further categorized into four themes that serve as pointers to categories of actors or stakeholders responsible for implementing measures that are implied by success factors in figure 2 in order to enhance e-payment adoption. The four themes are shown in row 1 of table 3, and critical factors under each theme (obtained from figure 2) are presented accordingly.

Figure 2: Factors from Literature that can Inform Efforts on Enhancing e-Payment Adoption

1.Attributes of e-payment systems	2.Attributes of the service provider of e-payment	3.Individual and social attributes of a customer	4.Governance mechanisms for e-payment systems
<ul style="list-style-type: none"> • Quality of information generated by the e-payment system • Technical and economic benefits of the e-payment system • Consistence of the e-payment system 	<ul style="list-style-type: none"> • Public and online image of service provider • Price or fees for using e payment system • Existence of famous exemplary leads in using an e- 	<ul style="list-style-type: none"> • These include a customer's: <ul style="list-style-type: none"> o Subjective norms o Social pressure, social norms & value o Computer and Internet experience o Initial trust or past 	<ul style="list-style-type: none"> • Government support and policy framework • Infrastructure setting • Existence of trust ranking systems & mechanism

<p>with the normal payment system</p> <ul style="list-style-type: none"> • Information available about an innovation • System quality attributes (e.g. convenience, accessibility, compatibility, security, reliability, simplicity, flexibility) 	<p>payment system</p> <ul style="list-style-type: none"> • Institutional top management support 	<p>experience of using epayment</p> <ul style="list-style-type: none"> o Perceived risk and risk attitude o Demographic details 	<ul style="list-style-type: none"> • Customer's accessibility to computer and internet
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CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Research Design

Research design is usually a plan or blue print which specifies how data relating to a given problem should be collected and analyzed. It provides the procedural outlines for the conduct of any investigation.

In this study, the researcher adopted a qualitative study approach because it provided in-depth information to address the objectives. In all, questionnaires were administered to the interviewees from the selected banks to solicit information concerning the E-banking. Part of the information was also gathered from reports in the bank concerning E-banking services.

An exploratory research design was considered the most suitable approach in view of the nature of the problem being investigated. According to Zikmund (2000), exploratory research is conducted to clarify and research a better understanding of the nature of the problem. Consequently, it is appropriate to use when there is little prior knowledge of the problem being researched. Saunders & Thornhill (2003) argue that exploratory research is advantageous because it is flexible and adaptable to change.

3.2. Sample and sampling Techniques

3.2.1. Study population

A population is the entire group of individuals, events or objects having common evident features. A target population is that population to which a researcher wants to take a broad view of the results of a study (Coolican, 2013). In this study, the target populations of Commercial Bank of Ethiopia Jimma city selected branches with a total population of 250 professionals were taken.

3.2.2. Sampling Techniques

In this research stratified technique was used. The researcher used this sampling technique because it helps to gather relevant information from the concerned department and since the population of the study was segmented in to different sections within a department of the banks in the study, which was also advisable to come up with representative samples and generate the findings of the study. With regards to this, the total participants of target population of the study are 154 employees' banks.

Sr_No	Branch	No of employees	Sample size	Branch Grade
1	District Office	69	43	
2	Jimma Main	64	40	Grade 4
3	Hermata	51	31	Grade 4
4	Abajifar	26	16	Grade3
5	Ginjo Guduru	20	12	Grade2
6	Jiren	20	12	Grade2
	SUM TOTAL	250	154	

3.2.3. Sample size

Here under is a simple random sampling used for the strata of customer service manager (CSM) because of large number. The sample size is determined using Solvin's formula (2010).

$n = N / (1 + Ne^2)$ where; n -sample size, N- target population, e- margin of error at 95%, 100% -95% = 5% and therefore, e = .05

$$n = 250 / (1 + 250 * .05^2) = 154$$

3.3. Data sources and type of data

3.3.1. Primary Data

The primary sources of the data serves as main sources of the study, it was collected from the staffs of the concerned department using questionnaire and interview. This is because the study should depend mainly on the opinion of staff on the issues of benefits and challenges related to adoption of E-banking services which make primary data sources to be more important than secondary sources.

3.3.2. Secondary Data

Secondary data are obtain from different sources like research paper, articles, magazines, published and unpublished materials, books, internet, web sites and different official reports. The data's found from these sources were used to see the empirical and theoretical aspects of the study. Also they are used in this study as references by reviewing them.

3.4. Tools for Data Collection

In order to achieve the intended objectives data collection instruments are very important. Thus, the instruments data collections for this study are questionnaires and interview with key informants. The questionnaire were designed into two major parts, the first part is about personal characteristics of respondents such as, sex, position, age, qualification and so on, and the second part deals with the issue challenges and benefits of adoption of E-banking in Ethiopia. The study was adopted the descriptive approach (table, frequency, percentage) which uses quantitative method of data collection and analysis. Questionnaires were the main instrument used for the data collection and it is solicit from 154 respondents.

3.4.1. Questionnaire

Questionnaires were distributed to 154 respondents of employees of the banks. Questions present in the form of affirmative statements, relating to the concepts on E-banking and to identify the intention on the challenges and benefits of adopting E-banking system, 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 Liker scale with the following rating. **'5' Strongly agree, '4' agree, '3' moderate or neutral, '2' disagree, and '1' strongly disagree.** The questionnaire is close ended to get guided responses and for easy

analysis and to obtain information, the respondents also requested to forward any suggestion so as to provide open ended responses if they have opinions which they feel the researcher would find useful.

3.5. Methods of Data Processing and Analysis

3.5.1. Data Processing

It involves the transformation of the raw data in to some processed form to facilitate analysis. Highlight the important characteristics of the data, facilitates comparisons and render it suitable for further statistical analysis and interpretations. In this, section the collected raw data was check and adjust to identify omissions; legibility, consistency, completeness, uniformity and accuracy of the response gives by the respondents. Editing was take both at housing and filed to check completeness, consistency and questions answered out of order by respondents.

3.5.2. Method of Data Analysis

Once the questionnaires were collected by the researcher, they were coded and fed into the SPSS computer software and analyzed. Initially screening of data was done using sort functions. Data was based on the objectives and research question of the study. Quantitative data collected was analyzed using descriptive statistical techniques which were frequencies, mean, standard deviation. Qualitative data was categorized and reported in emergent themes. Measures of central tendency gave expected summary statistics of the variables being tested. The findings were presented by use of frequency distribution tables that gave record of the number of times a score or a response occurs.

Descriptive statistics gave the profile of the target population, i.e. frequencies and percentages, means, standard deviations, whereas inferential statistics to be used were ANOVA/T test, Pearson correlation and the Multiple Regression Analysis Model so as to determine the factors affecting E-banking. Multiple regressions and correlation as a form of inferential statistical analysis were used in determining the relationship between the dependent and independent variables. The model used:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Where;

Y = E-banking

β_0 = Constant term

β_1, \dots, β_5 = Regression Coefficient to be estimated

X1 = Technological factor

X2 = Organizational factor

X3 = Environmental factor

e = stochastic term.

All the above statistical tests were done using the Statistical Package for Social Sciences (SPSS) Version 20. Significant levels were measured at 95% confidence level, with significant differences recorded at $p < 0.01$

Multicollinearity

It meant the existence of a perfect or exact, linear relationship among some or all explanatory variables of a regression model. If there is perfect collinearity among the independent variables, their regression coefficients are indeterminate and their standard errors are not defined. Therefore, independence of independent variables was tested by Variance inflation factor (VIF) and tolerance.

$$VIF(X_j) = \frac{1}{1-R_j^2} \quad \text{Tolerance } 1-R^2$$

Where; X_j = the j^{th} explanatory variables regressed on the other independent variables.

R_j^2 = the coefficient of determination when the variable X_j regressed on the remaining explanatory variable.

Normality

The distribution of residuals should be normal at each value of the dependent variable is one of multiple linear regression assumption. This means that errors are normally distributed, and that a plot of the values of the residuals was approximated a normal curve (Keith, 2006). According to Gujarati (1995) u_i are independently and normally distributed with mean zero and a common variance α^2 was given as; $u_i \sim N(0, \alpha^2)$

Homoscedasticity

The variance of the residuals for every set of values for the independent variable is equal and violation is called heteroscedasticity. This means that researcher assume that errors are spread out consistently between the variables. Symbolically described as follow;

$$\text{var} = \left(\frac{u_i}{(x_1, \dots, x_k)} \right) \alpha^2 \quad \text{For all } i$$

U_i is disturbance term or error term

X_k is explanatory variable

α^2 is the constant or homoscedastic variance of u_i

Sample size: sample size representativeness was tested by the formula given by Tabachnick and Fidell (2001). This formula used to test sample size representativeness by taking into explanation the number of independent variables as follow:

$$N > 50 + 8m$$

Where; m = number of independent variables, N -sample size.

3.7. Validity and Reliability

3.7.1. Validity test

Harper and Thompson (2011) note that in order for data collection tools to provide useful results, the questions must be both valid and reliable. According to Creswell (2009), the usual procedure in assessing the content validity of a measure is to use a professional or expert in a particular field which helps in discovering question content, correction in the wording and the sequencing problems before the actual study as well as exploring ways of improving overall quality of study. For the sake of this study, the researcher will use the opinions of experts in the field of study especially university research instructors specifically the main advisor and the co-advisor to establish the validity of the research instrument. Also the researcher will use opinions of experts of the organization for the questionnaires whether they are correctly processed or not. This will facilitate the necessary revision and modification of the research instrument thereby enhancing validity.

3.7.2. Reliability

Reliability of the data collection instrument is the consistency of measurement and frequently assessed using a test–retest reliability method (Cooper and Schinder, 2014). Reliability

enables the researcher to identify the ambiguities and inadequate items in the research instrument; where the instrument reliability is the dependability, consistency or trustworthiness of a test. The scores were tested using Cronbach's Alpha for the data to be reliable for those questionnaires raised by likert scale. According to George & Mallery (2003), it is recommended that if a Cronbach's coefficient of measurement scale exceeds 0.70 is acceptable as an internally consistent so that further analysis can be carried unless it is unacceptable.

George and Mallery indicated the Cronbach alpha in the following rule of thumb concerning reliability coefficient: If alpha is greater than 0.9 it gives excellent result, if the result of the alpha is from 0.8 up to 0.9 it results in good study, If the alpha is between 0.7 to 0.8 the result generated will be acceptable, alpha result less than 0.7 but greater than 0.6 is questionable, if the alpha goes between 0.5 to 0.6 the result found is considered to be poor and when alpha is less than 0.5 the result is unacceptable.

Category of questionnaire or Scale	Cronbach's Alpha	No of Items
Organizational factor	0.723	6
Technological factor	0.720	4
Environmental factor	0.710	8
Total	0.788	18

CHAPTER FOUR

RESULT AND DISCUSION

4.1. INTRODUCTION

In this chapter the analysis of the data is presented. The data was analyzed by using descriptive method; by measuring numerical values and converting them to percentages. The analysis process was done in such a way that ‘disagree’ responses were merged with ‘strongly disagree’. Likewise, ‘strongly agree’ responses were analyzed together with ‘agree’ responses. Therefore, results are expressed cumulatively as a negative and positive response respectively while the neutral results are expressed as they are.

After conducting the descriptive analysis, inferential analysis was used to show results. Data analysis was verified against the literature reviewed and recorded electronically according to the variables being investigated.

The primary data collected purposively the selected branches and District office in a form of questionnaire had three sections. The first section contained items related to respondents’ biographical data; the second section was composed of items of dependent and independent variable which is related with the technological factors, organizational factors, environmental factors, perceived ease of use and perceived usefulness. The interview session helped the researcher to have detailed information about the E-banking practice of the bank that could, otherwise, have been difficult though questionnaire.

4.2. Response Rate

The sample population consisted of District workers, managers and employees in the selected branches and district office in CBE, Jimma district. A total of 154 questionnaires were distributed, data was successfully collected from 145 respondents representing a response rate of 94.14% (Table 4.1). Fowler (1993) recommends 75% as a rule of the thumb for minimum responses.

Table 1. Response Rate of Questionnaires

Responses	No of Questionnaires	Percentage
Administered questionnaire	154	100.0%
Unreturned	9	5.86%
Functional questionnaires	145	94.14%

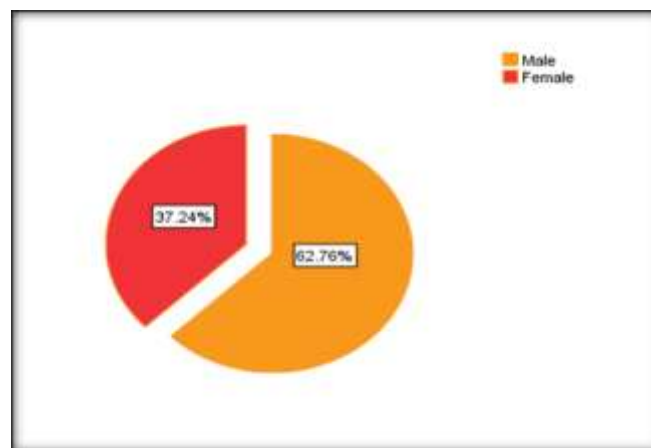
Source: Own Survey, 2020.

4.3. Demographic Profile

4.3.1. Gender

It was felt important to identify the gender of the respondents in order to know how representative sample was and to observe their view on E-banking practice in light of gender. In view of this, respondents were asked to indicate their gender and also gender distribution is one indicator on whether data collected is genuine. The distribution in this study indicates what is expected hence gives credibility to the data. As it is listed below in chart 4.1, it was found 91(62.76%) of the respondents were male while 54(37.24%) of the respondents were females. This tentatively implies that majority of the employees are male.

Figure 2: Gender of the respondents



Source: Own survey data, 2020

4.3.2 Age Distribution of Respondents

Table 2: Respondents Age

	Frequency	Percent	Valid Percent	Cumulative Percent
21-30	88	60.7	60.7	60.7
31-40	44	30.3	30.3	91.0
Valid 41-50	9	6.2	6.2	97.2
Above 50	4	2.8	2.8	100.0
Total	145	100.0	100.0	

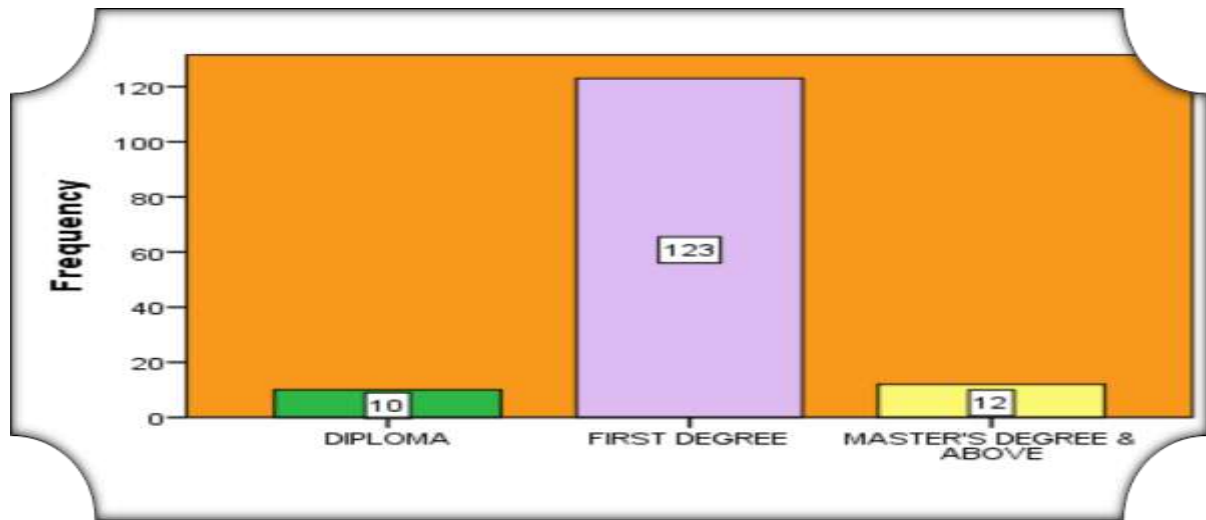
Source: Own survey data, 2020

With reference to the age group of the respondents, 60.7% (88) of them are in the range of 21 to 30 year, 30.3% (44) of them are in the age bracket of 31 to 40 years, 6.2% (9) of the respondents are between 41 to 50 years of age and 2.8% (4) respondents were above the age of 50. Based on the results, majority of the respondents is inside the age range of 21 to 30 years which is 88 respondents having 60.7%. The table 4.2 indicates the expected age distribution in the CBE Jimma district where majority of the workforce falls under productive age group. This data shows that feedback received was credible.

4.3.3. Education Level of Respondents

The education level of the respondents was sought by the researcher in order to establish whether there is a significant relationship between the level of education and E-banking practice, it was found that, 6.9% (10) of the respondents have a diploma, 84.8% (123) bachelor's degree and 8.3% (12) of the respondents have a Master's degree and above. This indicates that the respondents in this study have high level of academic qualification. The results would therefore, be of assistance in understanding and responding the questionnaire properly and effectively.

Figure 3: Educational background of the respondents



Source: Own survey data, 2020

4.4. Questions related to the Challenges of adopting E-banking system

4.4.1. Technological Related factor

Table 3: Technological Related factor

S/ NO	Description		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
			5	4	3	2	1
1	Customers of our bank fear risk to use automated teller machine(ATM)	Frequency	43	72	4	20	6
		Valid Percent	29.7	49.7	2.8	13.8	4.1
2	Lack of confidence with the security aspects considered as challenges for the adoption of E-banking system	Frequency	25	65	12	31	12
		Valid Percent	17.2	44.8	8.3	21.4	8.3
3	In the case of using mobile banking, ATM and others, security risk affect users decision to use the system.	Frequency	14	46	24	53	8
		Valid Percent	9.7	31.7	16.6	36.6	5.5
4	Customers do not trust the technology provided by the bank	Frequency	22	81	4	34	4
		Valid Percent	15.2	55.9	2.8	23.4	2.8

Customers of our bank fear risk to use automated teller machine (ATM)

The result presented in the above table shows that, the respondents asked whether customers of banks fear risk to use ATM, and the descriptive statistics result gives the largest number of respondents agreed on the issue, which is 115(79.4%) of the respondents agreed and about 17.9% of them disagreed to the same question. Therefore, fear of risk is one of the factors that hinder adoption of E-banking system in the CBE.

Lack of confidence with the security aspects considered as challenges for the adoption of E-banking system

The outcome of respondents in the above table received that lack of security is considered as challenges for the adopting of E-banking in Ethiopia, were 90(62%) of the respondents agreed, 12(8.3%) neutral, and the remaining 43(29.7%) disagree. It is possible to say that majority of the respondents indicated that technological challenges, such as security risk is hindrance factor for the adoption of E-banking in Jimma city. This result is consistent with the study of Gardachew (2010) stated that-banking system must also take into account multilateral security keys i.e., security needs of all participating parties in the E-banking system. An E-banking system that is not secured may not be trusted from its use

In the case of using mobile banking, ATM and others, security risk affect users decision to use the system

Fear of risk is one of the factors that hinder adoption of E-banking system in the CBE. the result shown on the above table revealed that lack of confidence with the security issue is considered as challenges for the adoption E-banking system, about 60(41.4%) of the respondents agreed that there is a problem that affects users decision. This result found from this study is consistent with the findings of Ghazi and Khalid (2012, p.9); Khalfan *et al* (2006) in which all indicted that, technological challenges, such as security risk as hindrance factor for the adoption of E-banking.

Customers do not trust the technology provided by the bank

The result presented in the above table shows that, the respondents asked whether bank customers fear risk in using E-banking and the result gives 103 (71.1%), 4(2.8%) neutral, and the remaining 38(26.2%) of the respondents disagree, that means the largest number of respondents were agreed on the issues. Therefore, Limited knowledge of customers on E-banking service is leading the customers to fear risk in using new technology of E-banking.

4.4.2. Organizational Related factor

Table 4: Organizational Related factor

S/NO	Description		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
			5	4	3	2	1
1	The bank have procedures in place for when there is an interruption in service of e-banking for the customers	Frequency	8	48	29	37	23
		Valid Percent	5.5	33.1	20	25.5	15.9
2	Relatively using of Mobile to get banking service is expensive for customers	Frequency	4	33	61	37	10
		Valid Percent	2.8	22.8	42.1	25.5	6.9
3	Lack of sufficient government support will affect customers	Frequency	6	10	19	54	56
		Valid Percent	4.1	6.9	13.1	37.2	38.6
4	Customers of our bank were not familiar with service provided though ATM, Internet banking, telephone and mobile phone	Frequency	8	67	50	9	11
		Valid Percent	5.5	46.2	34.5	6.2	7.6
5	Lack of technical and managerial skills on the use technological innovations	Frequency	4	20	43	58	20
		Valid Percent	2.8	13.8	29.7	40	13.8
6	Lack of skills to implement E-banking system	Frequency	12	16	16	34	67
		Valid Percent	8.3	11	11	23.4	46.2

The above results were also supported by an interview script received from the respondents, which indicated that, compared with traditional banking system; using different technological innovation in banking industry is used to perform banking activities at lower costs. One of the basic issue related with organizational factor is, the availability of financial as well skilled

human resource to implement the system. In this study costs related with the use of E-banking instrument and technical or managerial skills required to implement E-banking system were considered as organizational factors.

The result depicted on the tables deals with whether there is the banks have procedures in place for when there is an interruption in service of e-banking for the customers were 56(38.6%) end up with agreement. 60(41.4%) of the respondents disagreed with the question that the bank doesn't have procedures in place.

As it is shown in the above table 4.4, regarding the cost incurred on the use of different E-banking system like internet/online banking and mobile banking the largest number of respondents 47 out of the total or 32.4% did not agreed with the idea. Similarly the descriptive statistics result shows that, median and mode value for the first two questions in the table is 3 and 4 respectively.

On the other hand the result presented on table 4.3 above revealed that unfamiliarity with the service provided though ATM, Internet banking, telephone and mobile phone by customers, Lack of technical and managerial skills on the use of technological innovation and Lack of skills to implement E-banking system are considered as challenges for the adoption of E-banking system.

4.4.3. Environmental factor

Table 5: Environmental factor (Legal and target market)

S/NO	Description		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
			5	4	3	2	1
1	Lack of legal frame works that enforce banking industries to adopt technological innovation	Frequency	5	61	28	32	19
		Valid Percent	3.4	42.1	19.3	22.1	13.1
2	The bank have a target market or trade area for e-banking	Frequency		15	44	44	42
		Valid Percent		10.3	30.3	30.3	29

Source: From survey

Lack of legal frame works that enforce banking industries to adopt technological innovation.

Lack of legal framework may thus hinder the introduction of cost effective modern electronic payment instrument such as ATMs, credit and debit cards, mobile/telephone/internet banking. Other policy initiative which is currently under consideration is the development of securities market, particularly, that of long term debt instruments (Getahun 2008). Accordingly, the survey result shows majorities of the respondents were agreed that there is no legal frame works in Ethiopia.

The bank have a target market or trade area for e-banking

The second item from the list lack of legal frame work for the implementation of E-banking system is one basic challenge banking industry. Accordingly, the survey result shows majority of the respondents 46 or 31.6% were agreed that the bank have target market or trade area for e-banking. From the above finding there is no legal frame works on the adoption of technological innovation at central bank, Ethiopian banking industry cannot be enforced to implement E-banking system.

The finding of this study were also consistent with the study of Tan and Ouyang (2002), they found that lack of legislation is an initial challenges that influence E-banking adoption in china

4.4.3.2. Adequacy of ICT infrastructure.

Table 6: Environmental factor (Adequacy of ICT infrastructure)

S/NO	Description		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
			5	4	3	2	1
1	Using internet banking is difficult due to low internet access	Frequency	4	68	21	34	18
		Valid Percent	2.8	46.9	14.5	23.4	12.4
2	Internet connection was not good enough to perform online transactions in Ethiopia	Frequency	6	57	17	43	22
		Valid Percent	4.1	39.3	11.7	29.7	15.2
3	Lack of available	Frequency		43		102	

	ICT infrastructure	Valid Percent		29.7		70.3	
4	Mobile banking services may not perform	Frequency			58	59	28
		Valid Percent			40	40.7	19.3
5	Customers may not willing to accept E-banking	Frequency	8	67	51	8	11
		Valid Percent	5.5	46.2	35.2	5.5	7.6

Source: From survey 2020

Using internet banking is difficult due to low internet access

As indicated in the above table most of the respondents 70 (48.3) showed their agreement, 52(36%) Strongly agree that the Using internet banking is difficult due to low internet access. On the other hand, 14(9.7%) disagreement, 6(4.1) respondents showed their strongly disagreement that the Using internet banking is difficult due to low internet access. Only 3(2.1) of the respondents were neutral to the question. Overall, the item Using internet banking is difficult due to low internet has mean score 2.From this one can conclude that using internet banking is difficult due to low internet access.

Internet connection was not good enough to perform online transactions in Ethiopia

The second item from the list of environmental factor is concerning whether Internet connection was enough to perform online transactions good or not. From the total respondents, 40(27.6%) strongly agree, 77 (53.1%) agree, 3(2.1%) neutral, 18 (12.4%) disagree and the rest of 7 (4.8%) respondents strongly disagree. It is possible to say that majority of the respondents indicated that ICT infrastructure in Ethiopia for internet access is not sufficient to use online banking service, which indicated that lack of available ICT infrastructure in the country inhibits to use E-banking system.

Lack of available ICT infrastructure

The results on the above table indicated that the respondents of 37(25.5%) strongly agree,64 (44.1%) agree, 7(4.8%) neutral, 31(21.4%) respondents are disagree and 6 (4.1%) strongly disagree on the issues. Thus lead that the largest percent of the respondents agreed that high cost of ICT investment and lack availability of infrastructure considered as a factor that can hinder the adoption of technological innovation.

Mobile banking services may not perform

As indicated in the above table, shows of the respondents 34 (23.4%)strongly agree,70(48%) agree ,7(4.7%) neutral,25(17.5%), respondents are disagree and 9(6.4) strongly disagree on the issues. Banks could also offer mobile banking services through which customers can check their balance and transfer funds by short message service (SMS), as well as phone banking to check balances and make account inquires by phone. However, some experts in the banking industry speculate that underdeveloped telecommunications infrastructure may hinder the visibility and practicality of the CORE banking system.

Customers may not willing to accept E-banking

Finally, the result shows that unwillingness of Customers to accept E-banking service were:16(11.1%) of the respondents were strongly agree, 48(33.3%) of respondents were agree,23(15.8%) of respondents were neutral, 47(32.3%) of respondents were disagree and 11(7.6%) of respondents were strongly disagreed, which implies that unwillingness of customers to accepts new E-banking system is considered as challenges for the adoption of technological innovation, Therefore, one of the major obstacle factor identified in this study is lack of ICT infrastructure, to use E-banking service, such as internet banking, mobile banking, ATM and other

4.3.3.3. Lack of competition

Table 7: Environmental factor (Lack of competition)

		Frequency	Percent
Valid	Strongly Agree	6	4.1
	Agree	10	6.9
	Neutral	19	13.1
	Disagree	53	36.6
	Strongly disagree	57	39.3
	Total	145	100

Source: From survey 2020

The above table 4.6 shows that the largest number of respondents 110 or 75.9%, disagreed with the idea that lack of competition between Ethiopian banking sector and foreign bank is considered as challenges for the adoption of E-banking system. Even if this result generates there is a competition but, an interview result revealed that, Ethiopian government did not

allow foreign banks to operate in the country. These is due to protecting of local banks from well-developed foreign bank competition therefore, Ethiopian banking industry did not consider about competition with foreign banks and such polices could discourage banking sector of the country from adoption of E-banking system.

4.4. Analysis and Discussion Related to Perceived benefits/opportunity of adopting E-banking system

4.4.1. Perceived ease of use

Table 8: Perceived ease of use

S/NO	Description		Strongly Agree 1	Agree 2	Neutral 3	Disagree 4	Strongly Disagree 5
1	E- banking makes it easier for me to do banking activities	Frequency	75	60	2	6	2
		Valid Percent	52	41.1	1.4	4.1	1.4
2	In the case of mobile banking, our customers can simply use banking service by using their cell phone	Frequency	53	72	7	11	2
		Valid Percent	36.6	49.6	4.8	7.6	1.4
3	From the bank perspective it is easy to use mobile	Frequency	58	78	3	4	2
		Valid Percent	40	53.6	2.3	2.9	1.2
4	Using E-payment system (like debit card, salary card, ATM or visa card) simplify the activity of workers	Frequency	75	48	8	7	6
		Valid Percent	52	33.4	5.3	5	4.3

	to deliver service to customer						
5	Our bank provide guidelines on the use of electronic banking facility	Frequency	57	74	5	6	3
		Valid Percent	39.3	51	3.4	4.1	2.1
6	The management of the bank provides training courses for its staff when introducing new services	Frequency	44	82	9	7	3
		Valid Percent	30.4	56.7	5.9	4.7	2.3
7	Improve the relationship with customers	Frequency	66	55	10	12	2
		Valid Percent	45.8	37.9	7.2	8	1.1

Source: From survey 2020

E- banking makes it easier for me to do banking activities

As shown in the above table in the subject manner, if E-banking service is more accessible to users than visiting a bank physically to get services, the result of respondents were 75(52%) of respondents were strongly agreed, 60(41.1%) of respondents were agree, 2(2%) of respondents were neutral, 6(4.1%) of respondents were disagree, 2(1.4%) of respondents were strongly disagreed on the matter. This implies that the highest number of the respondents verify that E-banking is more accessible for users anywhere with no need of visiting the bank physically.

Using E-payment system (like debit card, salary card, ATM or visa card) simplify the activity of workers to deliver service to customer

The result for using E-payment system like debit card, ATM or visa card simplifies the activity of bank workers to deliver services to customers was: 75(52%) of the respondents were strongly agree, 48(33.4%) of respondents were agree, 8(5.3%) of respondents were

neutral 7 (5%) of respondents were disagreed and 6(4.3%) of respondents were strongly disagreed on the issue. It implies that majority of respondents agreed with the idea that E-banking simplifies the activities of bank employees, which is a good factor for the ability to adopt E-banking system. This idea is supported by Giglio (2002) suggests that adopting online banking services reduces the workload over the banking staff and it's easy to have more satisfied customers

From the bank perspective it is easy to use mobile

As the above table is also depicts, 58(40%) of the respondents were strongly agreed, 78(53.6%) of respondents were agree, 3(2.3%) of respondents were neutral, 4(2.9%) of respondents were disagreed and 2 respondents were strongly disagree or 1.2% were strongly disagreed in the issue whether customers of the bank can access banking services by using mobile banking or internet banking and simplifies banking activities. The result indicated that majority of the respondents were agreed that by using mobile banking or internet banking customers can access banking activities with simple manner.

4.4.2. Perceived usefulness

Table 9: Perceived Usefulness (Time saving)

S/ No	Description		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	E-banking such as, Internet banking ,Mobile banking, ATM and POS services are enables users to complete banking activities	Frequency	78	53	8	4	2
		Valid Percent	53.8	36.6	5.5	2.8	1.3
2	E-banking such as, Internet banking ,Mobile banking, ATM and POS are convenient, in terms of	Frequency	60	75	3	6	2
		Valid Percent	41.4	51	2.1	4.1	1.4

	time						
3	E-banking such as, Internet banking, Mobile banking, ATM and POS are convenient, in terms of 7 days and 24 hours	Frequency	56	76	8	3	2
		Valid Percent	38.6	52.4	5.5	2.1	1.3
4	E-banking is more accessible to users than visiting a bank	Frequency	55	67	11	8	3
		Valid Percent	38.6	46.2	7.6	5.5	2.1

Source from survey 2020

E-banking such as, Internet banking, Mobile banking, ATM and POS services are enables users to complete banking activities

The median and mode responses of the question, using E-banking such as internet banking, mobile banking, ATM and other services enables users to complete banking activities more quickly and easily were 2.00 and 1.00 respectively. It means that the largest number of respondents 78 or 53.8% out of the total was strongly agreed. These result implies, that using online banking system helps to perform banking activities within a short period of time. Clients can simply check their balance, transfer funds and pay their bills on line with just a click of mouse and a touch of button.

E-banking such as, Internet banking, Mobile banking, ATM and POS are convenient, in terms of time

Concerning Time saving to use Internet banking, Mobile banking, ATM and POS are convenient, in terms of time 135(92.4%) of the respondents agree and 10(7.6%) disagree. The result indicated that majority of the respondents were agreed that by using Internet banking, Mobile banking, ATM and POS are time saving

E-banking such as, Internet banking, Mobile banking, ATM and POS are convenient, in terms of 7 days and 24 hours

The result shown in the table whether E-banking is convenient in terms of 7days and 24hoursservices and 56(38.6%) of respondents were strongly agree, 76(52.4%) of respondents were agree, 8 (5.5 %) of respondent were neutral, 3(2.1%) of respondents were disagree and 1.3% or 2 respondents were also strongly disagreed on the issue. These results indicated that most respondents were agreed that E-banking service is more convenient in terms of saving time and delivering of bank service to customer 24 hours and 7 days a week in which E-banking service is save the time. It is supported by the study of Devamohan+

(2000) give explanation in there is no time and place restriction to get the services of E-baking. The customers need to wait in the long queue. By this they can save their time. The customers can gain 24 hours a day and out of 7 days a week access to banking services at anywhere. With the help of E-banking provides sophisticated services to the customers

E-banking is more accessible to users than visiting a bank

The result shown on the above table 4.9 also revealed that the median and mode value for the last question is 2.00 and 1.00 respectively, which indicates that, without visiting brick and mortar, customers can get bank service by using E-banking system. In line with this finding Balachandheret al. (2010) suggests that, one of the implications of E-banking is that it should reduce the need to visit bank branches to get services

4.4.2.2. Cost saving

S/No	Description		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Using technological tools like ATM helps to perform transaction at lower cost.	Frequency	59	74	1	8	3
		Valid Percent	40.7	51	0.69	5.5	2.1
2	High installation cost.	Frequency	41	47	18	20	19
		Valid	28.6	32.2	12.3	14	12.9

		Percent					
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Source: From survey 2020

Using technological tools like ATM helps to perform transaction at lower cost

The median and mode responses for both questions; “The transactions in Internet banking are at a lower price, or at no cost and using technological tools like ATM helps to perform transaction at lower cost” were 2.00. These result implies, using of technological tools such as internet and ATM were resulted in performing of banking duties at lower price

High installation cost.

Similarly, an interview result also indicates that, the basic benefit a firm or customers gained from the adoption of E-banking is cost minimization. This finding is consistent with the previous studies of Poon (2008), and Balachandheret al. (2010), in which all of whom found, cost minimization as an important factor for the adoption of E-banking system.

4.4.3. Other Benefit

Table 10: Other benefits of E-banking system

	Description		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Improve customer service	Frequency	66	68	6	4	2
		Valid Percent	44.8	46.9	4.1	2.8	1.4
2	Speed and efficiency	Frequency	67	69	3	5	3
		Valid Percent	45	47.3	1.8	3.5	2.4
3	Reduce number of customers come to the banking hall	Frequency	59	63	9	9	4
		Valid Percent	41	43.3	6.45	6.4	2.9
	Increased the	Frequency	63	71	7	3	1

4	productivity of bank	Valid Percent	43.4	49	4.8	2.1	0.7
5	Increase reliability and accessibility	Frequency	57	74	6	6	2
		Valid Percent	39.3	51	4.1	4.1	1.4
6	Used as better information control tools	Frequency	43	86	4	10	2
		Valid Percent	29.8	59.1	2.8	6.9	1.4
7	No time limit to access bank account and information	Frequency	61	64	4	12	4
		Valid Percent	42.1	44.1	2.8	8.3	2.7
8	Cover wide geographic area.	Frequency	42	64	7	24	8
		Valid Percent	29	44.1	4.8	16.6	5.5

Source: from survey, 2020

To improve customers service

The above table shows that whether the outcome of respondents concerning E-banking helps for the improvement of customer service and 66(44.8%) of respondents were strongly agree, 69(47.3%) of respondents were agree, 3(1.8%) of respondents were neutral, 5(3.5%) of respondents were disagreed and 2 as well as strongly disagree on the issue. It implies that as majority of the respondents were agreed on the issue by using the E-banking system banks can improve customer satisfaction. The above result is consistent with Kuan(2001) and Lacou(1995)explained that one of the indicate benefits of E-banking includes the opportunity or intangible benefits such as improved customer's satisfaction through improved services, improved banking experience and fulfillment of their changing needs and lifestyle

Speed and efficiency

The above table revealed whether E-banking service enhance customer services Speed or efficiency in service delivery of banks that 67(45%) of respondents were strongly agree, 69(47.3%) of respondents were agree, 9(6.45%) of respondents were neutral, 5(3.5%) of respondents were disagreed and 3(2.4%) of respondents were strongly disagree in the subject manner. This means most of the respondents agreed that E-banking has enhanced customers' service speed or efficiency of service delivery of banks

Reduce number of customers come to the banking hall

The result shown on the table revealed that 59(41%) of respondents were strongly agree, 63(43.3%) of respondents were agree, 9(6.45%) of respondents were neutral, 9(6.4%) of the respondents were disagreed and 4 respondents or 2.9% were strongly disagreed in which E-banking can reduce number of customers coming to the bank hall as compared to traditional banking system. The result shows that due to majority of the respondents strongly agreed on the issue E-banking can reduce number of customers coming to the bank hall as compared to traditional banking system

E-banking increases the productivity of the bank

The above table revealed whether E-banking increases the productivity of banks and that is 63 (43.4%) of respondents were strongly agree, 71(49%) of respondents were agree, 7(4.8%) of respondents were neutral, 3(2.1%) of respondents were disagreed, 1(0.7%) as well strongly disagree in the subject manner. This means most of the respondents agreed that E-banking has a benefit to increase the productivity or profitability of banks.

Increase reliability and accessibility

In addition to increasing the productivity of bank, the system also increase reliability and accessibility of banking services, the majority respondents were reliability and accessibility as a benefit are Strongly Agree and agree, respectively.

No time limit to access bank account and information

E-banking service were not limited by time, were the median and mode response for this issue is 1.00. Customers of the bank who uses online banking can get 24/7/365/6 (24 hours a day, 7 days a week and 365/6 days a year) banking service.

4.5. Regression assumptions

Before joining regression analysis, it is essential to test assumptions of multiple linear regression analysis Model (Keith, 2006; Pallant, 2005). Therefore, each assumption result was discussed below:

4.5.1. Normality test

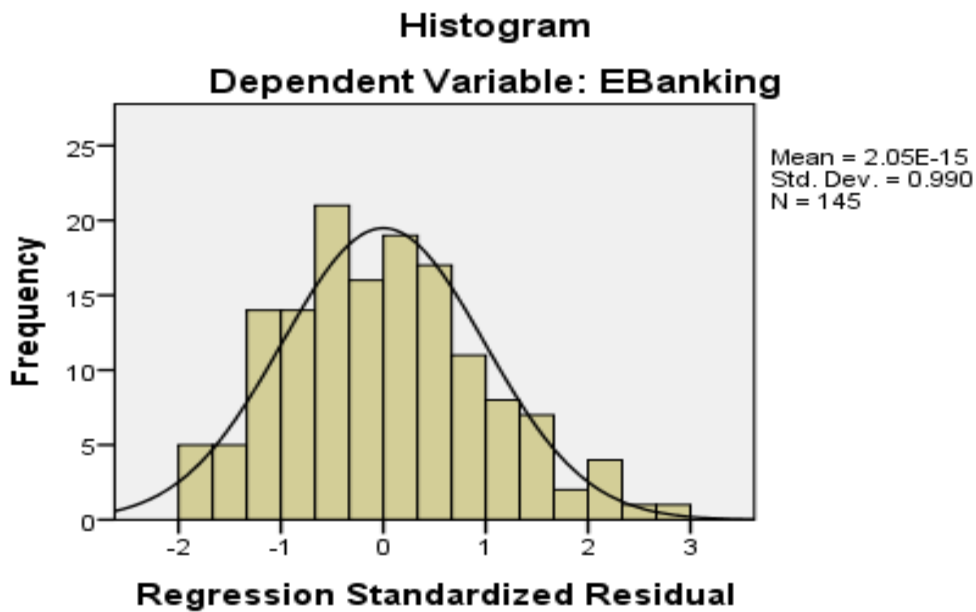
Another important diagnostics test conducted in this study is the normality assumption (i.e. the normally distributed errors). The normality assumption is about the mean of the residuals is zero. Moreover, Normality tests are used to determine whether a data set is well-modeled by a normal distribution or not, or to compute how likely an underlying random variable is to be normally distributed (Gujarati, 2009). Therefore, the researcher used histogram for testing the normality of the data.

According to Fidell (2001), if the residuals are normally distributed around its mean of zero, the histogram should be a bell-shaped and regression standardized residual plotted between 3.3 and -3.3 . So that, from table 4.10 below, it can be noted that the data conforms to the normality assumption (Stevens, 2009). As we can understand from the histogram and p-p plot depicted below, the residuals seem normally distributed and the residuals are distributed with a mean of 0 and standard deviation of 0.990 which is approximately 1. Thus, the model fulfills the assumption of being normally distributed. Moreover, in the normal probability plot it is expected that our points will lie in a reasonably straight diagonal line from bottom left to top right which would suggest no major deviations from normality.

Table 11: Residuals Statistics

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.6671	3.6828	2.8469	.46488	145
Residual	-.82338	1.19568	.00000	.43270	145
Std. Predicted Value	-2.538	1.798	.000	1.000	145
Std. Residual	-1.883	2.734	.000	.990	145

a. Dependent Variable: E-Banking

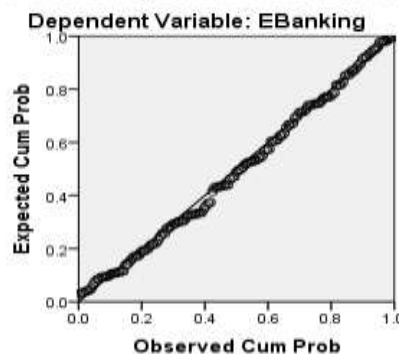


Source: Own survey data, 2020

4.5.2. Linearity test

This is slightly different from simple linear regression as we have multiple explanatory variables. Multiple regressions can accurately estimate the relationship between dependent and independent variables, when their relationship is linear in nature (Keith, 2006). If linearity is violated, all the estimates of the regression including regression coefficients, standard errors, and tests of statistical significance may be biased (Keith, 2006). This can be best checked by p-p plot residual as shown in the appendixes. When, p-p residual looks at straight line, the relationship between the dependent and independent variables is linear. Therefore, there is no linearity problem on the data used for this study.

Normal P-P Plot of Regression Standardized Residual



Source: Own data survey, 2020

4.5.3. Autocorrelation test

For any two observations the residual terms should be uncorrelated (or independent). This eventuality is sometimes described as a lack of autocorrelation. The researcher used and tested this with the Durbin–Watson (DW) test, which tests for serial correlations among errors. A value substantially below 2 (and especially a value less than 1) means that the data is positively auto correlated, i.e. on average a data element is close to the subsequent data element. A value of d substantially above 2 means that the data is negatively auto correlated, i.e. on average a data element is far from the subsequent data element. Thus, the DW test from the appendix shows Sig. F Change 1.805 which means the data is positively auto correlated. This implies that there is no problem with the assumption of autocorrelation and the variables are good predictors of E-Banking.

Table 12: Model Summary

Model	R	R Square	Adjusted R ²	Std. Error of the Estimate	Durbin-Watson
1	.732 ^a	.536	.526	.43728	1.805

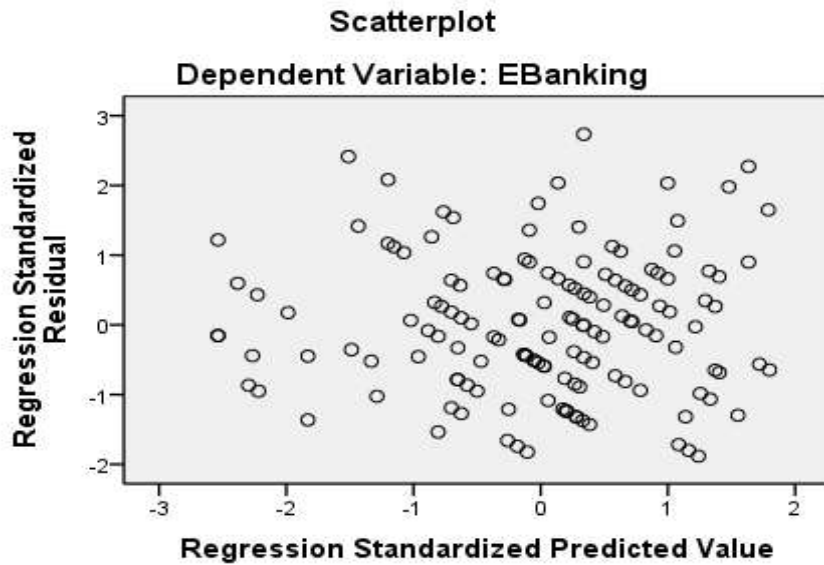
a. Predictors: (Constant), Envt, Techno, Org

b. Dependent Variable: E-Banking

Source: own data survey, 2020

4.5.4. Heteroscedasticity test

Heteroscedasticity statistics checked is used to measure model fitness. The variance of the residuals for every set of values for the independent variable should be equal and violation is called Heteroscedasticity. This means that investigators assume that errors are spread out consistently between the balanced score card. Scatter plot of more than 3.3 or less than -3.3 indicates a Heteroscedasticity problem (Tabachnick&Fidell, 2007). Therefore, as shown in appendix the data did not violate Heteroscedasticity assumption and instead it was homoscedastic.



Source: Own data survey, 2020

4.3. Correlation Analysis

Correlation is a statistical tool to determine the strength of relationship between two suitability variables. Therefore, correlation matrix is an interpretation of the correlations is based on a significant of the correlation between two or more variables. The ranges of r value from -1 to $+1$, which used to describe a direction relationship between two variables. Among them, minus means the relationship between two variables is negative, and if the greater the absolute value of correlation coefficient, the stronger the relationship. It shows that if one variable becomes bigger and another variable will become to smaller. For plus sign means a positive relationship between two variables, a variable tends to directly become bigger with another variable, or smaller and smaller with this variable (direct relation). When correlation coefficient equal to 0 , it means the weakest relationship between two variables. The correlation matrix table is a comparison of needs, requirements, or functions whereby the user identifies a relationship of either mutual benefit, conflict, or no.

Table 13: Correlations

		E-Banking	Techno	Org	Envt
E-Banking	Pearson Correlation	1	.579**	.611**	.522**
	Sig. (2-tailed)		.000	.000	.000
Techno	Pearson Correlation	.579**	1	.417**	.372**
	Sig. (2-tailed)	.000		.000	.000
Org	Pearson Correlation	.611**	.417**	1	.482**
	Sig. (2-tailed)	.000	.000		.000
Envt	Pearson Correlation	.522**	.372**	.482**	1
	Sig. (2-tailed)	.000	.000	.000	

** . Correlation is significant at the 0.01 level (2-tailed).

Findings revealed that technological factor was positively associated with E-banking ($r = 0.579$, $\rho < 0.01$). Further, environmental factor was positively correlated to E-banking ($r = 0.522$, $\rho < 0.01$) showing that both of the factors have a positive correlation with E-banking.

Moreover, organizational factor was positively and strongly correlated with E-banking ($r = 0.611$, $\rho < 0.01$). This implies that technological, organizational, & environmental are expected to influence E-banking positively. From all of the variables connected to E-banking organizational factor is at its strong level and positively correlates with E-banking resulting to $r = 0.611$.

4.4. Model Summary

Table 4.13 gives the regression model summary results. It presents the R value which is the measure of association between the dependent and the independent variables, the R Square which is the coefficient of determination measuring the extent at which the independent variables influence the dependent variable as well as the Adjusted R Square which measures the reliability of the regression results.

Table 14: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.732 ^a	.536	.526	.43728	1.805

a. Predictors: (Constant), Envt, Techno, Org

b. Dependent Variable: E-Banking

The R value (Pearson product moment correlation coefficient) indicating the strength and direction of the linear relationship between the dependent and independent variables in the model is 0.732 and reflects a strong degree of the association between E-banking and the independent variables. So, a value of 0.732 offers good or significant level of prediction (Creswell 2012). The predictive capacity is the square of the correlation coefficient and it is 0.536 (R square or R²) for this model. The R square was obtained from the R, which was the correlation coefficient.

Multiple linear regressions were used to determine the strength and character of the relationship between the independent variables and E-banking. The results showed 53.6% of the variation of E-banking is explained by the variation in the independent variables.

Based on Field (2009) the R² reflects the percentage of variance in the dependent variable that is explained by the variation in the independent variable(s). Adjusted R² adjusts the value of R² when the sample size is small, because an estimate of R² obtained when the sample size tends to be higher than the actual R² in the population.

The rule of thumb is to report adjusted R² when it substantially differs from R² (Green and Salkin, 2010). In this model depicted in the regression table above, the difference is very small (adjusted R squared = 0.526). Therefore, we can report the unadjusted R².

Therefore, I can conclude that in this study 53.6% of the variation of E-banking is explained by the variation in the independent variables. The regression model is modest in terms of goodness fit since the R square value is 0.536 which is/has moderate effect according to Muijjs guideline quoted by Cohen, et al., (2007).

Based on the performed correlation and regression tests, it has become evident that the main model is supported by significant statistical evidence. Organizational, technological and environmental factors, are positively correlated with E-banking and predict E-banking a high confidence level.

4.5: Significance Level (ANOVA)

Analysis of the variance (ANOVA) was used to make simultaneous comparisons between means; thus, testing whether a significant relation exists between dependent and independent

variables. ANOVA indicates a significant F statistic implying that the model was fit for the estimation.

The results presented in table 4.14 gives the ANOVA results which shows the reliability of the model developed in explaining the relationship between the study variables. The significance of the model was tested at 5% level with a 2-tailed test.

Table 15: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	31.120	3	10.373	54.252	.000 ^b
	Residual	26.961	141	.191		
	Total	58.081	144			

a. Dependent Variable: E-Banking

b. Predictors: (Constant), Env, Techno, Org

From the table 4.14, the F statistic is 54.252 with a distribution F (3,141), and the probability of observing a value greater than or equal to 54.252 is less than 0.001 as given by the significance value of 0.000 which is less than the critical value at 5% level in a 2-tailed test. This therefore, reveals that the regression model developed is statistically significant and the variation in the results is insignificant that cannot result to a much difference in case of a change in the study units (population). Therefore, the model can be relied up on to explain the effects of the specific factors on E-banking of Commercial Bank of Ethiopia in Jimma town branches.

The ANOVA table shown above result indicates that the overall model is significant. The analysis of variance shows significant relationship between dimensions the independent variables and E-banking because the ANOVA value 0.000 is smaller than P value (0.05) which indicates the level of statistical significance. Hence, we can conclude that the overall linear regression model is significant.

4.8. Regression Results

Multiple regression analysis was conducted so as to determine the strength and character of the relationship between E-banking and the three variables. The regression equation becomes:

$$\text{E-banking} = a + bx_1\text{Env} + bx_2\text{tech} + bx_3\text{org} + P$$

Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	.320	.221		1.451	.149		
Techno	.261	.049	.347	5.362	.000	.788	1.269
Org	.325	.062	.361	5.268	.000	.702	1.425
Envt	.289	.088	.220	3.276	.001	.733	1.365

a. Dependent Variable: E-Banking

Table 4.12 shows that E-banking is positively associated with technological factor (.261), organizational factor (.325) and environmental factor (0.289). The multiple regression model with all four predictors produced $R^2=.732$, $F=54.252$, $p=0.000$. Since the p-value is less than $\alpha=.05$, we can conclude that the predictors did contribute to the multiple regression model. All of the three predictors resulted in the p-value for these coefficients are statistically significant ($p =0.000$) which indicates that all of them are significant predictor of E-banking. From this result organizational factor is highly significant compared with remaining two variables.

The multiple regression model with all four predictors produced $R^2=.732$, $F= 54.252$, $p<.001$. Therefore, the final model for the multiple regressions is, $E\text{-banking}=.320 + .261TE +.325OR + .289EN + P$. B0: not analyzed (generally, it is the mean for the response when all of the independent Variables (x) take on the value 0.), E-banking be 0.320.

Organizational factor in Commercial Bank of Ethiopia Jimma town branches have positive significant effect on E-banking $X_2= 0.325$ with $P=0.000$, also, the technological and environmental factor of the company have significant effect on E-banking with $X_1=0.261$, $X_3=0.289$ with $p <0.01$ and $P<0.05$ respectively. The values in the coefficients table under the column standardized coefficient and sub-column *Beta* is the regression coefficient when the independent and dependent variables are converted to a z-score. In the multiple regression, this standardized regression coefficient Beta (β) is useful, because it allows us to compare the relative strength of each independent variable's relationship with the dependent variable. In this case, the regression coefficients (b) provides us with information on how much change can be expected with a one- unit change in each independent variable, but they don't tell us the relative strength of the relationship between the dependent variable and each of the independent variables. With the Beta values here, we can see that organizational factor (0.347) has the strongest relationship with E-banking, compared to technological factor (0.347), and environmental factor (0.220). From this

result all of the variables of E-banking are significant for the study.

The multiple regression analysis discovered that technological adoption was found to be Positive and statistically significant ($p < 0.05$). The finding was consistent with the study in Uganda. Samuel, 2018. Accordingly, not using technology was found to be 61.5% times less likely than those adopted technology by using e-banking.

The output of multiple regression analysis also showed that that Organizational factor in Commercial Bank of Ethiopia Jimma town branches is positive and statistically significant association ($p < 0.05$), The finding was consistent with the study ; of Rasoulina & Javaheri (2006) Accordingly, organization which does not adopt e-banking was found to be 64% times less likely than those adopt. The output of multiple regression analysis also showed that environmental factor was positive and statistically significant association ($p < 0.05$).

The finding was consistent with the study in Kenya. Justus and Eva, 2011 found that electronic banking positively transform environment by 78% than those not using electronic banking. This study also reveals that using electronic banking positively affect environment.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1. Summary of Findings

- According to the result of the study, out of the total respondents, 62.8% of them are male employees of Commercial Bank of Ethiopia Jimma city branches whereas the rest 37.2% are female consumers.
- Concerning the age of the respondents from the total 145 respondents 60.7% of them are grouped under 21-30 ages category and 36.50% of them are from age 31 to 50 but, the rest of the respondents are categorized above 50 years. Majority of the respondents are above the age group are 21-30
- The respondents asked whether customers of banks fear risk to use ATM, and the descriptive statistics result gives median and mode of 2.00, that means the largest number of respondent were agreed on the issue, which is 66(38.6%) of the respondents are agree. the cost incurred on the use of different E-banking system like internet/online banking and mobile banking the largest number of respondents 61 out of the total or 35.7% did not agreed with the idea.
- The largest number of respondents 73 or 42.7% out of the total respondents were agreed that there is no legal frame works in Ethiopia, largest number of respondents 54 or 31.6% were agreed that the bank have target market or trade area for e-banking. ICT infrastructure in Ethiopia for internet access is not sufficient to use online banking service, which is 48% of them agreed on this idea.
- The largest numbers of respondents 67 or 39.2% were agreed with the idea that lack of competition between Ethiopian banking sector and foreign bank is considered as challenges for the adoption of E-banking system. The result for all statements of the field indicated that, Median and Mode value is 2.00, which means that respondents of the sampled agreed with the idea that perceived ease.
- The largest number of respondents 93 or 54.4% out of the total was strongly agreed. These result implies, that using online banking system helps to perform banking activities within a short period of time. The transactions in Internet banking are at a lower price, or at no cost and using technological tools like ATM helps to perform transaction at lower cost” were 2.00. These result implies, using of technological tools such as internet and

ATM were resulted in performing of banking duties at lower prices. Lastly, E-banking service were not limited by time, were the median and mode response for this issue is 1.

- Result from regression resulted Organizational factor in Commercial Bank of Ethiopia Jimma town branches have positive significant effect on E-banking $X_2= 0.325$ with $P=0.000$, also, the technological and environmental factor of the company have significant effect on E-banking with $X_1=0.261$, $X_3=0.289$ with $p <0.01$ and $P<0.05$ respectively.

5.2. Conclusions

The findings and discussion part of this study are concluded as follows:

- The low level of ICT infrastructure and lack of legal frame works at NBE, which can initiate banking industry to implement the system. In addition to the above two basic factors affecting adoption of E-banking in Ethiopia, Result of the study also shows that security risk and lack of trust on the use of technological adoption are other major barriers for the system. The level of security risk associated with E-banking product or service, such as ATM, internet banking, mobile banking and others, pose different challenges to different banks. Improvements are required to ensure client confidence.
- Chances of risk, lack of trained and efficient staff in e-banking context, lack of suitable legal and regulatory framework, absence of financial networks that links different banks, low level of internet penetration and poorly developed telecommunication infrastructure, high installation cost of internet and security issues are the main challenges for adoption of e-banking in Ethiopia. In addition, lack of customer awareness regarding the service is another challenge in order to provide the service. Therefore, from this, it is possible to conclude that there are challenges for the adoption of e-banking service, that are not yet adopted the system and for the sufficient adoption of the service from the viewpoint of the bank that are currently providing the service in the country.
- Technical and managerial skills available in commercial bank for the adoption of E-banking are also limited. This is influencing the choice of technology in Ethiopian banks.
- The study reveals that the benefits of technological innovation are well known to the banks and represent a formidable force to drive adoption of the system. In general

perceived Ease of use is one of the basic benefits for E-banking, in which it enables bank staff to perform banking activities in a simple way. The other driving force for the adoption of the system is perceived usefulness, in which, it is used for time saving and cost reduction. This and the other benefit identified in the study were considered as a very great potential for banks to improve their public image

5.3. Recommendations

For researchers:

It is recommendable to undertake further study with large sample size for generalization the findings of Bank.

It may be recommended to take the Future research to be done in order to continue the study on a higher sample size.

The study under taken only by collecting primary and quantitative data due to shortage of resource as the result it needs further study that consider secondary and qualitative data for more strength reputation of banks

For Government & National bank

It needs to urgently establish a clear set of legal frame works on the use of technological innovation in banking sector.

For bank

It builds always to guarantee reliability or dependability of online transactions in order to build customer confidence & to improve the trust worthiness.

need to move away from traditional bases of retail bank competition to a new technology based form of competition by focusing on cost reduction, customer retention, awareness, credibility, security, ease of use, and wider scope of products and service.

to use frequent promotions of the product Creating continuous social awareness about E-banking services

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Questionnaires to be filled by employees of CBE

Dear respondents;

The purpose of this questionnaire is to carry out a research for the partial fulfillment of master's degree in Business Administration. Any information you present will be kept confidential and will be used only for academic purpose. Your cooperation and prompt response will be highly appreciated.

General instruction

- ~ This questionnaire is to be filled by employees of the CBE
- ~ You are not required to write your name.
- ~ You are kindly asked to read carefully and respond to each question in the questionnaire.
- ~ Please put a (√) mark in the box of your choice

Thank you for your cooperation in advance!

Section I: Demographic profile of respondents

Please indicate the following by ticking (√) on the spaces in front of response options:

1. Gender: Male Female

2. Age: 21-30 31-40 41-50 Above 50

3. Educational level: Diploma First degree Master's degree & above

Instruction: Below are lists of statements pertaining to Adoption of E-banking. Please indicate whether you

The following are some challenges the company faces, When adopting E-banking system, please indicate level of your choice		S	A	N	D	S.A
Technological factor		A	2	3	4	5
	1					
1	Customers of our bank fear risk to use automated teller machine(ATM)					
2	Lack of confidence with the security aspects considered as					
3	In the case of using mobile banking ,ATM and others, security					
4	Customers do not trust the technology provided by the bank					
	II.Organizational factors					
5	The bank have procedures in place for when there is an is an interruption in service of e-banking for the customers					
6	Relatively using of Mobile to get banking service is expensive for customers					
7	Lack of sufficient government support will affect customers					
8	Customers of our bank were not familiar with					

	service provided though ATM, Internet banking, telephone and mobile phone					
9	Lack of technical and managerial skills on the use technological innovations					
10	Lack of skills to implement E-banking system					
	III Environmental factors					
11	Using internet banking is difficult due to low internet access					
12	Internet connection was not good enough to perform online					
13	Lack of available ICT infrastructure					
14	Mobile banking services may not perform well because of					
15	lack of legal frame work that enforce banking industries to					
16	The bank have a target market or trade area for e-banking					
17	Lack of competition among local banks					
18	Customers may not willing to accept E-banking service					

The following are some of the opportunity derived from the adoption of E-banking system, please indicate your choice		SA	A	N	D	SA
		1	2	3	4	5
IV. Perceived Ease of Use						
19	E- banking makes it easier for me to do banking					
20	In the case of mobile banking, our customers can simply use banking service by using their					

	cell phone.					
21	From the bank perspective it is easy to use mobile banking					
22	Using E-payment system (like debit card, salary card, ATM or visa card) simplify the activity of workers to deliver service to customer.					
23	Our bank provide guidelines on the use of electronic banking facility					
24	The management of bank provide courses for its staff when introducing new services					
25	Improve the relationship with customers.					
	V. Perceived Usefulness					
26	E-banking such as, Internet banking, Mobile banking, ATM and POS services are enables users to complete banking activities.					
27	E-banking, ATM and POS services are enables					
28	E-banking such as, Internet banking ,Mobile banking, ATM and POS are convenient, in terms of 7 days and 24 hours					
29	E-banking is more accessible to users than visiting a bank.					
30	Using technological tools like ATM helps to perform transaction					
31	Improve customer service					
32	Speed and efficiency					
33	Reduce number of customers come to the banking hall.					

34	Increased the productivity of bank					
35	Increase reliability and accessibility					
36	Used as better information control tools					
37	No time limit to access bank account and information					
38	Cover wide geographic area					
39	High installation cost.					

Part two: Questionnaires related with the opportunity of adopting E-banking any other benefits? Please specify.

Thank You!

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Interview Questions

I. Challenges of adopting E-banking system.

1. What type of Electronic banking service do you provide? ATM, Internet banking, mobile banking or others? Please specify
2. What are the basic challenges of adopting new technological innovations like ATM, internet banking and mobile banking?
3. Is the following factors considered in your institution as challenges for the adoption of technological innovation?
 - A. lack of competition
 - B. Customers reluctance
 - C. lack of social awareness
 - D. cost incurred in the purchase of technological instruments
 - E. Security risk
 - F. inadequate ICT infrastructure
4. Do you see any social, Economic and legal challenges to the adoption of ATM, internet banking and mobile banking in your branch?
5. Do you think that government policy have impact on the adoption of E- banking system? (Please Specify/explain)

II. Opportunity of adopting E-banking system.

1. What are the benefits your branch gained from the adoption of ATM, internet banking and mobile banking system in the delivery of service to customers?
2. Concerning the opportunity I want to talk about. One of these is the perceived advantages, so what are the advantages derived from the usage of technological tools like ATM, internet and mobile to deliver service to customers instead of using the traditional tools.
- 3 In your opinion what are the key factors that push to adopt ATM, internet banking and mobile banking system?
4. As Your opinion, what are the advantages / reasons that you consider of implementing E-Banking system?