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IMPACT OF ELECTRONIC BANKING SERVICE ON CUSTOMERS' SATISFACTION IN ADDIS ABABA (THE CASE OF SELECTED COMMERCIAL BANKS)

BY

SURAFEL EPHREM MENGESHA

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DECLARATION

I, the undersigned, declare that this research paper is my original work and that all sources of the materials in the research paper have been duly acknowledged. The matter embodied in this project work has not been submitted earlier for award of any degree or diploma to the best of my knowledge and belief.

_____   _____
             Name   **Signature**

St. Mary's University, Addis Ababa   **MAY, 2015**

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Acronyms & Abbreviations

ANOVA   Analysis of variance

ATM   Automatic teller machine

CBE   Commercial Bank of Ethiopia

CSEB   Customer satisfaction in electronic banking

CORE banking   Centralized on line real-time electronic banking/environment

DB   Dashen Bank

E-banking-   electronic banking

EBSQ   Electronic banking service quality

EFT-   Electronic fund transfer

ICT-   Information communication technology

IDT   Innovation diffusion theory

NBE-   National bank of Ethiopia

POS   point of sale/purchase

SERVQUAL   Service quality

TAM   Technology Acceptance Model

TTF   Task- Technology Fit model

UB   United Bank

ZB   Zemen Bank

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ABSTRACT

The objective of the study is to assess and examine the influence of e-banking service on customer satisfaction, its relation with demographic characteristics (age, education level & occupation) and the major opportunities and challenges of e-banking activities to satisfy customers of selected private and public commercial banks in Addis Ababa. A total of 160 questionnaires wereproperly filled and returned and interview with four branch managers and e-banking customer service heads were conducted as purposive and convenience sampling were employed. For the purpose of the study primary data were collected using likert scale based questionnaires. And the data was analyzed using descriptive statistics and inferential statistics (ANOVA test, correlation analysis& multiple regression models). The study used ANOVA test to see the relationship between demographic character and customer satisfaction in e-banking, correlation analysis to observe the relationship and regression analysis to explain the variables which determine e-banking induced customer satisfaction. The empirical findings show that service quality dimensions (reliability, assurance, responsiveness, empathy and tangibility) have significant relationship with customer satisfaction in e-banking. The four service quality dimensions (reliability, assurance, responsiveness & empathy) have positive and significant impact on customer satisfaction in e-banking of both public and private commercial banks in Addis Ababa. However tangibility has no influence on customer satisfaction. Thus the respective management bodies of commercial banks should work more to strengthen this service dimension. There is also a relationship between e-banking induced customer satisfaction and demographic characteristics (age & education level of e- banking users). Although the opportunities of e-banking is promising, the fundamental challenging problems faced by commercial banks in relation to e-banking is infrastructural barriers such as network failure, low level of internet penetration, unreliable power supply, requirements of heavy investment and lack of ICT knowledge from the customer side so that commercial banks should enhance their internal capacity and work with the government bodies (Ethio-Telecom, Ethiopian electric power & NBE) to acquire modern technological advancement consistently in the city. And the bank should design and implement the mechanism of increasing their electronic banking customers' confidence, knowledge, and technological skill via sustainable awareness creation programs of using e- banking service in Addis Ababa.

Key words*: Customer satisfaction, E-banking, SERVQUAL model*

CHAPTER ONE

1.1 Background of the Study

In an era of business globalization, Information technology has brought an electronic revolution in the banking industry. It is IT that was revolutionizing the overall operations of banking at local, national and international level. Among the IT based banking services, E-banking is one of the modern technology in which banks use it in order to provide better services and solutions to the demanding customers by maintaining the competitive advantage through the degree of customer satisfaction in this dynamic market arena. The competition in banking sector become stiff and reshaped due to the introduction of AMT, POS, Internet banking and mobile banking which are the major milestones of electronic banking in Ethiopia (Garedachew,2010).

As banking technology is identified as the information and communication technology employed by banks to deliver different services to its customers in a safe and reliable way in an electronic flat form, both customers and banks have been increasingly profited from the adoption of state of the art of modern technology during the last two decades being penetrated in the competitive environment by analyzing and fulfilling customer satisfaction based on the prospects and challenges of E-banking (Fenuga,2010). As customer satisfaction refers to the extent to which customers are happy with the product or service provided by a business. In the banking industry of Ethiopia commercial banks are practically providing e-banking system to their customers in order to raise customer satisfaction through their major intentions of introducing the adopted modern banking technology and achieving profits. So that, investigating and understanding of the level of customer satisfaction and identifying the opportunities and challenges of E-banking towards customer satisfaction in accordance to the impact of E-banking on customer satisfaction in selected branches of commercial banks in Addis Ababa will be unquestionable issue for better tomorrow of the banking sector (Philipose,2013).

Hence there are few researches that have been done on the impact of E-banking on customer satisfaction in Ethiopia such as Assefa (2013) studied on the impact of e-banking on customer satisfaction in Gonder city and indicated that demographic characteristics have a significant

relation with e-banking based customer satisfaction, Yitbarek (2015) stated that service quality dimensions reliability, responsiveness and ease of use have strong influence on e-bankingusers.

Today modern technology is considered as the key driver for the changes taking place in the banking industry around the world. Thus the world banking sector is entering into a new phenomenon of unprecedented form of intense competition supported by the pervasive and steadily growth of information and communication technology infrastructure and system. According to Amaoko (2012), information technology has brought a dynamic progress in the business environment perhaps no other sector has been influenced by advances in technology as much as banking and financial sectors.

Banking technology brings a cutting edge to run the business based on customer centric services and delivery channel (Bijuk & Srechari, 2012). Among the electronic banking distribution channels, Automatic teller machine (ATM) is the primary one and Finland is the first country in the world to have taken a lead in e-banking system (Mishra.R & J. Kiranmai, 2009).

Advancement in technology like electronic banking have also lead to improvements in the ways in which banks process information and provide service to their customers with a strategy of enhancing the service quality to maintain customer satisfaction and conquering the competitive advantage in the fierce competition currently existing in the banking industry. The capacity to fulfill customer expectation is needed to bring strong loyalty to the service of banks. It is mandatory to understand and realize the customers need for measuring the level of customer satisfaction (Amudha & Yabanu, 2012)

Ethiopia is surging ahead to be a leader in the horn of Africa in the financial sectors these sectors are insurance companies, micro finance institutions, saving and credit cooperatives and banking industry among these banking industry accounts for about 95% of the total financial sectors assets, implying that the finical sector is undeveloped and activities that banks could perform are legally limited in expanding services frame workswhich in turn contribute to lesser contestability (Zerayehu,Kegnewa&Teshome,2013). Thus, this study aimed to examine the level of customers' satisfaction in electronic banking via service quality dimensions, identifying the opportunities and challenges of electronic banking in Addis Ababa and determining the status of the

application of ICT in modern banking as a result the study will be the support forother researchers in the area

1.2 Statement of the problem

Indeed, when any business organizations full-fill customers need through technology advancement aided service not only the customers satisfy but also the organization achieves higher sales, profit, market share and competitive advantage in the competitive environment. So that it is vital for business companies to satisfy their customers using any one of the mechanism which is applying technology aided channels consistently. Likewise banks as a business organization should give intense attention to the reason behind the means of satisfying customers based on the impact of banking technology. However Ethiopian commercial banks did not satisfy their customers enough due to a number of problems hindering the smooth delivery of electronic banking services.

According to the study of Yitbarek (2015) dimensions of service qualities like ease of use, reliability and transaction efficiency have impact on customer satisfaction in electronic banking in which it stated other variables could have an influence. So that this study addressed not only five service quality dimensions impact on electronic banking induced customer satisfaction but also differentiating the major e-banking opportunities and challenges.In addition to this commercial banks are on the track of adopting and applying interoperability and striving for creating cashless society in using e- payment which is POS terminals in varies market centers in the city though different challenges have been observed. As studies of Shittu (2010) revealed almost all banks in Ethiopia have adopted electronic banking as a means of enhancing service quality which leads increasing customer satisfaction but it was limited to adoption of e-banking in the country without including service quality dimensions. Beside this Bultum (2014) studied on the factors that affects adoption of electronic banking in Ethiopia banking industry, the major factors affecting customers satisfaction towards the operation of electronic banking are network interruption, lack of sufficient technician in all banks, lack of alternative system, lack of convince of E-banking, frequent breakdown of ATM, machine out of order, machine out of cash, no printing statements, cards gets blocked, unreliability of ATM service, lack of extended mobile banking services, resistance to change in technology among customers and services

providers,customer perception on the risk of failure,complexity,security, lack of personalized services, customers inability to quickly adopt to the new technology, under development of technological infrastructure and low level of relevant knowledge creation and innovation as it is, it was also limited to the challenges of e-banking without including the opportunities.

According to the findings of Assefa (2013) the impact of E-banking on customer satisfaction in Gonder city about 62.19% of the respondents know what e-banking ismean and also 66.42% of respondents underlined on the direct relationship of E-banking and their banking service satisfaction and the study was considered only on ATM which was the onlyform of e-banking in the area. Yitbarek (2015) conducted a study on impact of e-banking on customer satisfaction in Addis Ababa of selected private and public banks. The researcher used qualitative approach in analyzing the study and it was limited to customers of most researchers repeatedly covered branches of these banks in the scope.

Therefore the present study bridged the gap of methodology by using multiple regression analysis, ANOVA & Correlation analysis and also covered the banks that were not included in other studies like United bank & Zemen bank. More over the researcherinvestigated the impact of electronic banking service on customers'satisfaction by taking other research findings as point of departure in respect to the problems pointed out, realizing service quality dimensionsand the challenges and opportunities of electronic banking practice in selected four branches of commercial banks in Addis Ababa, capital city of Ethiopia.

1.3 Research questions

The study answered the following questions

1. What are the focal electronic banking service quality dimensions that have impact on customer satisfaction?
2. What are the challenges and opportunities of E-banking towards customer satisfaction?
3. Is there any relationship between demographic characteristics (age, occupation & education status) and E-banking induced customer satisfaction?
4. What is the level of customer satisfaction due to electronic banking?
5. What must be done to improve customer satisfaction of using e-banking?

1.4 Objective of the Study

1.4.1 General Objective

The general objective of the study is to assess the electronic banking service quality dimensions that have impact on customer satisfaction.

1.4.2 Specific Objectives

1. To identify the focal electronic banking service quality dimensions those have influence on customer satisfaction.
2. To list the major challenges and opportunities of electronic-banking on customer satisfaction.
3. To identify the relationship between demographic characteristics and E-banking oriented customer satisfaction.
4. To analyze the level of customer satisfaction due to electronic banking system.

1.5 Significance of the Study

Banks invest large amount of money to provide technological aided service to retain and acquire customers in keeping customer satisfaction with the intentions of achieving their profitability. But to gain this without proper understanding of the impact of e-banking on customer satisfaction is unthinkable. So that the findings and recommendations of the research may be significantly mandatory to both private and public commercial banks, branch managers, electronic banking department heads, IT managers, employees, National bank of Ethiopia, Ethiopian Tel communication, Ethiopian electric power authority and those bank customers will get benefits from opportunities of e-banking on customer satisfaction. Finally, it adds value to the existing knowledge of electronic banking and customer satisfaction in financial institutions and the study can be used as a base point for further investigations in the related issues.

1.6 Scope and limitation of the study

1.6.1 Scope of the study

This study has been undertaken conceptually to examine and assess the impact of E-banking (ATM, POS, Internet banking and mobile banking only) on customer satisfaction beside this the opportunities and challenges of using E-banking towards customer satisfaction were also be addressed and customers who were registered to take cards and yet not practically utilizeswere not included.

Geographically, the research delimits itself on only four branches of selected commercial banks found in four sub cities of A.A although there are 18 commercial banks with many branches in Addis Ababa. These selected branches of commercial banks are Zemen bank (main branch) in KIrkose sub city, Dashen bank(Bole mehdanialem area branch) in Bole sub city, united bank (lideta branch) in Lideta sub city& commercial bank of Ethiopia (Tefera Deguefe branch) in Yeka sub city

1.6.2 Limitation of the Study

As conducting a research is bounded by a lot of constraints this study has some limitations that hinder from making investigation of the research. From the bank side Starting from the letter of permission to conduct the study in those branches there was a delay and having the appointment to interview particularly e-banking customer service heads took me much time. On the part of customers, they were even reject me when I tried to distribute the questionnaires right after they withdraw the money from ATM machine and it was unfortunate that other branch account holders were on the spot to use the channels. Beside customers inside the bank hall waiting the queue was my target due to many of them were busy of doing what they aimed to do in the bank hall. Thus the researcher faced constraints that can be summarized as the time constraints, targeted customers' busyness, the bank working environment, dalliance in letter of permission approval, financial constraints and extended interview appointments.

1.7 Organization of the Study

The research paper is organized in to five chapters. The first chapter implies introduction, Background of the study, statement of the problem, Research question, objective of the study, significance of the study, scope and limitation of the study & definitions of terms and concepts. Literature review in which previous related research done on e-banking and customer satisfaction in and out of Ethiopia with both in empirical and conceptual aspect is the second chapter. Research Methodology and design will be under chapter three. The fourth chapter deals with analysis of results and findings and finally chapter five presents summary of findings, conclusion and recommendations of the study.

CHAPTER TWO - LITERATURE REVIEW

2.1 Customer satisfaction

It is an overall customer's attitude towards a service provider, or an emotional reaction to the difference b/n what customers anticipate and what they receive .regarding the fulfillment of some need, goal, or desire (Hansemark and Albinsson, 2004). Customer Satisfaction is to degree at which the product or services rich the standard of the buyer in his or her expectations. It deals with what people called as surprise quotient. This is to extend at which firms give out unexpected technical characteristics or personal service to a customer. This definition talks about the degree at which a firm's performance or it services rich the standard expectation of the customer requirement.Most researchers agree that satisfaction is attitude or evaluation that is formed by the customers by comparing what they expect to receive to their subjective perceptions of the performance of they actually get (Oliver.1980).

Definitions

Several authors have defined customer satisfaction in different ways:

- According to Kotler (2000) satisfaction is a person's feeling of pleasure or disappointment resulting from comparing a products perceived performances (outcome) in relation to his/her expectations.
- Customers satisfaction is a psychological concept that involves, the feeling of well-being and pressure that results from obtaining what one hope for and expects from an operating product/service(WTO,1985)
- Customer satisfaction as an attitude-like judgment following a purchase act or service of customer product interaction (Lovelock and Wirtz,2007).
- As Farris Paul W, Bendle, Phillip, Pfeifer & David (2010) customer satisfaction is the number of customers whose reported experience with a firm exceeds specified satisfaction goal.

In today's competitive environment customer satisfaction is major challenge for the banking sectors due to customers have alternative choice in different types of services like electronic banking services provided by banks so that this study adopts the definitions of customer

satisfaction as the desirable expectations of customers via electronic banking service quality in surpassing challenges and using opportunities in to considerations and Customer satisfaction is conceptualized as an overall customer evaluation of a product or service based on purchase and consumption experiences over a time period (E.W.Anderson,et.al, 1994) . It is argued that since cumulative satisfaction is based on a series of purchase and consumption experiences, it is more useful and reliable as a diagnostic and predictive tool than the transaction perspective that is based on a one-time purchase and consumption experience. Therefore, the study conceptualizes customer satisfaction as cumulative measured of being an electronic banking service customer.

Literally, customer satisfaction may be described as a process or an outcome. One area that has received considerable debate in customer satisfaction literature is whether customer satisfaction should be defined as an outcome or process. Many early definitions conceptualized satisfaction as a process which is currently a dominating view heeled by most scholars (Oliver,1980,Parasuraman et.al, 1988) the process perspective presuppose that customer satisfaction is a feeling of satisfaction that results from the process of comparing perceived performance and one or more predictive standards such as expectations or desires (Khalifa and Liu,2002). The customer is satisfied of the performance of the performance of the product /services equal to his /her expectations and the opposite is there that is if the expectations less than perceived performance, the customer is highly dissatisfied.Within this context of the researchers believe that customers satisfaction should be defined from the process perspective so as to indicate the impact of E-banking on customer satisfaction as per the utilization of this modern technology in bankingindustry while customers gets benefits and being challenged in the application of the system on the process.

2.2 Service quality

In the existing business environment the concept of quality is becoming the primary goal of achieving profits through satisfying customers that is why most banks give intense attention to their service package quality so as to conquer the competitive advantage and market share. Johnston (1997) spelt out that the intangibility of service is typically assumed to make consumers evaluations of quality more difficult than for tangible products. This views based on the natural hesitation of people to evaluate things they cannot touch. The intangibility of services make them

much more subjective product. Quality is a matter of how we feel and of our particular taste. This dependence on subjective feelings means that what is perceived as high quality service may differ between individuals.

Service quality has become a popular area of academic research and has been acknowledged as an observant competitive advantage and supporting satisfying relationships with customers (Zeithmal, 2000). It is concepts that has aroused substantial interest and argue in research. There are difficulties defining and measuring it with no overall consensus emerging on either (Wisniewski, 2001). Service quality has been defined as the overall assessment of a service by the customers (Eshghi*et al.,* 2008), while other studies defined it as the extent to which a service meets customer′s needs or expectations. Service is assumed to be quality when it consistently conforms to customer expectations (Asubontenget al*.,* 1996; Wisniewski and Donnelly, 1996).

Garvin (1987) referred to the product oriented quality approach as objective quality. (Clemes, Gan and Kao, 2007).However, understanding quality in the goods sector is inadequate for understanding service quality because of the fundamental differencebetween the two terms (Parasuraman, et al., 1985).Again (Parasuraman, et al., 1985)Suggest that service quality is performance based rather than objects, therefore precise Manufacturing specifications concerning uniform quality can rarely be set.

Service quality is more difficult for consumers to evaluate than product quality; this isdue to a lack of tangible evidence associated with the service (Hong and Goo, 2004). Inthe past decades, researchers (Carman 1990; Garvin 1987; Parasuraman et al, 1985,1988) have defined and measured service quality by examining the attributes of serviceQuality, while others (Bitner and Hubbert 1994; Oliver, 1997; Parasuraman, Zeithaml, and Berry, 1994) focused on the application in services to conceptualize the relationship between service quality and customer satisfaction. Therefore, a combination of the service quality and customer satisfaction literature has formed the foundation of service quality theory (Clemes et al., 2007; Parasuraman et al., 1985).

Bitner and Hubbert (1994) define service quality as the customers overall impression ofthe relative inferiority or superiority of the organization and its services. On other hand,Service quality is not objectively measured according to some technicalstandards but is subjectively felt

by customers and measured relative to customer determined standards (Kwortnik, 2005).The previous literature suggests that the evaluation of quality in services is moredifficult than goods (Parasuraman et al., 1985). As a result Service quality has confirmed to be a complex concept to analyze and understand (Brady and Cronin, 2001). So that, Rust and Oliver (2000) pointed out that it is essential for companies to develop the awareness of customers' perceptions ofservice quality.

2.3 Relation between customer satisfaction and service quality

In the era of stiff competition of the banking industry, both private and state banks are in the game of market arena in terms of providing service quality in every aspect of their competitive strategies because the awareness of their customers are developed in selecting whose bank provides better quality of services as per the satisfaction level they expected to achieve so that different banks designed winning strategies of rendering best service quality to enhance their customer satisfaction over existing competitors in the market rivalry. The relationship between expectation, perceived service quality and customers satisfaction have been investigated in a number of researches (Zeithaml, et al, 1988). They found that, there is very strong relationship between quality of service and customer satisfaction (Parasuraman et al, 1985; 1988). Increase in service quality of the banks can satisfy and develop attitudinal loyalty which ultimately retains valued customers (Nadiri, et al 2009).

 The higher level of perceived service quality results in increased customersatisfaction. When perceived service quality is less than expected service quality customer will be dissatisfied (Jain and Gupta, 2004). According to Cronin and Taylor (1992) satisfaction super ordinate to quality-that quality is one of the service dimensions factored in to customer satisfaction judgment Parasuramanet. al (1985) and Zeithaml et., al (1990) noted that the key strategy for the success and survival of any business institution is the deliverance of quality services to customers. The quality of services offered will determine customer satisfaction and attitudinal loyalty (Ravichandran et al. 2010).

Research has indicated that service quality has been increasingly recognized as a critical factor in the success of any business (Parasuraman et al., 1988), and the banking industry in this case is

not exceptional. Parasuraman, A., ZeithmaI,V.A., &Berry,L.L. (1988) found thatthe performance of theservice provider on core and relational dimensions of services was an important driver for customer satisfaction in retail banking.

Service quality has been widely used to evaluate the performance of banking services (Cowling & Newman, 1995).The banks understand that customers will be loyal if they provide greater value (quality services) than their competitors (Dawes &Swailes, 1999), and on other hand, banks can only earn high profits if they are able to position themselves better than competitor within specific market (Davies et al., 1995).There is positive linear relationship between the service quality and customer satisfaction. Consequently, banks need to focus on service quality and customer satisfaction as a core competitive strategy (Chaoprasert & Elsey, 2004).

2.4 Service quality dimensions(Service quality Model)

As Johnston (1995) pointed out that identification of the determinants of service quality is necessary in order to be able to specify measure, control and improve customer perceived service quality. The most frequently used scales in the measurement of perceived service quality are SERVQUAL (Parasuram, Zeithaml, and Berry 1988) and SERVPERF (Cronin andTaylor 1992). Both are the result of research work from the US school of quality thus Among the models for measuring service quality, the most acknowledged and applied model in diversity of industries is the SERVQUAL (service quality) model developed by (Parasuraman et al,1985)

The SERVQUAL model of Parasuraman et al. (1988) proposed a five dimensional construct of perceived service quality tangibles, reliability, responsiveness, assurance and empathy as the instruments for measuring service quality (Parasuramanet*el al*., 1988; Zeithamlet*el al.,* 1990). Therefore in this study SERVQUAL model is used to measure to service quality of electronic banking provided by selected banks towards their customer satisfaction.

Reliability

It involves two concepts, dependability and uniformity in performance. Reliability also meanshonouring the commitments in areas such as billing accuracy, proper record maintenance and delivering the service within acceptable time limit. It also refers to the correct technical

functioning of a self-services technology and the accuracy of service delivery. Many authors have detected that reliability is significant in the determination of service quality (Bagozzi, 1990; Davis et al., 1992; Parasuraman et al., 1988 Zeithaml & Bitner, 2000). Andreliability is the most crucial characteristics for customers in the evaluation of service quality. Zeithaml and Bitner (2000) advised that customers should be specifically influenced by the reliability of new technology because they might be associated with risks such as the technology malfunctioning. Parasuraman et al. (1988) also considered reliability of the service as a important factor of service quality. Furthermore it is also discovered that reliability is the most crucial determinant of service quality. Research on the use of computers or technologies which share similar characteristics also affect performance (or dependability) as it is an important attribute (Davis et al., 1989; Bagozzi, 1990; Davis et al., 1992). Finally, Dabholkar (1996) in his study revealed that reliability and accuracy are appropriate measure for assessing service that has to do with technology.

Assurance

Parasuraman et al. (1985) defined assurance as knowledge and courtesy of employees and their ability to inspire trust and confidence. According to Sadek et al. (2010), in British banks assurance means the polite and friendly staffs, provision of financial advice, interior comfort, eases of access to account information and knowledgeable and experienced management team.

This is made up of the guarantee that the record showing banking activities and security of accountInformation is not shared (Yang and Fang 2004). Security is another essential determinant in the decision of consumers to use internet banking. Strong issues on security are a common concern to individuals hence their unwillingness to use internet banking (Madu, 2002).

Other studiesalso indicated that in Australia security concerns were shown to be the major cause of the slow growth of electronic banking in the country whilst Polatoglu and Ekin (2001) also indicated that risk interms of financial, physical and social characteristics was the main cause of slow growth of electronic banking usage. Bagozzi (1990) in their study found out that most individuals had faint knowledge and understanding of online banking security risks though they know of the risks. A further finding shows that individuals are aware that their bank will protect their privacy hence their strong confidence in their bank but have a weak confidence in

technology use for online banking., Cunningham (2003)indicated that one of the most important future challenges facing individuals or customers of a bank is the fear of higher risks associated with using the Web for banking and financial transaction.

Responsiveness

Customers are particularly interested in the speed with which a service is offered or delivered.(Bateson, 1985). In addition, most researches have indicated that in most cases, customers overrate the processing time of a service. Base on the above Lovelock and whrtiz (1979) posited that on certain occasion customers has a strong liking to carry out the service by themalso resolved that slow service delivery has a negative effect on individuals overall perceptions of the service quality. So, if individuals are expecting a rapid service delivery, it is probable that they will assess the service more positively (Dabholkar, 1996). Similarly discovered also that time was a significant factor for individuals in using a new service or technology. And in the same way discovered that time savings were essential to individuals who use electronic banking and shopping (Dabholkar, 1996). Customers often utilizes the bank responsiveness towards e-banking when they are on the position of withdrawing of money from ATM machine the machine may not work due to various reasons so that the customer's enforced to request the bank for immediate responseof serving them in solving their problem using either POS machine found in the bank or other mechanism.

Empathy

Parasuraman et al. (1985) defined empathy as the caring and individual attention the firm provides its customers. It involves giving customers individual attention and employees who understand the needs of their customers and convenience business hours. Ananth et al. (2011) referred to empathy in their study on private sector banks as giving individual attention; convenient operating hours; giving personal attention; best interest in heart and understand customer's specific needs.

Tangibility

Parasuraman et al. (1985) defined tangibility as the appearance of physical facilities, equipment, personnel, and written materials. Ananth et al. (2011) referred to tangibility in their study of

private sector banks as modern looking equipment, physical facility, employees are well dressed and materials are visually appealing.

2.5 Electronic banking

Now a day, it is unthinkable that the success of a banking system without information and communication technology. It has enlarged the role of banking sector in the economy. The financial transaction and payment can now be released quickly and easily. The banks with the latest technology and techniques are more successful in the competitive financial market by generating more and more profitability (Kaur Rupinder, 2012). As a result of efficient delivery channels of technology for the banking industry like electronic banking brings new mechanisms of building the capacity of commercial banks for continuous and inclusive growth (R. Seronmodevi and M.G Sarvanaraj, 2012).

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, rather than by cheque or cash. It can be used electronic funds transfer to:

♦ Paycheck deposited directly in to bank or credit union checking account.

♦ Withdraw money from checking account from an ATM machine with a personal identification number (PIN), at convenience, day or night.

♦ Instruct bank or credit union to automatically pay certain monthly bills from account, such as auto loan or mortgage payment.

♦ Have the bank or credit union transfer funds each month from checking account to your mutual fund account.

♦ Have government social security benefits check or tax refund deposited directly into checking account.

♦ Buy groceries, gasoline and other purchases at the point-ofsale, using a check card rather than cash, credit or a personal check.

♦ Use a smart card with a prepaid amount of money embedded in it for use instead of cash at a pay phone, expressway road toll, or on college campuses at the library's photocopy machine or bookstores.

♦ 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.

All electronic payment methods share number of common characteristics. These are independence, Interoperability profitability, security, anonymity, divisibility, case of use, and transaction fees. Independence refers to the ability of E-commerce methods of approaching without installing specialized software. Interoperability and portability refer to the ability of forms of E-commerce to interlink with penetrated some of the poorest economics due to the overwhelming demand for any form of the communications.

Conceptual Definitions

- According to (Abid& Noreen, 2006)electron banking defines as any use of information and communication technology and electronic means by a bank to conduct transactions and have interactions with stakeholders

- It is the delivery of banks information and service by banks to customers vie different delivery plat forms that can be used with different terminals devices such as personal computers and mobile phone with browser, desktop software, telephone or digital television (Daniel, 1999).

- Based on the definitions of Stan (1997) electronic payments is a system of payment where by transactions takes place electronically without the use of cash.

- Electronic banking facilitates an effective payment and accounting system there by enhancing the speed of delivery of banking services considerably (R.K Uppal & RimpiJatana 2007)

In accordance to (R.R. Nitsure, 2003) Electronic banking was considered as ATM and telephone transaction recently it has been transformed by the internet which is a new delivery channel that has facilitated banking transactions for both customers and banks.

Conceptual definition of electronic banking can also be put in the following diagram.
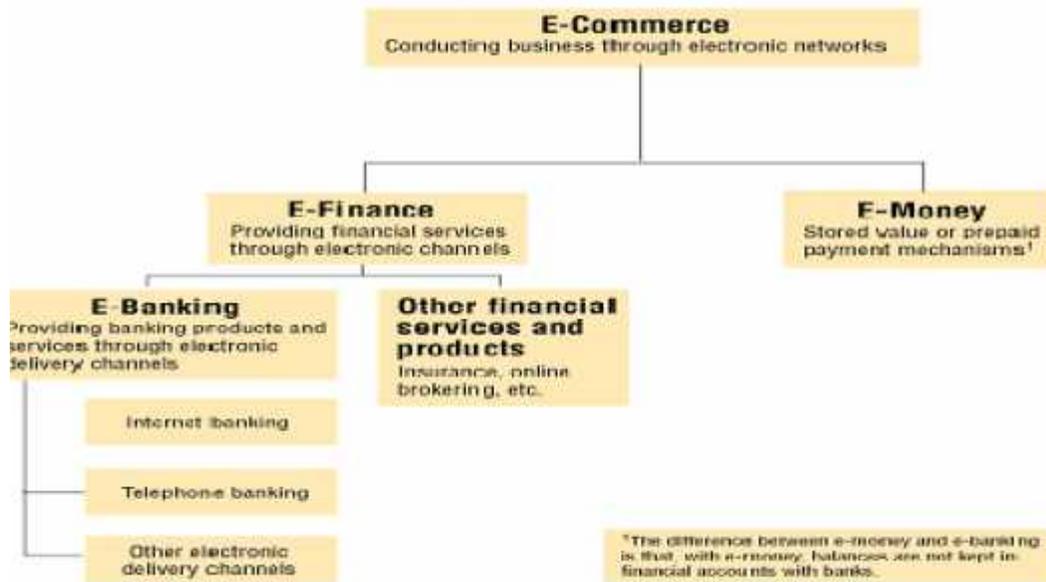
Source: (Angela kopoulos, 2011)

2.6 Types of E-banking

There are many electronic banking delivery channels to provide banking service to customers among them ATM, POS, Mobile banking and Internet banking are the most widely used and listed below.

Mobile banking

Mobile banking is a subset of E-banking in which customer's access a range of banking products like savings accounts and credit instruments, via electronica channels. mobile banking requires the customer to hold a deposit account to and from which payments to hold a deposit account to and from which payments or transfers many be made . Mobile banking reduces the transactions costs of payments because there is an electronically accessible state of value.

Further more mobile banking is a term used for performing balance cheeks, account transactions, payments credit applications and other banking transactions through a mobile device such as a mobile phone or personal digital assistant (PDA). The mobile banking services were offered over

SMS, service known as SMS banking. Mobile banking is used in many parts of the world with little or no infrastructure, especially remote and rural areas. This aspect of mobile Communication is also popular in countries where most of their populations is unbaked. In most of these places, banks can only be found in big cities and customers have to travel hundreds of mile to the nearest bank. The scope of offered services may include facilities to conduct bank and stock market transactions, to administrate accounts and to access customized information (Tiwari R, 2007)

Internet banking

Internet banking allows customers of financial institution to conduct financial transaction on a secure website operated by the institution, which can be a retail or virtual bank credit union or society. It may include any transactions related to online usage. Banks increasingly operates websites through which customers are able not only to inquire about account balance, interest and exchange rates but also to conduct arrange of transactions. Unfortunately, data on internet banking are scarce and difference in definitions make cross-country comparisons difficult (Arbar T.Timothy, 2012).

POS (Point of sale)

It is also sometimes refers to as point of purchase (POP) or check out is the location where a transaction occurs. A ''check out'' refers to as POS terminal or more generally to the hard ware and software used for check outs, the equivalent of an electronic cash register. APOS terminal manages the selling process by a sales person accessible interface. The same system allows the creation and printing of the receipt because of the expensive involved with a POS system, the e Bay guide recommends that if annual revenue exceeds the threshold of 700,000 investments in a POS system will be advantageous. POS systems record sales for business and tax purposes illegal software dubbed ''zappers'' is increasingly used on them to falsify these records with a view to evading the payments of taxes (Shittu O,2010). It is one of the e-banking deliveries channel in which customers used it to withdraw money from the bank on behalf of ATMmachine damaged and purchasing services and products from hospitals, super markets and hotels.

ATM

Automated teller Machine(ATM) is a machine where cash withdraw can be made over the machine without going in to the banking hall. It also sells recharge cards and transfer funds, it can be assessed 24 hours/7 days with account balance enquiry (Fenuga, 2010)

2.7Theories related to electronic banking of information technology

Innovation Diffusiontheory is developed by Roger in 1983 explains individuals' intention to adopt a technology as a modality to perform a traditional activity. The critical factors that determine the adoption of an innovation at the general level are the following: relative advantage, compatibility, and complexity oftrial ability. It is concerned with the manner in which a new technological idea, artefact or technique, or a new use of an old one, migrates from creation to use. According to (IDT) theory, technological innovation is communicated through particular channels, over time, among the members of a social system. The stages through which a technological innovation passes are: knowledge (exposure to its existence, and understanding of its functions); persuasion (the forming of a favourable attitude to it); decision (commitment to its adoption); implementation (putting it to use); and confirmation (reinforcement based on positive outcomes from it).

Dishaw and Strong (1999) indicate that the ***Technology Acceptance Model*** (TAM) and the ***Task-Technology Fit model*** (TTF) have been used extensively to explain the adoption of e-banking. The models provide quite different but sometimes overlapping perspectives on the utilization behavior of these electronic channels The Task-Technology Fit model (Irick, 2008) links technology to performance and posits that performance will be increased when a given technology provides features and support that correspond with the requirements of the task. Thus for banks, they will adopt e-banking technologies if it helps deliver better services to customers.

Technology Acceptance Model (Davis, 1989) however stands out as the most effective theory underpinning technology adoption by customers. It was developed to explain and predict computer-usage behaviour and has its theoretical foundation in the Theory of Reasoned Action by Ajzen and Fishbein (1980). The TAM (Davis, 1989) posits that the adoption of any technology is influenced by two related factors of perceived usefulness and perceived ease of

use. The TAM thus examines the manner in which factors such as system characteristics ensure user friendliness of the technology. Here, the user utilizes information in a systematic way in order to decide whether or not to use the technology in question (Al-Hajri, 2008). In addition, it also postulates that users will adopt the technology if they find it useful.

TAM has been described as well-established and robust (Yuttaponget al.,2009). According to Yuttaponget al*.,* (2009), the model consistently explained a significant proportion of the differences between usage intentions and actual behaviour.

2.8 Relationship between electronic banking and customer satisfactions

Many banks consider technology as a route for service quality improvements, while others consider it as a cost effective new service delivery toolwhatever the underling strategy nobody questions the importance of technology and adoption by banks.
 Moreover it is important to assess how customer find themselves, among these technologies from ATMs to Mobile banking, Internet banking and POS terminals) and can meet real customer needs.

As per the study of Hasan et.al (2013) the trial to examine the contribution of various dimensions of service quality in customer satisfaction a result of the study indicates that most variables were good predictors of overall satisfaction in e-banking. However a result of principle component analysis indicates that perceived value, brand perception, cost effectiveness, easy to use, convenience, problem handling, security /assurance/ and responsiveness are important factors in customer satisfaction in E-banking.

Responsiveness, easy to use, cost effectiveness and compensation are predictors of brand perception in e-banking and fulfillment efficiently. Security assurance, responsiveness convenience, cost effectiveness; problem handling and compensation are predictors of perceived value in e-banking. So that bankers and e-banking service designers should think over these dimensions and make possible changes in the e-banking services according to the customers' expectation and need of the time. It will help to enhance service quality of e-banking and increase the level of customers' satisfaction in e-banking.

The study conducted by (Saha M & Siddiqui, 2006) also revealed that overall senior customer satisfaction level is poor which can be improved by the bank through enhancing the quality of their IT based services. During the study it is also observed that customers' evaluation of E-banking service is affected by their experience in using modern technology of banking system this investigation indicated that demographic characteristics have relationship with IT based service in the banking industry in terms of age, occupation and educationof the customers who use electronic banking which illustrated the higher the user of the technology were early age, educated and in good status of occupation. Beside this modern technology can help the banks to achieve higher level of customer satisfaction. The technology alone doesn't guarantee success because customer satisfaction would be based largely on how customers perceive services performance relative to their expectations.

According to Polotoglu & Ekin (2010) internet banking is very effective to banks and to consumers because it is like an electronic brochure which provides institutional and promotional information ways for contacting the bank special offers recruitment announcement etc. On the other hand, a study by Kumbhar (2011) on consumer satisfaction towards E-banking services of ICICT bank in channi city, India which considered factors affecting on customer satisfaction.An empirical investigation of aims service and examined that the cost effectiveness of ATM service was core service quality dimension and it was significantly affecting an overall customer satisfaction in ATM service provided by commercial banks. However, results of factors analysis indicates that cost effectiveness, early to use and security and responsiveness were also influence customer satisfaction. Therefore, banks should concentrate their efforts on those dimensions for the future better ATM service to satisfy their customers.

2.9Challenges and opportunities in E-banking

2.9.1 Challenges of electronic 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 nonbank entities, such as Internet service providers, telecommunication companies and other technology firms (BCBS, 2001).

On the other hand, electronic banking related problems are user error, bad internet connections, access problems and security issueslike Cyber security is a global challenge that requires global and multi-dimensional responses with respect to policy, socio economic, legal and technological aspects. E-banking applications represent a security challenge as they highly depend on critical ICT systems that create vulnerabilities in financial institutions, business and potentially harm banking customers. It is imperative for banks to understand and address security concerns in order to leverage the potentials of ICTs in delivering E-banking applications. In the deployment of E-banking application, attention should be drawn to the prevention of cyber-crime the use of ICTs by individuals to commit fraud and other crimes against banking transactions (ITU4D, 2006). Most of these problems happen less to outweigh its benefits

E-banking in Ethiopia is in its earliest stage of development. Most of them are basic services only the deregulation of e-banking industry coupled with the emergence of new banking technology is enabling new competitors to enter the financial services markets quickly and

efficiently. However it needs to be recognized that perception norms and an improvement in functioning of e-bank.Electronic banking like any other technological based businesses is exposed to various factors that hinder banks from adopting E banking system so that the researcher summarizes major challenges of electronic banking in Ethiopia in the following aspect *Social and cultural barriers such as High rate of illiteracy, less awareness and customer acceptance*

Proper understanding of the customer is the primary aspect of the E-banking. It is known that computer literacy in Ethiopia is still very low and is barrier in fast acceptance of internet. Mindset of the Ethiopian customer needs to be changed by giving awareness about technical terms in e-banking. Even though it adopts in the fast changing technical scenario, the obsolesce of technology fast.Hence there is always shortage of skilled personal and fear of technologyputs the customer away from electronic delivery channels.

Economic factors such as High cost of internet, low income and heavy investment and cost of Technology:

In connection with Startup cost electronic banking is huge at initial level for acquiring personal computer and other equipment; oneself to do online banking is still not with reach of the middle class & upper middle class customers the cost of maintenance of all equipment like, modem, routers, bridges and network management systems. The cost of sophisticated hardware and software and skill level of employees needed. In e-banking there is need of skilled employees or knowledgeableprofessionals to route the banking transactions through the internet. Banks can employ software application developers, database administrators and training to existing bank staff on the changing systems and procedures who can handle e-banking applications under proper supervision.

Legal and security issues such as Cyber security issues and lack of suitable legal, regulatory frame works of E-payment and restricted business

In a paper less transactions, many problems of security are involved. A secrecy threat as a decision to cause the economic hardship to data, destruction of network, resources disclosure, modification of data or fraud, denial in services and distortion of information,Providing appropriate security of using encryption techniquesimplementation of firewalls and virus

protection software for the purpose of protecting the electronic operation system and customers account and legal frame work for recognizing the validity of banking transactions. Information technology act provides security &legal frame work for e-commerce transactions. Information technology act or NBE suggested that criterion of Digital Signature Certification Board for authentication of electronic records and communication with digital signatures. In the perspective of restricted business not all transactions can be carried electronically; many deposits and some withdrawals require the use of physical services. Some banks have automated to their customers (front end) but still largely depend upon manual process (back end).It result, most of clientele or customers were restricted by lack and awareness and due to technical problems.

Management and banking issues like Resistance to change in technology among staffs and customers and E-banking possess risks and less proper Organization Structure:
Banks may require to adopt flatter organization structure for judicious blending of needs for greater delegation of power, decentralization,customer centric business models, quickly reaction of customer needs in creating awareness by having a better technological skill, learn continuously from customers, provide customer access, whatever and however they want to transact and interact especially for implementing electronic service.

Infrastructural barriers like *Low level of internet penetration, weak telecommunication and frequent power interruption.*
Whenever there is a frequent power interruption, low level of internet penetration and weak telecommunication electronic banking service would be hindered as a result customers will not get expected satisfaction and lead them not to relay on the advanced technology oriented services provided by banks.

Knowledge barriers such as Lack of trust by customer, lack of technological knowledge and language barriers
These challenges are often common in Ethiopia due to less curiosity of customers towards modern technology and less efforts of banks to bring trust of customers for the service of electronic banking via awareness creation.

Competition

The nationalized banks and commercial banks have the competition from foreign and new private sector banks. Competition in banking sector brings various challenges before the banks such as product positioning, innovative ideas and channels, new market trends, cross selling at managerial and organizational part this system needs to be manage, assets and contain risk. Banks are restricting their administrative folio by converting manpower into machine power i.e. banks are decreasing manual powers and getting maximum work done through machine power. Skilled and specialized man power is to be utilized and result oriented targeted staff will be appointed.

2.9.2 E-banking Opportunities in Ethiopia

Information technology revolution has converted the world into a global village. The thinking, structure, work-culture and functioning styles are changing on hour basis. IT has created tremendous job opportunities for the people around the globe as well made the organizations efficient and productive. There has been an IT revolution in the world in the last 40 years. This revolution has altered the way we work and think. It has touched every enterprise, sector, society and government where banking is the most triggered area. IT has created tremendous job opportunities for the people around the globe, and has made the organizations efficient and productive. In most of the developed countries like USA, it has contributed to half of the productive growth and a third of the economic growth over the last five years. In Ethiopia most of the organizations have already deployed IT to transform their processes. The opportunities of e banking can be analyzed from the viewpoint of customers, banking organizations and economy in general. Recent developments have introduced many opportunities for development in banking industry. IT as an enabler has broken all bounds of cost, distance and time.

Opportunities for Customers:

General banking customers have been significantly affected by the advent of e-banking revolution.

♦ A banking customer's account is extremely accessible with an online account.

- Through internet banking customer can operate his account remotely from his office or home. The need for going tobank in person for every single banking activity is dispensed with.

- Electronicbanking lends an added advantage towards payment of utility bills. It eliminates the need to stand in long queues for the purpose of bill payment.

- All services that are usually available from the local bank can be found on a single website.

- Sharp growth in credit card/debit card usage can be majorly attributed to e-bankingcustomer can shop globally withoutany need for carrying paper currency with him.

- By the medium of e-banking (including internet banking), banks are available 24/7 and are just a mouse click away.

Opportunities for Banking Sector:

In addition to banking customers, growth of e-banking infrastructure in general and online banking in particular has proved to be extremely beneficial to banks and overall bank organizations on account of following:

- The concept of online banking has immensely helped the banks in putting a tab over their specific overheads and operating cost.

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

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

- The reach and delivery capabilities of internet-enabled banks, proves to be significantly better than the network of physical bank branches.

The importance of e-banking cannot be overemphasized. E-banking provides easy access tobanking services. The interaction between userand bank has been substantially improved bydeploying ATMs, Internet banking, and morerecently, mobile banking. Cheng (2006) also added that, it reduces thetransaction costs of banking for both Small andMedium Enterprises

(SMEs) and banks. SMEs need not visit banks for banking transactions,providing round the clock services. Cheng TCE, (2006) also posits that e-banking ensures conveniences,quick services and access to the account from anypart of the world. E-banking offers benefits tobanks as well. Banks can benefit from lowertransaction costs as e-banking requires less paperwork, less staffs and physical branches. E-bankingleads to higher level of customers'satisfaction and retention (Polatoglu, 2010). E-banking reducesloan processing time as borrower's loanapplication can be viewed by loan processing and loan approval authority simultaneously (Smith AD, 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 N,2009)

2.10 Empirical studies

In the year of 2016, there are eighteen commercial banks operating in Ethiopia, among these sixteen of them are private banks while the rest two of them are state owned banks.Although a rapid increase in the number of financial institutions, Ethiopian banking sectors are still undeveloped compared to the rest of the world. Banks in Ethiopia are unable to improve customer service through technological advancement so that the customers of their commercial banks have missed seldom to satisfy with the exposure of technology in banking sector that has been satisfied and entertained elsewhere in Africa and other part of the world.

The modern E-banking such as ATM, POS, Internet banking and mobile banking are somehow new to Ethiopia banking industry. E-banking applies the use of modern technology that allows customers to access banking services electronically whether it is to withdraw cash, transfer funds, to pay bills or to obtain commercial information. This technology introduced to the banking sectors by few private and one state owned commercial bank of Ethiopia introduced ATM service for local users in 2001 where ATMs located in Addis Ababa.

Despite there are some related studies conducted by different researchers in various parts of the world limited number of researches have been conducted in Ethiopia on the issue of electronic banking modern technology particularlyGaredachew (2010) studied on the challenges and opportunities of electronic banking in Ethiopia and found out the major challenges of electronic

banking system such as lack of suitable legal and regulatory frame works for e-payment and e-commerce ,political instability of neighboring countries, absence of financial networksthat links different banks and rate of illiteracy.

According to (Wondessen&Tsegai,2005) the challenges and prospects of electronic payment in Ethiopia were lack of customer trust in the initiatives, unavailability of electronic payment regulations and laws, frequent power disruption and lack of skilled man power. The authors found these investigations through applying interview and observation right on the place while customers have been served. And they came up to the conclusion and recommendations of emphasizing on the enhancement of adequate legal and security frame work to improve the use of electronic payment. Thus the finding has seldom argumentative issues with the previous study.

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

Vaithianathan, S. (2010) in his study comments that due to the high Internet penetrationamong developed countries' populations, these countries are able to deploy electronic commerce to theiradvantage, whereas developing countries are still trailing far behind. Apart from this, other issues such as lack of technology infrastructure, lack of awareness, lack of skilled human resources, and the lack of government initiatives, including various economic and social factors are cited as hurdles that prevent pervasive e-commerce adoption in developing countries.

Majid. K(2012) explained the concept of e-banking andhighlighted all the concerns and challenges while implementing the same in theirs study of the challenges and opportunities of electronic banking in India. The authors emphasized that e-banking was necessary not only for improving the quality of services rendered to the customers but also for better marketing of

products. The authors evaluated various e-banking modems for banking transactions like ATM, EFT, ECS, SPNS, PC banking, mobile banking and internet banking. But they mainly emphasized on virtual banking, smart cards, e-cheques and internet banking. They analyzed the websites of various banks for internet banking adoption in which private sector banks were providing maximum internet banking services followed by public sector banks, foreign banks and old private sector banks. The author suggested some measures which could contribute towards greater adoption of e-services. The customers should be taken into confidence that the transactions made by them are risk free, and there is no scope of any fraud.Further, they should also be assured that hackers can do no harm to their interests. Furthermore, the system should be free from legal intricacies. Whereas Amadeh and Jafarpour (2009) studied four groups of obstacles in a research titled the study of obstacles and strategies to improve Electronic banking in the perspective of Iran these obstacles included sociocultural, managerial, financial and technical causes. The first two were accepted and the second two were rejected at the end of the study.

As per the study of (Bultam,2014) entitled on the assessment of factors that affects adoption of electronic banking in the Ethiopian banking industry. This research was conducted on four banks in Ethiopia these private banks were Dashen bank, Zemen bank, Wagagen bank and one stated bank (Commercial bank of Ethiopia). The results of the study showed that the major obstacles of Ethiopian banking industry faces in the adoption of electronic banking are lack of trust, 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 author recommended that establishing legal frame work on the use of technology in the banking industry, supporting the banking industry by investing on modern technology infrastructure and the banks strategic focus on technological innovations instead of traditional mechanism of providing service was unquestionable.

Moreover, based on the study of(Assefa, 2013) conducted research on the impact of electronic banking on customer satisfaction in Ethiopian banking industry. The study scope was on the two private banks Dashen bank and Wagagen bank in Gonder city and its aim was in comparing the traditional brick and mortar banking service, realizing the demographic characteristics age, occupation, education relationship with electronic banking induced customer satisfaction and understanding the level of customer satisfaction through the opportunities and challenges of

electronic banking. The researcher pointed out as a result majority of users of electronic banking are the young, the educated, salaried, and students, business man women are not actively using the service of electronic banking. Electronic banking reduced frequency of bank hall for banking service, reduced waiting time for customers. there are customers who do not know the fee charged for being electronic banking users the bank customer satisfaction increased after being electronic banking users, enabled customers to control their account movements and there is high opportunity to expand electronic banking service in the city. Finally the author suggested that bank should work much in increasing the number of users from all aspects that from gender, age, education status, occupation and make business man and women to use electronic bankingservice.

Raopun (2005) evaluated the level of internet banking services in Thailand andCompared the overall service quality of internet banking. The author used eightdimensional quality model given by David A. Garvin, namely, performance, features, reliability, conformance, durability, serviceability, aesthetics and perceived quality. The results of the study indicated that reliability, security system and information accuracy were the most important perspectives and least important was the perceived quality of commercial bank. The results of the study could be used as a guideline to set up a form of service in order to satisfy the needs of target group accurately and appropriatelyand the research study by MesaySata Shankar (2012) shows all service quality dimensions are positively correlated with customer satisfaction indicating quality banking service as a prerequisite for establishing and having a satisfied customer. According to the result of correlation, empathy and responsiveness are the dominant determinants of customer satisfaction.

Boateng and Molla (2006) indicated that the operational constraints of internet bankingis associated with the customer location, the need to maintain customer satisfaction and the capabilities of the Bank's main software to act as an influential factors in motivating the decision to enter electronic banking services and consequently influencing the usage experience and thus affecting the level of satisfaction (Boateng and Molla, 2006).

As posited by Qureshi et al. (2008), the perceived satisfaction associated with internet banking has made some customers shift from traditional banking. The main argument for such shift is the perceived usefulness, perceived ease of use, security and privacy provided by electronic banking.

According to Jannatul(2009) on his part of study of electronic banking and customer satisfaction concentrating on the impact of variables of electronic banking on customer satisfaction in Bangladesh under five service quality dimensions namely reliability, assurance, responsiveness, empathy and tangibles are established based on SERVIOUAL model. These variables are tested in electronic banking to explore the relationship between service quality and customer satisfaction. The results of the study indicated that the factors are the major service quality dimension for customer satisfaction in electronic banking and the three variables reliability, responsiveness and assurance have more contribution to satisfy the customers of e-banking in Bangladesh.

The study of (Yitbarek, 2015) on the impact of electronic banking service on customer satisfaction in selected commercial banks of Addis Ababa, It aims to investigate impacts of electronic banking service on customer satisfaction, its relation with demographic characteristics and major challenges in electronic banking activities to satisfy customers in selected private and public commercial banks in Addis Ababa. The empirical results indicated that service quality dimensions reliability customer support and ease of use has strong influence on electronic banking users in both private and state owned banks thus the management bodies of the commercial banks should strive to strengthen these service dimensions, there is also a relationship between satisfaction in electronic banking and age, education level of users of electronic banking. And the study indicated that the major problem faced by commercial banks in relation to electronic banking is network failure due to poorly developed telecommunication infrastructure, lack of reliable power supply, lack of ICT knowledge from customer end in order to sustain the service the commercial banks should work with government's bodies (Ethio-telecomand Ethiopian electric power) and increasing the customers' knowledge and confidence in using electronic banking system.

To sum up, many of related studies on the impact of electronic banking on customer satisfaction are seldom conducted in using qualitative approach and focused in some private and state owned commercial banks even the study of Assefa (2013) did not include state owned bank and assess the level of customers' satisfaction in terms of service quality dimensions. On the other hand the study of Yitbarek (2015) were not indicated the valuable information's that could be obtained from electronic banking department of the study areas. Thus this study is designed to address the

current gap in the literature methodology and questions of representativeness by assessing and examining the impact of electronic banking on customer satisfaction of three private banks and one state owned bank in Addis Ababa.

Conceptualframe work

The independent variables are the SERVQUAL dimensions: Tangibility, Responsiveness, Reliability, Assurance and Empathy. Customer satisfaction is the dependent variable that the study measure with the independent variables. The most famous model of service quality was proposed by Parasuraman et al. (1985, 1988). It had five dimensions and can be explained as: Reliability, Responsiveness, Assurance, Empathy and Tangibilityin addition to this, demographic characteristics (age, education & occupation) relationship to customer satisfaction in electronic banking have been considered.

Impact of electronic banking service quality on customer satisfaction

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┌─────────────────────────────────┐
│  ┌───────────────────────┐      │
│  │     Reliability       │      │                  ┌──────────────┐
│  └───────────────────────┘      │                  │  Customer    │
│  ┌───────────────────────┐      │                  │ Satisfaction │
│  │     Assurance         │      │                  └──────────────┘
│  └───────────────────────┘      │
│  ┌───────────────────────┐      │
│  │   Responsiveness      │      │
│  └───────────────────────┘      │
│  ┌───────────────────────┐      │
│  │     Empathy           │      │
│  └───────────────────────┘      │
│  ┌───────────────────────┐      │
│  │    Tangibility        │      │
│  └───────────────────────┘      │
└─────────────────────────────────┘
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│  Demographic                    │
│  characteristics                │
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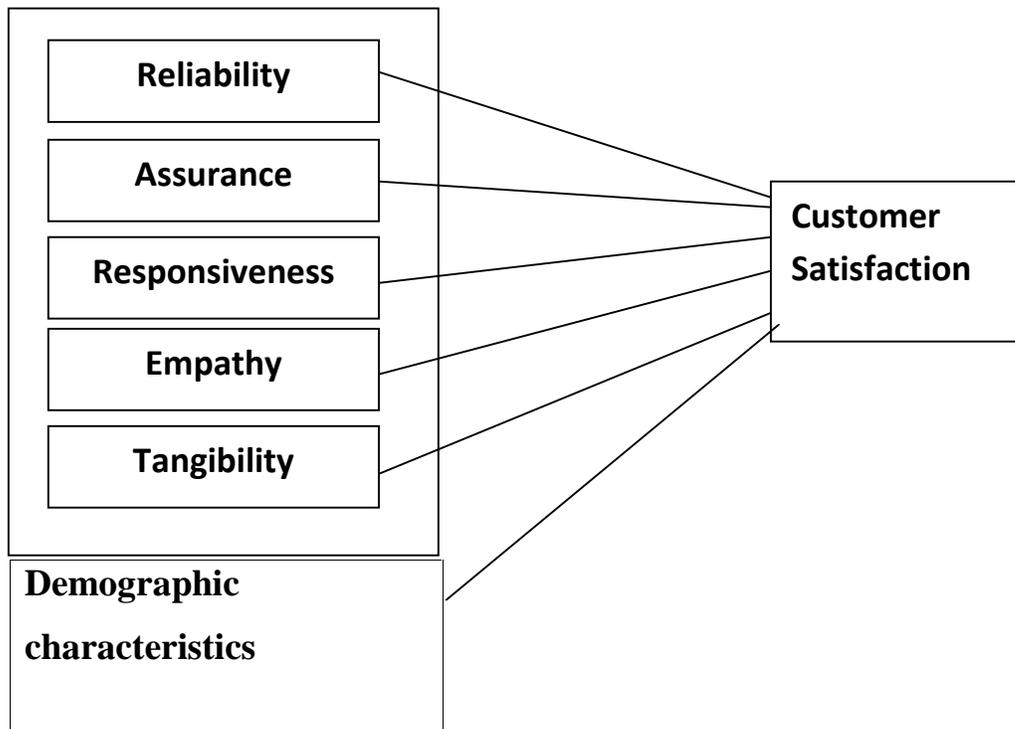
Source: E. Abebe, 2013

Based on the conceptual frame work of the study above, the researcher pointed out the following hypothesis that indicates the positive or negative relationship of overall satisfaction of customers

towards electronic banking, with different components of service quality and demographic characteristics.

Ho1: Demographic characteristics (age, education & occupation) has no significant relationship with customer satisfaction in e- banking

Ho2: Reliability has no a positive significant impact on customer satisfaction towards electronic banking.

Ho3: Responsiveness has no a positive significant impact on customer satisfaction towards electronic banking.

Ho4: Assurance has no a positive significant impact on customer satisfaction towards electronic banking.

Ho5: Empathy has no a positive significant impact on customer satisfaction towards electronic banking.

Ho6: Tangibility has no a positive significant impact on customer satisfaction towards electronic banking.

Therefore this study emphasize on the analytical frame work and hypothesis that became tested using descriptive and inferential statistical analysis then the null hypothesis either be accepted or rejected.

CHAPTER THREE - RESEARCH METHODOLOGY

3.1Research Design

As saunderet. al (2007) defined research design is the general plan of how the research questions had been answered. Based on the purpose of the study it was adopted an explanatory research because it is suitable to explain the correlation and relationship between variables as stated by Philip &Adrien(2009). The study has been relied on both quantitative and qualitative approaches. And it was a program that guided the researcher in the process of collecting, analyzing and interpreting the data. In addition the researcher used descriptive form of research design such as tabulation, graphs, charts and etc.

3.2 Data type and source

Concerning to the source of data both primary and secondary sources were used in generating valuable and relevant data. The primary source of data also used purposefully in the analysis state of the study. This data were gathered through questionnaires and interviews that have been prepared for customers of the four branches of each commercial banks (one state owned and three private banks), branch managers and electronic banking customer service supervisors respectively. And also secondary source of data were gathered from relevant reading materials obtained from the internet, books in journals, articles, magazines, annual reports of commercial banks, newspapers and the internet on issues relating to E-banking service impact on customer satisfaction plus related area researches.

3.3 Sampling technique & sample size

Due to the wider nature of the banking industry in Ethiopia, the study did not include all branches of the 18 commercial banks operating in all parts of Ethiopia. As a result the researcher selected four branches of commercial banks in Addis Ababa. Namely, Zemenbank(main branch) Dashen bank (Bole mehdanialem area branch), United bank (lideta branch) and Commercial Bank of Ethiopia (Tefera Deguefe Branch). These branches of commercial bankswere selected based on the branches highest grade statues of providing services and profitabilityand sub city

basis of Addis Ababa which are Zemen bank in Kirkose sub city, United bank in lideta sub city, Dashen bank in Bole sub city and Commercial bank of Ethiopia in yeka subcity. The researcher used purposive sampling to select branches and convenience sampling to distribute the questionnaires.

The population of the study was currently active electronic banking customers of the four selected branches of commercial banks who have been using since the branch has been opened and the service has been provided till to March,31/2016 thus the total study population was 47,035 which was obtained from the sum total of electronic banking users ofthe four branches of commercial banks in which 3,233 and 7,113 were e-banking customers of commercial bank of Ethiopia(Tefera degufe branch) & Dashen bank (Bole mehdanialem area branch) respectively. While 35,000 & 1,689 have been the customers of Zemen bank (main branch) & United bank (lideta branch). So that Sample size of 180 respondents was taken to be considered to fill the questionnaires but 160 questionnaires were filled completely and used for the study. As a result 40 respondents from each branch of commercial banks were covered. Therefore, the simplified formula provided by Taro Yemane (1967) was used to calculate sample size indicated below.

$$n = \frac{N}{1+N(e)2}$$

Where, n= number of sample size

N= Total number of study population

e= level of confidence to have in the data or degree of freedom which is 92.5% for the study.

$$n = \frac{47,035}{1+47,035(0.075)^2}$$

Sample size will be = 178and the researcher assumed 90% response rate and totally distributed 180 questionnaires but 160 were filled completely and used for the study.

3.4 Method of data collection

The basic instruments that the researcher were used A.-5 point likert scalequestionnaires which were distributed to respondents as customers of four branchesof commercial banks and collected by the researcher himself for the purpose of the study assuring customers response, that were kept confidentially by researcher. Regarding interview, it was prepared in semi structured and collected from four branch managers and fourelectronic banking customers services supervisor of each branches of the four commercial banks, this interview session were held by the researcher himself.

3.5 Data Analysis Method

The researcher were analyzed the data by using both qualitative and quantitative analysisthrough the use of descriptive statistical tools such as frequency, valid percentage of results with the help of SPSS (statistical packages for social science software program). Descriptive analysis was used to describe the data that were collected from questionnaires in the form of frequency, percentage and tabulation form Additionally, ANOVA, correlation analysis and multiple regression analysis were conducted to explain the relationship and impact of the variables which determined customer Satisfaction in E-banking service and to measure the level of customer satisfaction. The researcher were also usedqualitative analysis technique in order to analyze the collected data from interview and secondary data so as to display the results in the form of narration by using content analysis technique. Lastly the final research of the study will be presented using tables and graphs.

3.5.1Research model

As the purpose of the study is to assess and examine the impact of five e-banking service quality dimensions on customer satisfaction by commercial banks. The researcher used multiple regression model to determine significance level of the variables towards e-banking induced customer satisfaction.

Customer satisfaction in e-banking=f (electronic banking five service quality dimensions)

$CSEB = \alpha + \beta_1 I_1 + \beta_2 I_2 + \beta_3 I_3 + \beta_4 I_4 + \beta_5 I_5 + \varepsilon$

Where CSEB= Customer satisfaction in electronic banking

I_1= Reliability

I_2= Assurance

I_3= Responsiveness

I_4= Empathy

I_5= Tangibility

Thus (alpha) is constant, (beta) is coefficient of estimate, is the error term. Customer Satisfaction in e-banking is dependent variable and I_1 toI_5 are independent variables.

3.6 Reliability and validity

Reliability is defined as be fundamentally concerned with issues of consistency of measures. (Bryman and Bell, 2011) and it isdefined by Phelan and Wren (2006) as reliability (repeatability over time or consistency) is the degree to which an assessment tool produces stable and consistent results. While the same author defines Validity as how well a test measures what it is purported to measure.Due to the nature of the questionnaire construct, as varying ways were applied for measuring the different variables considered, it was not possible to apply Cronbach's alpha or factor analysis to determine the statistical reliability and construct validity. In addition, the size of the sample was one constraint not to apply these statistical tests. Field (2005) recommends that the sample size necessary for factor analysis should at least be 300 or above.

To overcome this challenge, the draft survey questionnaire was pilot tested with 20 respondents and feedbacks from the pilot testing were incorporated into designing of the final survey questionnaire. The feedbacks obtained were instrumental in increasing the response rate for the questionnaires and ease of understandability of the questions. in addition to this triangulation was also applied to increase the reliability of the questionnaire by gathering comparable information from the concerned bodies at the same time asrecommended by Greener (2008).Part of the recommendations made to enhance reliability and validity of research tools by Phelan and Wren(2006) includehaving instruments reviewed by faculty at other schools to obtain feedback

from an outside party who is less invested in the instrument. Accordinglythe first draft of the survey questionnaire was critiqued by the research advisor.

According to Greener (2008), three validity measures were considered in designing the survey instruments, construct validity, face validity (external validity), and internal validity.Construct validity is the assumption that the instruments must actually measure what they are purported to measure. External validity more often called generalizability, determines if we can generalize the results of the study to other contexts or situations. The study to some extent may suffer from lack of external validity considering the sample size in nominal terms, the study population, and the theoretical backing by (Lau and Zhang, 2006).

Whereas internal validity, also called causality, examines whether the observed change in a dependent variable is indeed caused by a corresponding change in hypothesized independent variable and the study has examined both causality and association between dependent and independent variableshence, the study is less likely to be susceptible to the risk of internal validity error.

Table 3.1 Reliability Analysis

Items	Cronbach's Alpha	Cronbach'sAlpha Based on standardized item	N.of Items
Reliability	.783	.785	3
Assurance	.768	.765	3
Responsiveness	.727	.750	3
Empathy	.681	.685	3
Tangibility	.644	.653	3
Total	.830	.890	15

Source: Own study (2016)

3.7 Ethical considerations

At first a support letter was obtained from St.mary's university school of graduates then the support letter was submitted to the banks head office of human resource and electronic banking department for reviewing the ethical issues and ethical clearance. Finally the approval letter was presented to commercial bank of Ethiopia (Tefera Degufe branch), United bank (Lideta branch), Dashen bank (Bole mehdanialem branch) &Zemen bank (main branch) and granted permission. During the collection of data via questionnaires & interview the following contents were taken in to account.

- Response of customers was unnamed
- They were informed that they will not encounter any problem with relation to their answers.
- They were informed that they can abort any time on the process.

CHAPTER FOUR - DATA ANALYSIS AND RESULTS OF THE STUDY

4.1 Analysis and Results

4.1.1Demographic profile

According to the total of 180 questionnaires were personally distributed and 160 were properly collected from e-banking users as a respondent with well-organized follow up and guide in filling the questionnaires in which various questions asked related to e-banking service, opportunities, challenges and their satisfaction level to e-banking customers of the selected four branches commercial banks in Addis Ababa. Due to this the statistical analysis of the study was done using SPSS software, version 20. And the results of the study were shown in both inference and descriptive aspect.

Table.4.1 Demographic profile of respondents

Demographic Character	Frequency	Percentage	Cumulative percentage
Gender			
Male	108	67.5	67.5
Female	52	32.5	100
Total	160	100.00	100.00
Age			
20-30	82	51.3	51.3
31-40	58	36.3	87.5
41-50	15	9.4	96.9
51-60	5	3.1	100
Total	160	100.00	100.00
Educational level			
Primary	10	6.3	6.3
High school	11	6.9	13.1
Diploma	36	22.5	35.6
Degree	76	47.5	83.1

Master's degree	20	12.5	96.9
Doctorate & higher	7	4.4	100
Total	160	100.00	100.00
Marital status			
Single	90	56.3	56.3
Divorced	2	1.3	98.8
Married	68	42.5	100
Widow	0	0	0
Total	160	100.00	100.00
Occupation			
Unemployed	2	1.3	1.3
Salaried	101	63.1	64.4
Student	8	5.0	69.4
Business person	49	30.6	100.00
Pensioner	0	0.00	0.00
Total	160	100.00	

Source*:* Own survey, 2016

As per descriptive analysis the questionnaires were contained demographic profile of respondents as being factors of influencing e- banking customers' satisfaction of the selected branches of commercial banks. As it can be observed from table 4.1, among 160 respondents 67.5% were male and 32.5% were female. Beside this of age wise 51% of respondents were in between 20-30 and 36.3% respondents were in the age of between 31-40 while in the age between 51-60 were 3.1%. This indicates that most of the respondents were younger. In terms of educational level 47.5% of the respondents were bachelor degree holders, (12.5%) were masters holder, (4.4%) had doctorate and current primary educational status of respondents were 6.3% in which there were no respondents less than primary level. It implied that the respondents had high literacy level. In the case of marital statues 42.5% of respondents were married and 56.3% were unmarried but there were no respondents in widowed life. In respect to occupation side the respondents were the mix of salaried (63.1%), business person (30.6%), unemployed (1.3%), and

student (5.0%) but there were no respondents in the category of being pensioner as a sample respondent.

Hypothesis testing

The researcher tested whether there is a relationship between customers' satisfaction in electronic banking service and demographic characteristics (age, education & occupation). As the variables are categorical and continuous variables ANOVA was conducted in order to test if there is a significant relationship between the two variables.

Statement of hypothesis

Ho1: Demographic characteristics (age, education & occupation) have no significant relationship with customer satisfaction in e- banking.

Table 4.2 Age and customer satisfaction in e-banking

ANOVA					
	Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**
Between Groups	1.628	3	.543	.362	.000
Within Groups	233.979	156	1.500		
Total	235.608	159			

Significance at 0.05
Source: Own survey, 2016

Based on the categorization of age of customers from 20-30, 31-40 & 41-50, the above table 4.2 indicates that the relationship between age and customer satisfaction in e-banking are statically significant as the sig value were less than 0.05 so that the null hypothesis were rejected which indicates there is a significant relationship between age and e-banking induced customer satisfaction as a result the alternative hypothesis were accepted. Beside the descriptive statics results merely support it and this result support the study outcome of Assefa(2013) in which 69.15% of respondents were male, 94.53% of the sample respondent age were less than 35 and also in the study results of Yitbarek(2015) the respondents who were less than the age of 35 were around 95%. This all implied and supported the result of this study in which age has a significant relation with customer satisfaction in e-banking.

Table 4.3 Level of education and customer satisfaction in E-banking

ANOVA					
	Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**
Between Groups	14.227	5	2.845	1.979	.000
Within Groups	221.380	154	1.438		
Total	235.608	159			

Significance at 0.05
Source: Own survey, 2016

As it can be observed from table 4.3 the educational status has significant relation with customer satisfaction in electronic banking. Due to the results of sig value is less than 0.05 the null hypothesis is rejected and the research hypothesis is accepted. The study result of Vijay M. (2012) indicated that 90.60% of respondents were degree and above degree holders which supported this study outcome. Additionally the finding of Yitbarek (2015) stated that 73.3% of participants in the study were degree and above degree holders. This implied that customers with higher educational level have a progressive perception and interest in using modern technology because it made them use it comfortably within respect to their knowledge of know how enhancement which leads them to be satisfied of it. This result obtained as education was categorized from primary up to diploma and from degree holders up to doctorate.

Table 4.4 Occupation and customer satisfaction in Electronic banking

ANOVA					
	Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**
Between Groups	4.813	3	1.604	1.084	.357
Within Groups	230.795	156	1.479		
Total	235.608	159			

Significance at 0.05
Source: Own survey, 2016

It can be seen from the table 4.4 that occupation have no significant relation with customer satisfaction in e-banking due to the sig value is greater than significance level at 0.05 which shows the statistical (null) hypothesis is accepted whereas the alternative hypothesis is rejected. This study has a support from other study result of Jayaraman M.et.al.(2012) in Klang Valley,

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Malsia, about the study of demographic factors in adoption of retail internet banking factors found that there is no relationship between occupation and annual income with that of adoption of retail internet banking.And also the study result of Assefa (2013) indicated that 52.99% of respondents were students and 41.29% were salaried. Based on the study of Yitbarek (2015) occupation has no significant relationship with electronic banking induced customer satisfaction. The categorization of occupation was salaried, business man and student plus unemployed together.

4.5Correlation analysis

Table4.5Correlation analysis between explanatory variables and customer satisfaction in e-banking

		Reliability	Assurance	Responsiveness	Empathy	Tangibility	Customer Satisfaction
Reliability	Pearson Correlation	1	.399**	.420**	.438**	.431	.409**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
Assurance	Pearson Correlation		1	.368**	.467**	.446**	.376**
	Sig. (2-tailed)			.000	.000	.000	.000
Responsive ness	Pearson Correlation			1	.420**	.340**	.388
	Sig. (2-tailed)				.000	.000	.000
Empathy	Pearson Correlation				1	.373**	.484**
	Sig. (2-tailed)					.000	.000
Tangibility	Pearson Correlation					1**	.340**
	Sig. (2-tailed)						.000
Customer Satisfaction	Pearson Correlation						1**
	Sig. (2-tailed)						

Source : Own survey, 2016

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

Reliability and customer satisfaction in e- banking has moderately high correlation coefficient which is 0.409 at 0.01 level of significant that leads the reliability of commercial banks e-banking service deliveries have significant association with the level of customer satisfaction. So that reliability is one of the better predicator of satisfaction level in electronic banking system.Assurance and customer satisfaction has a bit moderate positive significant correlation

coefficient of 0.376 at 0.01 significant Level. Although the correlation coefficient of assurance is relatively lower it has significant correlation with e-banking induced customer satisfaction. Responsiveness and e-banking centered customer satisfaction has a bit moderate correlation coefficient of 0.388 at 0.01 level of significant which leads that responsiveness has a positive significant correlationin the satisfaction level of customerson electronic banking and it can be considered as a smaller predictor of satisfaction level on electronic banking.Empathy and customer satisfaction has moderately higher correlation coefficient relatively which is 0.484 at 0.01 level of significant. This implied that commercial banks have good empathy in electronic banking service delivery in satisfying customers. Therefore empathy like that of reliability can be a better predicator of level of satisfaction obtained through electronic banking system. Finally, Tangibility and customer satisfaction has the lowest correlation coefficient of 0.340 at 0.01 level of significant relatively which shows the weak significant correlation of the two. Generally Reliability, empathy and responsiveness can be the predicator of satisfaction level on electronic banking service delivery due to their higher in correlation coefficient relatively.

4.3Regression analysis between customer satisfaction in electronic banking and explanatory variables

Table 4.6 Model Summary

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.564ᵃ	.318	.295	1.02181

Significance at 0.05

a. Predictors: (Constant), Tangibility, Responsiveness, Empathy, Reliability, Assurance

As it can be seen in the above model summary R= 0.564 which indicates the positive relationship between customers' satisfaction in electronic banking and explanatory variables (reliability, assurance, responsiveness, empathy and tangibles) and R-square measured how much the percentage of the difference in the dependent variable is explained as a result of the change in the independent variable which are service quality dimensions thus R-square is also measured the

goodness of the fit of those explanatory variables in explaining the variation in customer satisfaction as dependent variable. So that, the R-square value for the regression model is 0.295 which implies the variables contribution for the customer satisfaction on e-banking is 29.5% in this study where the rest 70.5% indicates the variation in the level of customer satisfaction of CBE, DB,ZB & UB are explained by other variables which are not included in the model. Due to the R-square value is smaller to explain the variation being good explanatory variables of the satisfaction level of commercial banks.The researcher believes that with additional variables such as ease of use, proximity and transaction efficiency their R-square value or measure of determining the dependent variable might significantly increase. This can be supported by the study of Yitbarek(2015) and Assefa (2013) stated customized variables such as transaction efficiency, ease of use and electronic banking service availability and accessibility 24/7 were good explanatory variables of the satisfaction level of commercial banks.

Table 4.7 ANOVA

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	74.816	5	14.963	14.331	.000[b]
	Residual	160.792	154	1.044		
	Total	235.608	159			

a. Dependent Variable: Customer satisfaction on e- banking

b. Predictors: (Constant), Tangibility, Responsiveness, Empathy, Reliability, Assurance

As per ANOVA results indicated on above table 4.7 there is a statistical significantcorrelation between dependent and independent variable at 1% significant level due to the sig value 0.000this reveals that the explanatory variables; reliability, assurance, responsiveness, empathy and tangibility have impact on customer satisfaction. However all electronic banking service quality have no equal correlation with customer satisfaction degree because the outcome of multiple regression analysis stated that there is variation in the impact of e-banking service quality dimensions on customer satisfaction.

In terms of F-statistics (14.963) at a significant level of 0.000,which means there is a relationship between e-banking service quality dimensions and customer satisfaction among Commercial bank of Ethiopia, Dashen bank, Zemen bank &United bank.

Table 4.8Regression coefficient analysis of model

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.063	.507		.123	.000
	Reliability	.183	.097	.153	1.884	.000
	Assurance	.170	.145	.096	1.174	.000
	Responsiveness	.169	.092	.144	1.847	.000
	Empathy	.396	.114	.283	3.466	.001
	Tangibility	.106	.109	.077	.970	.334

a. Dependent variable: CSEB

Based on the above results here can be developed the following regression model

$CSEB=0.063 + 0.153I_1 + 0.096I_2 + 0.144I_3 + 0.283I_4$

Std.Err (0.507) (0.097) (0.145) (0.092) (0.114)

T.values (0.123)* (1.884)* (1.174)* (1.847)* (3.466)*

R- Square (Adj.) = 0.295, F= 14.963

Significant at 95% level of confidence

Where CSEB = customer satisfaction on electronic banking

I_1= Reliability

I_2= Assurance

I_3= Responsiveness

I_4= Empathy

According to the independent variable effect on change of customer satisfaction level here is the finding up on the results of regression analysis which is reliability (I_1) with 0.153 of 100% change in reliability leads to 15.3% change in customer satisfaction level. Responsiveness (I_3) with 0.144 of 100% converts in responsiveness stands for 14.4% of customer satisfaction level

conversion. And empathy (I_4) with 0.283 of 100% change in empathy leads to 28.3% change of the level of customer satisfaction on electronic banking users.

Statement of hypothesis

Ho2: Reliability has no a positive significant impact on customer satisfaction towards electronic banking.

The results of regression model reveals that coefficient analysis shows the relationship between dependent variable (CSEB) and independent variables in which the coefficient sig value of I_1 (reliability) is 0.000 at 5% significant level which indicates that there is a significant relationship in between reliability and customers satisfaction on electronic banking. As it was observed thatrespondents satisfaction level were dependent on the reliability of the e-banking service. Thus the null hypothesis has been rejected.

Statement of hypothesis

Ho3: Assurance has no a positive significant impact on customer satisfaction towards electronic banking.

Ho4: Responsiveness has no a positive significant impact on customer satisfaction towards electronic banking.

Ho5: Empathy has no a positive significant impact on customer satisfaction towards electronic banking.

Ho6: Tangibility has no a positive significant impact on customer satisfaction towards electronic banking.

The coefficient sig value ofI_2 (assurance) is 0.000 at 5% significant level in which the variable has a significant relation with customer satisfaction on e-banking which leads to reject the null hypothesis. And the other two independent variables I_3& I_4 (Responsiveness & Empathy) have significant positive relationship with CSEB so that the null hypothesis is rejected. Whereas I_5 (tangibility) has a sig value of 0.334 which is greater than 0.05 at level of significant. Therefore tangibility has no impact on customer satisfaction towards electronic banking usage as a result the null hypothesis is accepted.

Based on the finding almost all independent variables have positive significant relationship with customer satisfaction except I_5 (tangibility) which has the coefficient value of 0.077 and sig

value of 0.334 that exceeds 0.05 significant level as a result this variable has weak impact on e-banking customer satisfaction of commercial banks whereas reliability with coefficient value of 0.153 and empathy with coefficient value of 0.283 have a positive impact on customer satisfaction on electronic banking. This implies that an increment in reliability, responsiveness, empathy and assurance leads to an increment of e- banking customer satisfaction. Therefore among the five service quality dimensions as independent variable in ranking sequence empathy, reliability, responsivenessand assurance has impact on customer satisfaction level on electronic banking system in commercial banks.

These investigations obtained major support from different empirical studies that advocates the impact of electronic banking service quality dimensions on customer satisfaction. Such as Hitesh (2015) pointed out that empathy, responsiveness and assurance have more or less influence on electronic banking induced satisfaction level. Yitbarek (2015) on his part of empirical study found out that reliability has higher impact on the satisfaction of e-banking usersin addition to thisNiveen (2013)stated that tangibility has relationship but no significant effect on customer satisfaction because of the bank customers were preferred to deal with human being than machine and technology. Responsiveness, empathy and assurance/security have good relationship and considered as the predictors of customers satisfaction on electronic banking service (Kumbhar, 2011).Other study also indicates that customers perception is highest in the reliability area this result showed consistency with Parasuraman et al. (1985, 1988) and Yang et al., (2004) and lowest in the assurance area.

4.4 Descriptive analysis of opportunities and challenges of electronic banking

Table 4.9 Customers response on the opportunities of electronic banking system

	Statements / questions	SDA	DA	N	A	SA	Total
		%	%	%	%	%	
1	Electronic banking service saved my time via improved speed and efficiency.	2.5	0.6	1.9	46.3	48.8	100
2	Electronic banking has the advantage of decreasing the longer queue available in the banking hall.	1.9	0.0	1.9	35.0	61.3	100
3	The access and availability of mobile phones with vital functions has facilitated E-banking system for me	0.0	5.0	23.8	36.9	34.4	100
4	Electronic banking helped me to transfer of money by using mobile banking system without going to the branches hall.	1.3	3.1	36.3	30.6	28.8	100
5	E-payment using POS terminals have made me use more cards than carry cash on hand.	1.9	3.1	27.5	41.3	26.3	100
6	I obtained E-banking service within 24 hours a day and 7 days a week without interruption	1.3	18.8	6.9	37.5	35.6	100
7	E-banking made customer alert in controlling their transactions.	2.5	3.1	6.3	47.5	40.6	100
8	E-banking system is becoming more understandable and easier due to the establishment of ICT research and development team in the bank.	2.5	1.9	31.3	40.0	24.4	100

Source: Own survey, 2016
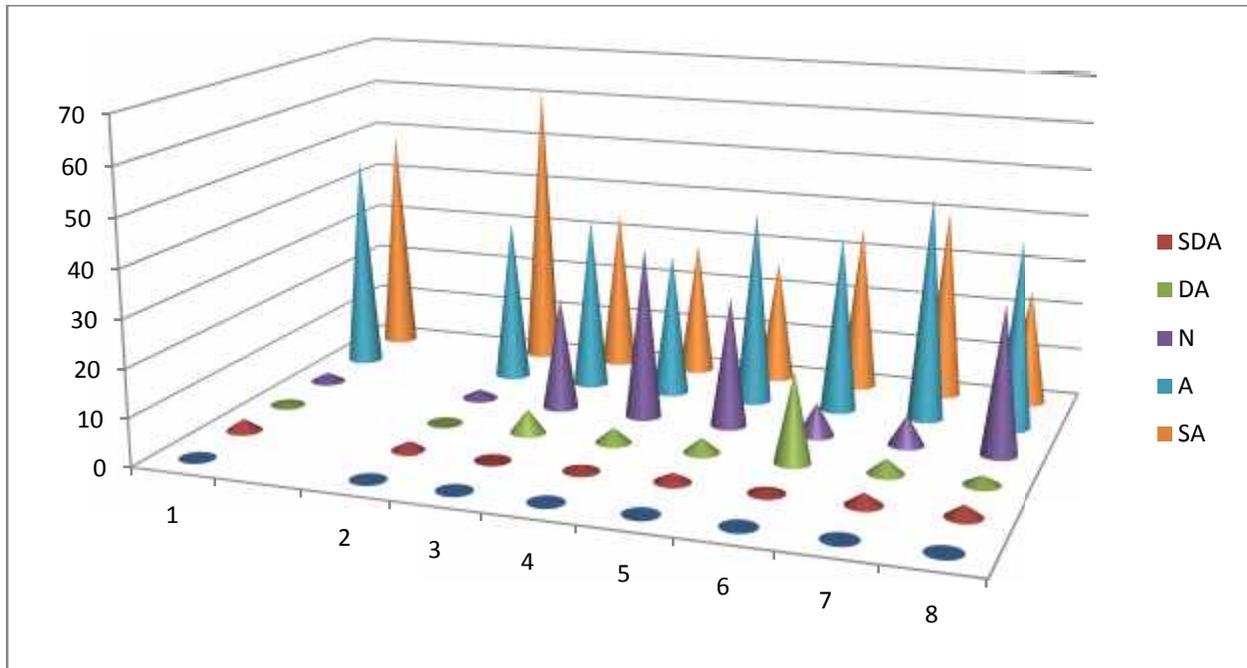
Own survey, 2016

Figure 1: Opportunities of electronic banking

From question item.1, 48% strongly agreed, 46.3% agreed while 1.9% of respondents were neutral. More over 0.6% disagree and 2.5 % strongly disagree with the result compilation. This implies that electronic banking service provided by commercial banks saved customers time via enhancement of speed and efficiency of the service.

From question item.2, (61.3%) and (35.0%) of respondents are strongly agreed and agreed respectively with the question, 1.9% were neutral while 0% and 1.9 disagreed and strongly dis agreed respectively so that it can be conclude that one of the advantage of e-banking system is decreasing the longer queue available in the banking hall of commercial banks.

As per Question.3, 34.4% strongly agreed and 36.9% agreed while 23.8% were neutral. More over 5.0% and 0% were disagreed and strongly disagreed respectively. This consolidates the fact that although many respondents shared mobile phones availability with various functions facilitated e-banking system utilization. Some of them were undecided on the issue which indicates customers' lower tendency towards mobile banking.

From question item 4, (28%) and (30.6%) of the respondents strongly agreed and agreed respectively up on the question, 36.3% were neutral while 3.1% and1.3% were disagreed and strongly disagreed. Therefore it can be conclude that many of respondents as customers were not either mobile banking users or were not access its function of transferring money.

From question item 5, (26.30%)and (41.3%) of respondents were strongly agreed and agreed respectively under the question, 27.5% were neutral when 3.1% and 1.9% of respondents were disagreed and strongly disagreed. This indicated that even though may of customers agreed on the advantage of POS made them not to carry cash during purchasing habit. Some of them were undecided due to the researcher suggested that no awareness and habit of using e- payment in the study area.

According to Question 6, 35.6% strongly agreed, 37.5% agreed while 6.9% were neutral. Furthermore 18.8% and 1.3% were disagreed and strongly disagreed respectively with the question. One can conclude that e-banking service has not been provided 24/7 without any interruption.

From question item.7, 40.6% strongly agreed, 47.5% agreed while 6.3% were neutral. Beside this 3.1%and 2.5% of respondents were disagreed and strongly disagreed respectively. It is safe to conclude that customers became aware and alert of controlling their financial transactions or accounts using e- banking service.

Based on the question 8, (24.4%) strongly agreed, (40.0%) agreed while (31.3%) remained neutral with the research question. In addition to this 1.9% and 2.5% of respondents weredisagreed and strongly disagreed. This implies that customers were not informed and got awareness of the contribution of information and communication technology research development team in making e- banking system ease to use.

Table: 4.10Ranking of Customers responses on E-banking challenges and barriers

	Statements/ questions	Highest challenge	Higher Challenge	High Challenge	Low challenge	lower challenge	lowest challenge	Total
		%	%	%	%	%	%	
A.	*Social and cultural barriers* such as High rate of illiteracy, less awareness and negative perception.	19.4	13.8	29.4	19.4	12.5	5.6	100
B.	*Infrastructural barriers* like Low level of internet penetration, weak telecommunication and frequent power interruption.	46.9	28.1	11.9	6.3	4.4	2.5	100
C.	*Economic factors* such as High cost of internet, low income and heavy investment	26.3	25.6	21.3	13.8	9.4	3.8	100
D.	*Management and banking issues* like Resistance to change in technology among staffs and customers and E-banking possess risks	9.4	20.6	28.8	23.1	11.3	6.9	100
E.	*Legal and security issues* such as Cyber security issues and lack of suitable legal and regulatory frame works of E-payment	6.3	16.9	26.9	21.3	17.5	11.3	100
F.	*Knowledge barriers* such as Lack of trust by customer, lack of technological knowledge and language barriers	17.5	23.1	25.0	15.6	11.9	6.9	100

Source; Own survey, 2016
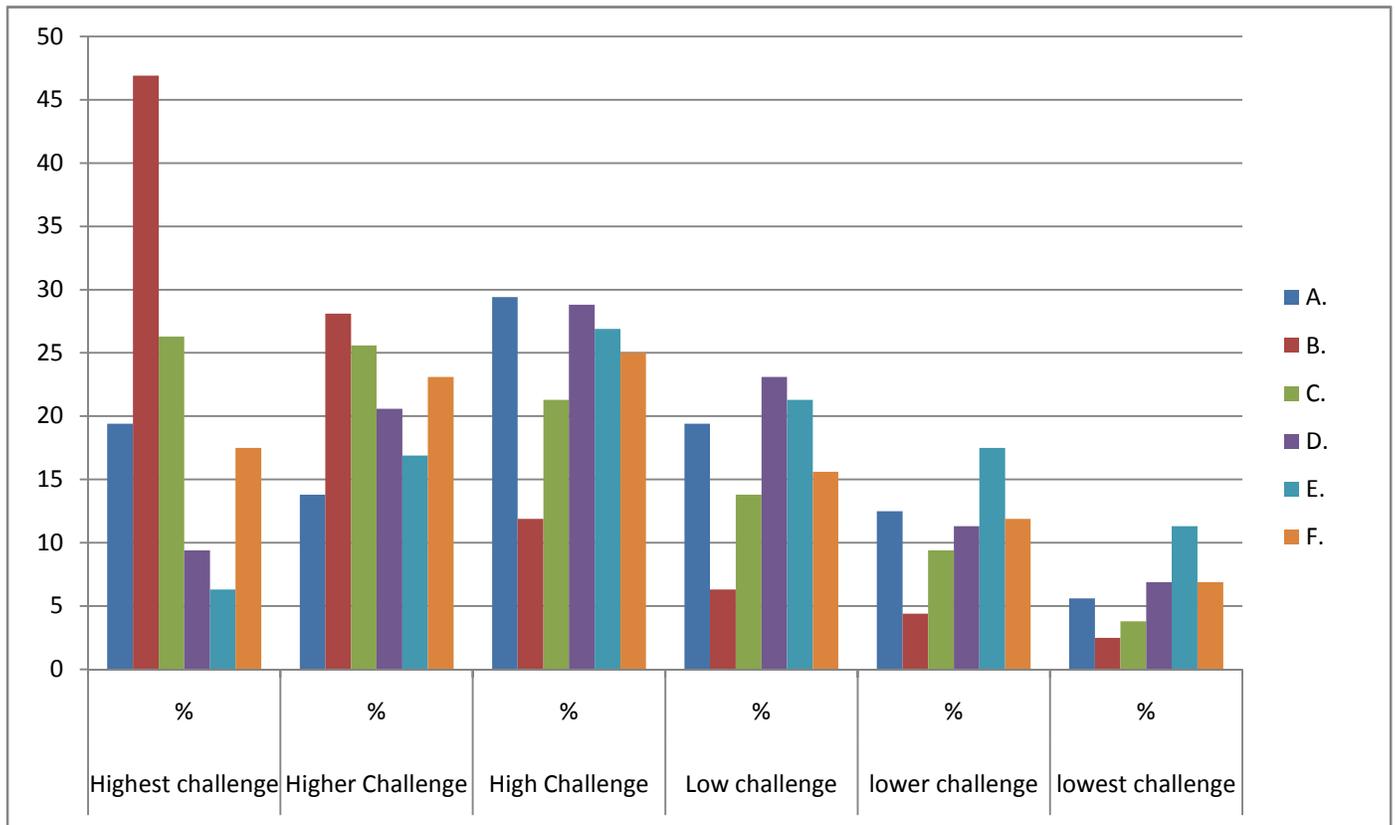
Own survey, 2016

Figure 2: Challenges of Electronic Banking

From question A, 19% highest challenge, 13.8% higher challenge, 29.4% were high challenge and the total results were 62.6% of respondents considered social and cultural barriers as the high challenge of e- banking.

As the question B, 46.9% and 28.1% were highest and higher challenge respectively while 11.9 were high challenge. This shows that the total high challenge result were 86.9% accounted for infrastructural barriers.

From the question C, 26.3% highest challenge, 25.6% higher challenge and 21.3% were high challenge. The sum of those results 73.2% were respondents of considering economic factors as high challenge.

Based on the question D, 9.4% highest challenge 20.6% higher challenge and 28.8 were high challenge. The total of this results become 58.8% of respondents which indicates management and banking issues

From the question E, 6.3% highest challenge 16.9% higher challenge and 26.9% were high challenge. These shows that the sum results become 50.1% respondents were in the position to legal and security barriers.
 As per the last question E, 17.5% highest challenge, 23.1% higher challenge while 25.0% were high challenge in which the total results become 65.6% of respondents accounted for the knowledge barrier.

Therefore in ranking perspective among the six categorical e-banking challenges and barriers specified on the table the first highest challenge were infrastructural barrier like low level of internet penetration, weak telecommunication and frequent power interruption with 86.9% of respondents. Economic factor (73.2%) and knowledge barriers (65.6%) were the second and third challenges of electronic banking system respectively. The fourth and fifth positions were occupied by social and cultural barriers and management and banking issues with the 62.6% and 58.8% of respondents. The least challenging (50.1%) were remained to legal and security aspectcategory.

4.5 Interview response

Interview was conducted in four commercial banks of branch managers, customer service manager and e-banking department and customer service heads were engaged in the interview session. Theinterview was addressed the demographic character (age, occupation, educational level and marital statues) in order to triangulate with the customers response.

According to commercial bank of Ethiopia, TeferaDeguefe branch and customer service managers response there are 2,329 ATM machine based debit card users, 885 mobile banking customers and 19 internet banking customers at branch level but POS terminal users can be regarded under debit card holders till March31 2016. In respect to the demographic profile it is a bit formidable to differentiate however from the observational experience most of e- banking customers are youngsters, salaried and literate. Concerning to the bank intention was to introduce and expand modern technology centered e-banking throughout the country by designing and applying operational and service excellence as a strategy which is still exercised that is why the accessibility and availability 24/7, charge less service and permission limit of large amount of money transfer around 100,000 birr in mobile banking and 50,000 birr of purchasing ability via POS are considered as a slight differentiation mechanism ensuring competitive advantage in the market rivalry this leads the bank to be over competitors as they replied.Beside e- banking service quality the customers are satisfied in terms of the reliability and speed delivery responsiveness of the bank timely but there is lack of well-organized awareness creation in using the banking technology that targeted youngsters and literatewho have the exposure of such technology easily via various ways so as to enhance the general public perception towards e-bankingdelivery channels as well. Among the opportunities of e- banking system availability of 24/7, no charge during service, e-payment being cashless to purchase and accessibility and proximity for withdrawalare what our customers benefited of it although some problems like network failure, ATM machine being out of service, the machine capacity of holding cash, less awareness of the society and lower estimation on national holidays withdrawal habit of customers are accounted. The bank is always on the spot of solving thosechallenges like outsourcing the service providing aspect of POS to other companies, forming disputes resolution team for immediate problem handling matter but still the bank expects a lot from the government in the case of infrastructural development for alleviating network failure and clear cut legal

frame work. Finally let the customers expect from the bank that the all e-banking system will majorly focus on using mobile banking service in the near future as they replied.

Dashen bank replied thatthere are 413,000 debit card holders and 958 POS terminals respectively while 10,200 mobile banking and 6,292 internet banking customers in national level. And as per bole mehdanialem area branch response there are 6,414 ATM card holders and 91 POS terminal respectively while 306 mobile banking and 302 internet-banking users until the end of March31, 2016. Beside age, occupation, educational status and marital status most of our customers are youngsters, salaried, business persons and literate who are estimated via exposure. As Dashen bank is pioneer of introducing POS and being the second in ATM next to CBE, the intention was adopting world class banking technology and introducing to Ethiopian market with a mission of creating cashless society in applying the strategy of service enhancement, deposit mobilization and service excellence through differentiation aspect of being the first in adopting and introducing modern technology such as golden and green American express cardfor the purpose of foreign currency increment in the country, designing selective programsin Dashen to merchant connection, charge fee based service, incentive packages and banking hall based face to face communication are made the bank to have competitive advantage over competitors as they pointed out. With respect to awareness creation the bank has been done a little due to less focus on promotional aspect of the technology to the general public however market survey assessment has been conducted formally in order to enhance e-banking service quality based on the requirements of the bank set it at once like replacing the old ATM machines and increasing its accessibility and availability of e-banking delivery channels in Addis Ababa. In addition to this the bank has an opportunity of 1.3 million of its customers that are expected to use e-banking system, unbanked society, improved merchant capacity and foreign currency liberalization because about 100,000 million dollar were obtained as foreign currency during the year 2015. even though it is faced challenge such as infrastructural barrier in network interruption due to poor Ethiopian Tel communication technical response, unfair market penetration and competition, cultural challenges, lack of well qualified spare parts importers or vendors, lack of technical experts and lack of initiation from the bank side in awareness creation.so that we are on the process to bring resistance and solve the barrier but there are beyond our capacity that the government should perform like developing good network oriented infrastructures in making

Ethio Tel communication using the latest technology, adopting security ,regulation and legal frame works that will make the unfair market penetration in to positive one and expanding ATM machine and POS terminals producers and importers by decreasing tax or making it without tax. As it is our customers expect adoption of new banking technological service in the future like we adopted and introduced American express card recently.

According to United bank responsethere are 79,000 ATM card users and 15,000 mobile banking customers respectively while 10,000 internet banking and 89 POS terminals in national level. Where as in lideta branch aspect there are 1,281 ATM card holders, 2 POS terminals, 322 mobile customers and 84 internet banking customers. With respect to demographic characteristics age, occupation, education level and marital status, although pointing out the figure is difficult electronic banking system users are youngsters, business person, salaried and literate. The bank intention was modernizing banking service and delivery channel expansion via product development, customer adaptability, early stage introduction of new technology, interoperability like PSS in between six banks and resource sharing. The bank has core competencies in e-banking IT specialist of internal manpowerwhich leads the bank to have competitive advantage over competitors although the strategies are not implemented due to top level decisions towards cost minimization. Beside this the bank replied that expected focus are notgiven to awareness creation in using E-banking to the general public so that customers are not informed well and understood the pioneered of the bank in internet bankingto the market. In respect to the relationship of e-banking and customer satisfaction, the bank serves customers in giving e-banking service timely like faster response to card request and compromises the customers' compliance. In terms of opportunity of e- banking there are literacy rate increasing, population increment, technological and economic development and generating foreign currency whereas the challenges are no policy frame work, Ethio Tel communication infrastructural problems, lower financial status of the bank comparing to competitors. Therefore, the bank is expected from the government in order to design regulations and legal frame works, enhancing infrastructural development, have fair market play, analyzing financial accumulations and emphasis on foreign currency generation. And finally the customer shall expect from the bank which ever new technology adapting to the market and interoperability.

Zemen bank replied that we are putting a lead in adopting and introducing the state of art of modern technology in the banking industry as result we have 20,000 customers of ATM card users, 5000 mobile banking customers, 10,000 internet banking and 50 POS machine in our main branch. Beside the demographic package the customers are majorly business man /women, literate and youngsters. The bank intention to adopt this technology was reaching the customers wherever and whenever they are rather than bringing them in to the bank hall, targets middle and high class status of customers and deposit collectedby setting the strategies of service excellence, cost leadership and applying blue ocean strategy that was designed and prepared by consulting firm which made the bank acquire world class technological statues and set up relatively. So that we kept the competitive advantage better than our competitors in providing e-banking service in using the marketing department for the purpose of awareness creation through one to one strategy due to the bank customers are some target groups. In terms of satisfying customers we have well organized structure of reliability of the e-banking service; security issue of ATM machine has video camerafor controlling mechanism and serving customers to the place where they are for further service. On the part of opportunities of e-banking the bank responded that economic development, awareness of technology, upraising income of young generation, various conference in the city and foreign acquisitions will be taken as a prospect. Whereas governmental resistance towards technological advancement, lack of infrastructural development like Tel communication , competition, lack of availability of vendors for software companies, lack of competent IT specialist who are specialized on e-banking are some of the challenges. Although the bank are facing those challenges they are solving it through providing training to man power, discussion with regulatory bodies, increasing customer benefit packages and considering the IT professionalism in the vice president position but they pointed out that the government shall be proactive in policy, procedure, law formulation, enhancement of the technological aspect of Tel communication service in related to e- banking. At last the bank explained that there will be interoperability of using once bank debit card in all banks ATM machine to withdraw or other services and expansion of software and hard ware specialist in the area of electronic banking system.

CHAPTER FIVE: FINDINGS, CONCLUSION AND RECOMENDATION

5.1Summary of Findings

The study was conducted to assess and examine the impacts of electronic banking service on customer satisfaction in selected commercial banks in Addis Ababa. Indeed thehigher the service qualityis the higher the customer would be satisfied via electronic banking as modern technology advancement in the banking sector. The major findings of the study are as follows

♦ Based on the descriptive analysis it can be concluded that the majority of current electronic banking users are youth between the age of 20 up to 30 and 31 up to 40, educational level the respondents were predominantly degree holders, occupationally, salaried are the major users, business men/women are next users whereas pensioners, students are not active participants in using e- banking service.

♦ According to ANOVA test of demographic characteristics relationship with customer satisfaction on electronic banking, except occupation age and level of education have significant positive relationship with customer satisfaction in electronic banking.

♦ As per correlation analysis among the independent variables reliability, empathy and responsiveness are good predictors of level of customer satisfaction in electronic banking due to their higher correlation coefficient.

♦ Among the independent variables which are the five service quality dimensions, reliability, assurance, responsiveness and empathy have a positive relationship with customer satisfaction in e-banking as per the hypothesis tested and agreed. Beside this any increment in reliability, assurance, responsiveness and empathy leads to increase in customer satisfaction by 15.3%, 9.6%, 14.4% and 28.3% respectively which are significant at 5% level of confidence.

♦ According to descriptive analysis ofthe opportunities of electronic banking service saved customers time via improved speed and efficiency, decreasing the longer queue available in the banking hall and alert customers in controlling their transactions were strongly agreed by respondents but 31.3% of respondents were neither agreed nor dis agreed for the ICT research & development team contribution towards making the e-banking system ease to use

and understandable which tends to conclude that there is lack of information and awareness in the customer side.

♦ Among the six categories of challenges in both private and public commercial banks infrastructural barrier with 86.9%, economic factors 73.2% and knowledge barrier 65.6% have been ranked as the highest ,higher and high challenges of e-banking towards customer satisfaction respectively.

5.2 Conclusion

This research paper has assessed and examined the impact of electronic banking service on customer satisfaction in selected commercial banks in Addis Ababa and came up with a number of findings which leads to put the conclusion in such a way that although today era of electronic banking revolution calls for adoption and innovation in banking system as the use of modern technology makes serving customers convenient and saves a lot of time.Commercial banks have been in striving to adopt and expand in providing efficient technological based customer service delivery channels service qualities to full fill their customer satisfactions.However various challenges like infrastructural barrier and knowledge barriers were hinder the banks to influence positively their customers with electronic banking delivery channels service thought there have been opportunities.

Among the five service quality dimensions reliability, assurance, responsiveness and empathy have more importance to increase customer satisfaction in electronic banking because when once service quality is high then it has an indispensable contribution on the improvement of customer satisfaction but different challenges could be an obstacle to provide efficient electronic banking based services to customers from the bank ,customer and other concerned bodies side therefore I suggest that further research should be done in this direction in order to identify and evaluate specific aspect of electronic banking service qualities on customer satisfaction, prospects and challenges of electronicbanking. Another direction further research could be to test the findings, conclusion and recommendation of this study will be undeniably vital.

5.3 Recommendation

Based onthe findings and conclusion of the study the researcher forwards the following recommendations to the concerned bodies

♦ The banks should work much in increasing the number of users from all aspects that is from age, gender, educational status, occupationally and should do great job in making business men/women and students to be the users of e-banking plus it should determine which customers with which demographic profile are more sensitive to e-banking service satisfaction.

♦ Commercial banks should exploit the opportunities in expanding e-banking service by mitigating the challenges.

♦ Banks should enhance their internal capacity in providing trainings to man powers and set disputes resolution team particularly for e-banking services in the branch level.

♦ Commercial banks should work with Ethio telecom and Ethiopian electric power to resolve service interruption and to reduce the consequence of unreliable services.

♦ As service quality dimensions reliability, assurance, responsiveness and empathy have impact on level of customer satisfaction in e-banking; banks should give special attention to the dimensions in order to increase their customers' satisfaction extent.

♦ Commercial banks should create e-banking service awareness by improving the skills and knowledge of their customers through showcase video presentation in the branch while arranging peculiar incentive package to POS terminal users so as to make cashless society in the capital city of Ethiopia, Addis Ababa.

♦ The banks should insist respected governmental bodies to design directives, policies and clear cut legal frame works of electronic banking that guides all private and public banks equally in fair play of competition in the market arena.

♦ Commercial banks have to work with Governmental tax bodies to decrease imposed tax on importing ATM machine and POS terminals.

♦ Respected governmental bodies should work well on the development and expansion of ICT infrastructure due to e-banking requires modern technological advancement.

♦ All the concerned bodies should strive for implementing interoperability for further convenience environment in electronic banking system.

Finally, more focus shall be given by the commercial banks to the major variables which have high impact on e-banking service induced customer satisfaction although the variables were not utilized comprehensively. Future researchers could try to apply other variables in other geographic areas with customers who do not use e-banking service that are not covered in this study.

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APPENDIX

Appendix-A Questionnaires to customers

QUESTIONARIE

St. Mary's University

Post Graduate Studies

Researcher:-SurafelEphrem   **Address:-**   mobile number   0911874323

Research Title:- Impact of electronic banking on customer satisfaction in Addis Ababa (the case of selected commercial banks)

Questionnaires to be filled by customers of selected branches of commercial banks in Addis Ababa.

Dear respondents

I am currently pursuing my masters of Business Administration (MBA) in General management at St. Mary's University, post Graduate studies, as partial fulfillment towards the completion of my post graduate degree. Hence, I kindly request you to full fill in this questionnaires' while assuring you that the information that you provide will be treated with confidentiality and shall only be used for the purpose of this academic research. I would also like to remind you that your fair and impartial feedback will make this study a very successful one.

Instruction for filling the questionnaire

Please read each statement carefully and put the tick **(√)** mark under the choice and write your opinion on the blank space.

Thank you in advance for your cooperation and assistance.

Part I: Demographic information

Please tick **(√)** mark in the box which expresses your self

1. Gender   male [ ]   female [ ]
2. Age   20-30 [ ]   31-40 [ ]   41-50 [ ]   51-60 [ ]
3. Educational level

Primary (Elementary) [ ]   Diploma [ ]   master [ ]

High school [ ]   Bachelor Degree [ ]   Doctorate/higher [ ]

4. Marital status   Single [ ]   Divorced [ ]   Married [ ]   Widow [ ]

5. Occupation   unemployed [ ]   Business man/women [ ]

Student [ ]   pensioner [ ]

Salaried [ ]   Other …………………………………

6. Name of your bank……………………………………….. Branch name ……………………………………

7. Which type of customers you are with the bank and it is possible to have more than one choice

Loan [ ]   saving [ ]   current [ ]

Other please, specify …………………………………………………………………………

8. How long have you been the customer of your bank

Up to a year [ ]   3-4 years [ ]

1-2 years [ ]   4-5 years [ ]

2-3 years [ ]   above 5 years [ ]

9. Which type of Electronic banking service delivery you use frequently? You can also tick more than one if you use more methods.

ATM [ ]   Mobile Banking [ ]

POS [ ]   Internet Banking [ ]

Other please, specify _____

PART-II Questions related to the opportunities of E-banking system

Respondent's level of agreement on the issue below: this part is kindly requires you to express your view on the issue being asked appropriately by ticking **(√)** on the spaces that specify your choice from the option that ranges from **5-**strongly agree to **1**-strongly disagree.

    1. Strongly disagree (SD)   2. Disagree (D)   3. Neutral (N)

          4. Agree (A)   5. Strongly Agree (SA)

	ITEM	SCALING				
	Opportunities of E-banking	**1**	**2**	**3**	**4**	**5**
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	Electronic banking service saved my time via improved speed and efficiency.					
2	Electronic banking has the advantage of decreasing the longer queue available in the banking hall.					
3	The access and availability of mobile phones with vital functions has facilitated E-banking system for me					
4	Electronic banking helped me to transfer of money by using mobile banking system without going to the branches hall.					
5	E-payment using POS terminals have made me use more cards than carry cash on hand.					
6	I obtained E-banking service within 24 hours a day and 7 days a week without interruption					
7	E-banking made customer alert in controlling their transactions.					
8	E-banking system is becoming more understandable and easier due to the establishment of ICT research and development team in the bank.					

If any additional opportunities _____

PART III Questions related to challenges of electronic banking system

The following are some of challenges and barriers in electronic banking system so that please RANK the challenges from the highest challenges to the lowest challenges according to their influence intensity to electronic banking system. **{1} is being for the highest challenge and {6} is being for the lowest challenge**

	Challenges and Barriers	1 highest challenge	2 Higher Challenge	3 High Challenge	4 Low challenge	5 lower challenge	6 lowest challenge
G.	*Social and cultural barriers* such as High rate of illiteracy, less awareness and negative perception.						
H.	*Infrastructural barriers* like Low level of internet penetration, weak telecommunication and frequent power interruption.						
I.	*Economic factors* such as High cost of internet, low income and heavy investment						
J.	*Management and banking issues* like Resistance to change in technology among staffs and customers and E-banking possess risks						
K.	*Legal and security issues* such as Cyber security issues and lack of suitable legal and regulatory frame works of E-payment						
L.	*Knowledge barriers* such as Lack of trust by customer, lack of technological knowledge and language barriers						

If there is any other challenges please specify,_____

_____

_____

_____

PART-IV Customer perception about electronic banking

Please put right mark (✓) in the response that yours feeling resembles about the question provided

	ITEM	SCALE				
	Service Quality Dimensions	**Stronglydisagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
		1	**2**	**3**	**4**	**5**
1	**RELIABILITY**					
1.1	The bank provides its Electronic based service at the time it promised to do so					
1.2	When I have a problem the bank shows a sincere interest in solving it.					
2	**ASSURANCE**					
2.1	I feel secured and safe in my transactions with the bank					
2.2	Bank staffs have the knowledge to answer my questions about ATM, POS, Mobile & Internet banking service					
3	**RESPONSIVENESS**					
3.1	Bank staffs tell you exactly when the service will be performed					
3.2	Bank employees are never too busy to respond to my electronic banking centered request.					
4	**EMPATHY**					
4.1	The bank provides me individual attention.					
4.2	The bank has convenient operating hours of electron banking services to me					
5	**TANGIBLES**					
5.1	The bank has modern looking equipment and tools					
5.2	The banks physical features are visually nice					

PART-V Customer satisfaction with relation to service quality dimensions.

Please rank your views using **1-5** on whether you are satisfied or not with the service of electronic banking provided by the bank and the general environment under which it operates.

	ITEM	SCALE				
	Service Quality Dimensions	Very dissatisfied	Dissatisfied	Indifferent	Satisfied	Very satisfied
		1	2	3	4	5
1	**RELIABILITY**					
1.1	The bank insists on error free records					
2	**ASSURANCE**					
2.1	The bank electronic service instils confidence in me to get the service at any time I want.					
3	**RESPONSIVENESS**					
3.1	The bank is always willing to assist you in operating electronic banking system.					
4	**EMPATHY**					
4.1	The bank has my best interest at heart					
5	**TANGIBLES**					
5.1	Materials associated with electronic banking service are visually appealing at the bank					

Appendix-B   INTERVIEW

These questions are designed for branches managers and electronic banking dept. head of the four selected commercial banks.

Q1. When we see the current users of electronic banking what can one say about age, gender, marital status, occupation and educational status of the customers?

Q2. How many customers do you have who use electronic banking service? Please specify based on the types of channels like ATM, POS, Mobile banking and Internet banking?

Q3. Are there any special strategies that guide your bank in implementing electronic banking system?

Q4. What were your intention and strategies when your start electronic banking service?

Q5. How do you overcome the challenges of advanced technological implementations?

Q6. Do you think that the service you provide via electronic banking is better than your Competitors?   If so, How and what is your competitive advantage?

Q7. Is your bank creating awareness of electronic banking delivery channels functions and usages to customers?

Q8. How do you explain the relationship of electron banking service quality you provide and your customer's satisfaction?

Q9. What can you say about the opportunities and challenges related to E-banking in the capital City of Ethiopia?

Q10. What mechanism you are using to enhance your customers satisfaction through Electronic Banking service?

Q11. What do the customer expects about advanced technological banking service in the near future?

Q12. What kind of support would you expect from the government to expand electronic banking system?

Thank you so Much!