SCHOOL OF COMMERCE

MA PROGRAM

THE EFFECT OF E-BANKING SERVICE QUALITY ON CUSTOMER SATISFACTION IN THE CASE OF COMMERCIAL BANK OF ETHIOPIA

BY:

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ADVISOR

GETIE ANDUALEM (PHD)

JULY, 2019

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A THESIS PREPARED IN PARTIAL FULFILLMENT TO THE REQUIREMENTS OF MASTERS OF ART IN MARKETING MANAGEMENT

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APPROVED BY BOARD OF EXAMINERS

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DECLARATION

I, Maykil Sisay the undersigned, declare that this thesis is my original work, prepared under the guidance of Dr. Getie Andualem. All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

_____
_____

Name **Signature**

Addis Ababa University, Addis Ababa July, 2019

ENDORSEMENT

This is to certify that Maykil Sisay carried out his thesis on "The Effect of E-Banking Service Quality Dimensions on Customer Satisfaction in the case of the Commercial Bank of Ethiopia" and submitted in partial fulfillment of the requirements for the award of the degree of Masters of Art in Marketing Management at Addis Ababa University with my approval as university advisor.

Signature: _____

Date: _____

Getie Andualem (PhD), Advisor

Addis Ababa University, Addis Ababa July, 2019

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Acronyms

ATM ---------- Automatic Teller Machines

ABP ----------Automatic Bill Payment

CBE ----------Commercial Bank of Ethiopia

E-BSQ ----------Electronic Banking Services Quality

EFT ----------Electronic Fund Transfer

ESQ ---------- Electronic Banking Service Quality Perception

E-S-QUAL ---------- Electronic Service Quality

EU ---------- Ease of Use

PDA ---------- Personal Digital Assistant

POS ---------- Point of Sale terminal

PSS ---------- Premier Switch Solution

R ---------- Reliability

RE ---------- Responsiveness

P ---------- Personalization

S ----------Security

SERVQUAL ---------- Service Quality

SPSS ---------- Statistical Package for Social Science

WD ---------- Website design

Abstract

The banking sector in Ethiopia has experienced massive competition among themselves with the introduction of Multiple E-banking service specially after 2010 .In order to minimize their operational costs, and for some other reason commercial banks in Ethiopia have adopted Electronic banking including ATMs, mobile banking and internet banking, POS, PDA and the like where customer can access their accounts in different ways. It can make basic financial services more accessible by minimizing time and distance to the nearest retail bank branches as well as reducing the bank's own overheads and transaction- related costs and also enable them to have wider Coverage.

The purpose of this study is to examine the effect of e-banking service quality dimensions on customer's satisfaction of Commercial Bank of Ethiopia. Explanatory Research Design with Quantitate Research approach were employed. Both Primary and secondary Data were used during this research work. Primary Data was collected via self-administered 360 questionnaires from the population of customers of 20 branches (five branches from each four districts) of CBE in Addis Ababa by using non-probability sampling approach particularly convenient sampling technique. As secondary Sources Different related literature with the topic under study were used .The constructs in this study were developed by using measurement scales adopted from prior studies. The instrument was evaluated for reliability and validity. Data were analyzed using SPSS Version 20. Results of this study *indicated that E-banking service quality was directly associated with customer perceived service quality. The results in this study indicate that Reliability; Responsiveness; Ease of use; Personalization; Security; and Website design have influence on customer's satisfaction of e-banking. In summary, findings provided evidence that E-banking service quality dimensions were influential on customer perceived service quality. Security Dimension and Ease of Use dimension has rated as the most and least Significant Service Quality Dimension respectively.*

The researcher concludes that there is a linear relationship between e-banking service quality and customer satisfaction. Management of bank needs to view and think from customers' perspectives so that the management understands customers' expectations.

Keyword: E-Banking Service, Quality, Commercial Bank Ethiopia

CHAPTER ONE

1.1 Introduction

It is difficult to deny the presence of many technological inventions that science has brought into our lives in the Current information age. One of the advanced technologies that have been introduced is electronic-banking or e-banking. Physical decentralization, with branches scattered around populated areas to give customers easy geographic access is characteristics of traditional banking. The physical banks also serve to assure customers that their bank has substantial resources and can guarantee the security of their savings (Lockett and Littler, 1997).The need for most visits to the bank are fixes away with the introduction E-banking. It is a state-of-the-art service that is just beginning to take off among banking customers. Indeed, it has major potential for future development as allows customers to do most of the things they do at banks like make balance enquiries, transfer funds and pay bills over the Internet.

E-banking has become increasingly predominant, employed by many financial institutions across the world to reduce costs associated with having personnel serve customers physically, shorten processing periods, increase speed, improve the flexibility of business transactions and provide better service overall (Shih and Fang, 2004). Currently the academic and other related literature forecasted the rapid growth and significant impact of e-banking on all types of markets (Nielsen, 2002).

When we discuss the concept of E-banking there is related concept that are directly linked with it which is Electronic Service Quality (E-SQ).Electronic Service Quality is a new developing area of research, which has Strategic importance for businesses striving to address customers.in the electronic marketplace. (Parasuraman and Zinkhan 2002) Maintain that Electronic Services contribute two key advantages: Information Efficiency and Transaction Efficiency. Electronic Service Quality is basic requirement for the good performance of Electronic Channels (Parasuraman and Zinkhan 2002)

Yang (2001) and Zeithaml (2002) believe that E-Service Experience greatly affects the establishment of trust and relation with customers, and enterprises must pay attention in

this regard. Oliveira et.al, (2002) believe that E-Service Quality can increase the Competition of the Company's Requirement Fulfillment. A higher Level of E-SQ Contributes to achieving the main business goals (Zeithaml et. al., 2000).

Oliveria et.al (2002) also state that Electronic Service (E-Service) might be the key to Long-Term advantages in the digital times, and E-service Quality is becoming even More Critical for companies to retain and attract Customers in the Digital age and can increase the Competition of the Company's requirement fulfillment (Oliveria et. al., 2002). Service Quality Delivery through Websites is an essential Strategy to Success, Possibly more important than low price and Web presence (Zeithaml, Parasuraman, &Malhotra, 2002). Santos (2003) believes that the E-Service features mutual exchange of information, which can bring customers extraordinary experiences.

Extensive Research on Traditional SQ has been conducted during the Past 20 Years (Parasuraman and Zeithaml 2002) .In Contrast, only a limited number of Scholarly articles deal directly with how customers assess E-SQ (Parasuraman and et. al, 2005), and what are appropriate dimensions of the quality of E-Service delivery. Supported by the above rationale this paper addressed the E-Service Quality dimension and their Effect on Customer Satisfaction in banking sector. The Purpose of this paper was to investigate the effect of E-Service Quality Dimensions on Customer Satisfaction from Customer's Perspectives. The paper explores E- Service Quality Dimensions based on a review of the development of E-Service quality dimension. It Proposed Six-dimension scale for measuring E-Service Quality: Reliability; Responsiveness; Ease of Use; Personalization; Security; And Website Design from the Customer's Perspective.

This paper is divided into five main sections including the introduction in First Section. In the second section, literature pertaining to e-banking, E-service Quality Dimension, E-banking trend in Ethiopia, E-banking Trend in CBE, E-customer Satisfaction were discussed while the methodology used to carry out the study were elaborated in Section 3. The findings of the study are detailed and analyzed in Section 4 and conclusions were drawn in Section 5.

1.2 Background of the Study

The advent of information technology to every aspect of human life and business has brought a lot of changes. These technological innovations not only improved the day to day life, but also brought totally new ways of doing things in which they were not even imagine before. Being non exceptional, information technology brought a great essence in banking system. One of these core contributions are E-banking technologies.

Electronic technologies innovation in the banking industry can be traced back to the introduction of ATM in 1970s. Later, banks were started to offer E-banking services through personal computers using intranet proprietary software for corporate customers in 1990s. Through time, with dramatic enhancements and innovations, today's banks offer multidimensional services through online technologies across the world. However, using a technology is an optional where having access to the technology by no means ensures it will be used effectively unless customers are intended to use it in their day to day life (AbuShanab, E. and Pearson, J.M., 2007).

The term E-banking is used in different ways in different contexts. While most authors used the term for similar meanings, some authors used the term as synonym for online banking or internet banking. For example, E-banking was defined as "an internet portal, through which customers can use different kinds of banking services ranging from bill payment to making investments" (Pikkarainen, and et.al. 2004). Here, they define the term E-banking from the internet perspective only. Data used the terms online banking and internet banking interchangeably to refer E-banking. Nupur, J.M., (2010) also associated E-banking with the internet banking by explaining its use as providing clients accessibility to nearly any kinds of transactions except for instant cash withdrawal. This seems to exclude ATM services. However, other authors describe the word E-banking in its generic form as follows.

Oyewole, O.S and et.al (2013) adopted the definition of E-banking in his study as the delivery of both retail banking products and services and large value electronic payments through electronic channels. These products and services can extend from electronic

deposit to the provision of electronic money including the provision of financial device and electronic bill payment. On their empirical research, Oni, A.A. and Ayo, C.K. (2010.) also used the term to represent various technologies that used to perform banking transactions through electronic channels including electronic cards, internet banking and mobile banking services.

E-banking technology represents a variety of different services that include ATM services like, Automatic Bill Payment (ABP), Electronic Fund Transfer (EFT) and Computer banking (PC banking) (Kolodinsky et.al, 2004). In this explanation, the term is used to represent different electronic forms of banking services other than those using the internet platform. For Bultum, A.G., (2014) the term was considered as multi-channel service provided through ATM, internet, mobile, POS and telephone. According to Sathye, M., (1999) E-banking was explained as an electronic connection between the bank and customer to prepare, manage and control financial transactions.

Service quality and customer satisfaction are very important concepts, which must understand by companies that want to grow while keeping their competitive edge. In the modern competitive environments, delivering high service quality is the key for a sustainable competitive advantage. Customer satisfaction has a positive effect on the organization profitability. Satisfied customers of any business repeat purchase, show brand loyalty, and give positive word of mouth.

1.3. Statement of the Problem

Many models have been developed to measure service quality delivered by firms in numerous businesses. It is important to review service quality models because of its relation with customer satisfaction. Parasuraman et al. (2005) e-service quality model is rooted from mean-end framework, and they develop E-S-QUAL (e-service quality) with four dimensions: efficiency, system availability, fulfillment and privacy, and E-RecS-QUAL (quality of recovery service provided by firm's web sites) with three dimensions: responsiveness, compensation and contact for measuring the service quality delivered by Web sites on which customers shop electronically.

Electronic services quality is also a concept studied so much. Nevertheless, the dimensions composing these services quality and applied items for evaluating these dimensions are changing. Electronic services quality dimensions have developed by (Parasuraman, Berry, & Zeithaml, 1985), in order to measuring consumers' comprehended services quality. In this research six dimensions of electronic services quality have been studied according to the above authors View point. These dimensions include six dimensions reliability, responsiveness, Ease of use, personalization, Website design and security.

Analyzing the past studies have found that e-customer satisfaction rest on various models: Horan, T and Abhichandani, T., (2006) e-customer satisfaction model, Schaupp and Belanger (2005) e-customer satisfaction model, Dong-lei, X.U. and Zu-zhu, W.A.N.G., (2010) e-customer satisfaction model, and Amin, M., (2016) e-customer satisfaction model. Although many authors have developed e-customer satisfaction models this study uses Chen et al. (2012) e-customer satisfaction model, which model is suitable for the customer satisfaction in e-banking.

The previous researchers have found a strong relationship among e-banking service quality and customer satisfaction which has theoretically been established by various early researchers. But the researchers previously had used a service quality scale called SERVQUAL to measure the quality of a service studied the interrelationship between service quality and customer satisfaction using the five service quality dimensions (i.e. Tangibility, Reliability, Responsiveness, Assurance and Empathy).

Literature GAP on Previous Studies

As tried to mentioned above to Examine the Effect of E-banking Service Quality on Customer Satisfaction previous Researcher were used Service Quality Dimension Called SERVQUAL Which are developed for general Service so that it affect the result to be on limited scope and under the influence of few variables. Taking this as literature Gap the researcher intended to show the Effect of E-banking service Quality on Customer Satisfaction by using of six constructs of conceptual model of e-banking service quality

proven by (Parasuraman and et al. 2005) i.e. reliability, responsiveness, ease of use, personalization, website design and security.

In Addition to the above literature GAP ,hence AAU are planning to Start post Graduate Program on E-commerce next year which was the big personal motivation factor for the researcher for conducting this thesis work.

1.4. Research Question

1.4.1. Main Research Question

How does e-banking service quality affect customers' satisfaction at CBE?

1.5. Specific Research Objectives

1. To examine the effect of the reliability of e-banking service on customers' satisfaction at CBE.
2. To examine the effect of the responsiveness of e-banking service on customers' satisfaction at CBE
3. To examine the effect of the personalization of e-banking service on customers' satisfaction at CBE
4. To examine the effect of ease of use of e-banking service on customers' satisfaction at CBE
5. To examine the effect of website design of e-banking service on customers' satisfaction at CBE
6. To examine the effect of security of e-banking service on customers' satisfaction at CBE

1.6. Hypotheses

H_1: The reliability of e-banking service has a positive and significant effect on customers' satisfaction at CBE.

H_2: The responsiveness of e-banking service has a positive and significant effect on customers' satisfaction at CBE

H_3: The personalization of e-banking service has a positive and significant effect on customers' satisfaction at CBE

H_4: Ease of use of e-banking service has a positive and significant effect on customers' satisfaction at CBE

H_5: Website design of e-banking service has a positive and significant effect on customers' satisfaction at CBE

H_6: Security of e-banking service has a positive and significant effect on customers' satisfaction at CBE

1.7. Significance of the Study

This study will be significance to the management of the bank by giving sufficient information on the e-banking service the bank is currently providing and help it to know areas which need improvement and plan towards it so that its customers enjoy quality service. It will also allow the stake holders to have knowledge on where the bank stands in the eyes of its customer. Moreover, as the employees are one of the stake holders it will help them to evaluate their service deliveries through the eyes of the customer. It will initiate other interested researcher to undertake detailed study in this area.

1.8. Scope of the Study

This research was going to primary focus on examine the effect of e-banking services quality provided by Commercial Bank of Ethiopia and its impact on customer satisfaction in Addis Ababa and measure the level of significance that each e-banking service quality dimension had on the customers' satisfaction.

In the literature part, it was introduce theories related to the effect of e-banking service quality on customer satisfaction by describing the relationship between the both constructs. The relationship is discussed by using service quality models of (Parasuraman et al., 2005 and Akinci et al., 2010), and Chen et al., (2012) models of customer satisfaction.

This study was delimited to from five branches from each four districts of CBE in Addis Ababa. For the purpose of this study five branches will be selected by probability sampling approach and stratified sampling technique. Three hundred eighty five respondent e-banking customers were selected by using non probability sample approach and convenient sample technique.

1.9. Organization of the Study

The study was divided into five chapters in order to provide clarity and coherence on the discussion of the study. The first part of the dissertation was discussing the background, problem statement, questions and objectives and the significance and limitations.

The second chapter was discussing the relevance of the study in the existing literature. After the presentation of the existing related literature, the researcher was provided a synthesis of the whole chapter in relation to the study.

The third part of the study was discussing the methods and procedures use in the study. The chapter was comprised the presentation of the utilized techniques for data collection and research methodology. Similarly, it was also contained a discussion on the using techniques in data analysis as well as the tools used to acquire the said data.

The fourth chapter was discussion of the results of the study. Data to be presented was statistically treated in order to uncover the relationship of the variable involved in the study. With the said data, the chapter seeks to address the statement of the problem noted in the first chapter.

The last chapter was comprised three sections: the conclusions of the study, and the recommendations and limitation. With the three portions, the chapter shall be able to address the problem stated in the initial chapters of the study.

Reference and annex also provided in the final part of the paper.

CHAPTER TWO

LITERATURE REVIEW

This chapter reviews appropriate literature from referenced books, journals, magazines, newspapers, reports, dissertations and other publications. The chapter is arranged under three sections that include the theoretical review, empirical review and conceptual framework. The theoretical review looks into the term E-banking service quality and its characteristics followed by dimensions of service quality. Then, the definition and explanation of the concepts of customer satisfaction as mediating and ultimate dependent variable of the study are discussed in detail. In the empirical review section, citations of past research concerning the relationship between E-banking service quality and customer satisfaction. The third part discuss about conceptualization for the study is developed through the exploration and definition of the constructs of conceptual model that describes the relationship between dependent and independent variable.

2.1. Theoretical Review of Literature

2.1.1 Definition of E-Banking

The concept of electronic banking has been defined in many ways; Sathye, M., (1999) defines electronic banking as the delivery of banks‟ information and services by banks to customers via different delivery plat forms that can be used with different terminal devices such as personal computers and mobile phone with browser or desktop software, telephone or digital television.

According to Mohamud, J.A. (2017) electronic banking defined as any use of information and communication technology and electronic means by a bank to conduct transactions and have interaction with stakeholders.

Oyewole, O.S et.al (2013) also defined electronic payment as a system of payment whereby transaction takes place electronically without the use of cash. Oyewole, O.S et.al (2013) Defined electronic banking (E-banking) is nothing but e-business in banking industry. E-banking is a generic term for delivery of banking services and products

through electronic channels, such as the telephone, the internet, the cell phone, etc. The concept and scope of e-banking is still evolving. It facilitates an effective payment and accounting system thereby enhancing the speed of delivery of banking services considerably (Ovia, 2001). Ovia, (2001) argues that electronic banking is a product of e-commerce in the field of banking and financial services. In what can be describe as business to consumer domain for balance enquiry request for Cheque books recording stop payment instruction balance transfer instruction account opening and other forms of traditional banking service. Banks are also offering payment services on behalf of their customer who shop indifferent e-shops.

Electronic banking has been around for quite some time in the form of automatic teller machines (ATMs) and telephone transactions. In more recent times, it has been transformed by the internet a new delivery channel that has facilitated banking transactions for both customers and banks. (R.Nitsure, 2003).

2.1.2 Evolution of E-Banking

Since the late 1990s E-Banking has developed from virtual insignificance to tens of millions of users worldwide Organization for economic cooperation and development (R.Nitsure, 2003). However, E-Banking is the product of different generations of electronic transactions. The current web-based internet is the latest of several generations of systems: Automated Teller machine (ATMs), Phone Banking, PC or House Banking. Automated teller machines (ATMs) were the first well-known machines to provide electronic access to customers where as in phone banking, users call their bank's computer system on their ordinary phone and use the phone keypad to perform banking transactions. PC banking superseded phone banking and allowed users to interact with their bank by means of a computer with a dial-up modem connection to the phone network. Phone and PC banking entailed maintenance costs associated with keeping up to date with diverse modems and with avoiding prohibitively complex installation procedures.

After those generations Deutsche Bank launched the very first Internet banking project in Latin America in 1996 and Citibank has developed a special "e-toolkit" across all its

across all its branches 9 worldwide United Nations Conference on Trade and Development (UNCTAD, 2002). E- Banking uses the web browser for the user interface and the Internet for data transfer and download of software, and so has a potential for reducing maintenance costs. For users, E- Banking provides current information, 24-hours-a-day access to banking services. The primary services provided by e-banks are transferring money among one's own accounts, paying bills, and checking account balances. Loans, brokering, share trading, service bundling, and hosts branches 9 of other financial services are being added to these primary services (Dewan & Seidmann, 2001).

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2.1.3 Characteristics of E-Banking

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

2.1.4. Common forms of E-Banking Technologies

PC banking: it is form of E-banking using proprietary software distributed and installed by the bank on customer's computer (PC) to access their bank. This can be completed through online banking where banking transactions are directed inside a closed network or through Internet banking (Natasha et al., 2014). It is also sometimes called home banking when the customers are accessing the bank through dedicated links from their home.

Telephone banking: Customers access their bank via telephone. In this case customers will call to their bank call centers to receive payment or fund transfer services. The customers must have their own access pass codes to commit these transactions. In early times, Telephone banking was popular in western countries before mobile and internet banking become common. Today such kinds of services are commonly offered to loyal customers who runs huge investments.

ATM banking: it is the process of cash withdrawal, deposit and transfer services using Automatic Teller Machines placed on any convenience places for customers like in malls, hotels and highways (Fenuga, 2010). ATMs are the oldest and the most widely used forms of E-banking technologies across the world starting from the early 1970s (Fenuga, 2010). Initially they were used to replace the basic banking transactions of cash withdraw. Nowadays, ATMs provide many more services including cash withdrawals, fund transfers, inquiries about account balances, and requests for account statements, direct deposits and foreign currency exchanges. Observability is their unique marketing benefit for banks in which customers are easily attracted by looking them standing in hotels and malls. However, some customers do not like to be exposed during extracting money from ATMs for psychological, social and security reasons (Fenuga, 2010). When discussing about ATMs, what comes to mind is that about payment cards.

Payment cards are smart cards that used to access customers bank account using ATMs and POS terminals. These cards can be debit cards, credit cards, prepaid or gift cards. The basic difference is that Debit cards require the customer to have pre-opened bank account with sufficient balance to be link with and accessed by the card. Whereas the others do not necessarily require it. Credit cards enable customers to use their card without having positive balance in their credit account. Usually they need some sort of guarantee during the account opening procedure to have trust between the issuer bank (it might be another company too) and the card holder. Normally, credit cards have limit on the accessible amount called floor limit where the card holder is forced to neutralize it before the credit limit is elapsed. Prepaid cards are smart cards which are used on ATMs and POS terminals. Their nature is like debit cards, but they do not need to have pre-opened bank account. One can have prepaid card for any amount he/she has paid during the request of

the card. Gift cards are like prepaid cards without any association between the card holder and the card. No labeling or KYC requirement is required and anyone who acquire the card can use them while all other types require some sort of authentication that proves the card holder is the actual owner of the card.

POS (Point of Sale terminal): it is an electronic channel to manage selling process by providing an interface for a sales person most commonly in hotels, shops, gasoil stations or any other merchants who have links with the banks (Shittu, 2010). POS terminals are used to accept payment cards like ATMs, but they are very portable and convenience to use unlike ATMs which need much space and are stagnant in relative permanent places. However, since they require the interaction between the merchant personnel and the customer, they are not as such fully self-service like ATMs. In case of transactions using POS machines, there is no need of carrying the actual cash notes. Hence, POS terminals are much preferable than ATM to create cashless society and increase deposit mobilization. It is also used to shorten the transaction process since the customer can pay its bills directly to the merchant on the spot.

Especially for ON-US3 transactions the bank will be more benefited from deposit mobilization without losing the actual cash notes from the bank's treasury through ATMs. In addition, in case of ON-US transactions, since both the customer and the merchant are the same bank account holder, the bank will be beneficiary from service charges of such payment circulations that makes it much preferred deposit mobilization without losing the actual cash. Though POS terminals are much common to see everywhere in developed countries and some African cites like Nairobi, it seems restricted to big Hotels and Supermarkets in Ethiopia. Moreover, mostly they are seen giving service for foreigners while most Ethiopians prefer to pay cash instead of using them 3ON-US transaction is a transaction where the card issuing and acquiring bank is the same.

Mobile banking: it is an alternative channel using mobile phones to perform banking transactions like checking balance, fund transfer, paying bills, air top up and other services. According Shittu (2010), it is used for performing balance checks, account transactions, payments, credit applications and other banking transactions through a

mobile device such as a mobile phone or Personal Digital Assistant (PDA). This might be through SMS, USSD or mobile applications (Shittu, 2010).

In short, Mobile banking can be defined as accessing a bank to conduct financial transactions through a mobile device (Cruz, Neto, Munoz-Gallego, & Laukkanen, 2010). Since more than 62% of the world population is using mobile phones (Statista, 2017), mobile banking is much convenient way to address E-banking for large number of users. Besides that, while it is fully self-service and convenient to use, it doesn't associate additional costs like internet banking. Moreover, most SMS notifications are free of charges.

Internet banking: it is an access of the bank to perform financial transactions through a secured portal using the Internet (Natasha et al., 2014). Customers can use Internet banking to see one's account detail, cash transfer, paying bills and related banking services through the Internet platform to access their banks. Except for cash withdrawals, Internet banking gives customers access to almost any type of banking transaction at the click of a mouse (Pikkarainen et al., 2004).

As Natasha et al. (2014) emphasize, providing an easy access of the bank through the website with few clicks is one special feature of Internet banking. This uniqueness which enables customers to utilize their time very efficiently makes it widely acceptable. In addition to that cross-country accessibility is unique nature of Internet banking that makes it preferable by international business men who want to access their bank and make transactions from any corner of the world.

2.1.5. Benefits, Drawbacks and Challenges

All electronic payment methods have their unique nature. However, most of them have common characteristics of independence, interoperability, portability, security, anonymity, divisibility, ease of use and less transaction fees (Worku, 2010). These characteristics enable E-banking to offer benefits to both banks and customers. Since banks are at the hub of any business, such advanced systems play very important roles on facilitating fast and convenient financial transactions. Moreover, such E-banking

technologies are very essential for least developed countries to overcome financial exclusion and physical distance barriers (Baptista & Oliveira, 2015).

Hence; merchants, agents and other intermediaries are beneficiaries of such advanced systems. Normann's justification (as cited Worku, 2010) listed out five main reasons for companies to provide technology-based service for their customers. These main reasons are cost reduction, quality control, direct customer connections, higher level of quality service and the use of technology as moderator of behavior towards the intended purpose.

According to Pikkarainen et al. (2004), significant operational cost reduction and less branch expansion are the two fundamental reasons for E-banking development. These authors also argued that, self-service channel provides customers freedom from time and place constraint to access their banks. These time and place freedoms enables customers to follow up their bank transaction detail easily in daily bases (Natasha et al., 2014). Time and cost saving with additional convenience are also cited as relative advantages of E-banking (Kolodinsky et al., 2004). In addition to providing the utility of time and place (Zahid, Mujtaba, & Riaz, 2010), it has also psychological impact in reducing stress customers from keeping long queues in boring branches (Kolodinsky et al., 2004).

On the other hand, there are some drawbacks and challenges associated with E-banking adoption. As both banks and customers share the benefits of these innovations, both faces some challenges in deploying and using these technologies. One of the main challenge for adoption of new technologies by organizations is the initial investment (Sharma, G. and Lijuan, W., 2014). Most E-banking systems requires huge amount of money for initial investment. This burden limits banks from fast adoption of latest technologies.

More specifically small banks couldn't cope up the competition of adopting these technologies with the big banks. Infrastructure related problems like lack of adequate ICT infrastructure, poor internet, lack of governmental regulations and lows are main challenges of E-banking adoptions in general and more particularly for developing countries (Bultum, A.G., 2014). Cost related problems are not challenges for banks only, but also customer require an access to the Internet or mobile banking facilities which costs additional money (Venkatesh, Thong, & Xu, 2012).

Difficulty to use electronic channel, lack of comprehensive access and lack of social dimensions are other challenges for customers (Mattila, Karjaluoto, & Pento, 2003). It is also obvious that E-banking environment doesn't create conducive environment for those who desire to have face-to-face relations with branch customer service personnel to acquire some social and psychological benefits. Moreover, privacy and security issues are among the major concerns of E-banking technologies for customers' E-banking adoption (Bultum, A.G., 2014).

2.1.6. E-Banking Trend in Ethiopia

The history of E-banking in Ethiopia has been starting by the giant state-owned bank called CBE in 2001 by starting ATM banking (Worku, 2010). However, the service was not successful and had been interrupted for years until the famous Dashen bank gives life for it in 2006 (Worku, 2010). Dashen bank has paid a lot sacrifices to introduce ATM banking to the society though it was also acquired the competitive advantageous of having such technologies which were almost not known before (Bultum, A.G., 2014). In 2010, Wegagen bank announced the starting of ATM banking services which make it the third bank to use E-banking technologies (Worku, 2010). Afterward, other private banks start to deploy such innovations with different varieties to compute for the market share.

According to (Worku, 2010). The main driving forces of E-banking adoption in Ethiopian banks include high competition among banks, improving organizational performance, cost reduction, wide geographic coverage and building organizational reputation. Currently all commercial banks of the country involve in E-banking services in one or other forms. On the following paragraphs the experience of E-banking adoptions in some selected pioneer banks will be discussed to have a general picture of the adoption level in the country.

2.1.7. E-banking Trend in CBE

CBE, which is mentioned repeatedly as a pioneer bank in Ethiopia, is legally established in 1963 (Bultum, A.G., 2014). Currently, it is the only state owned commercial bank which plays significant role in the country's financial economy. The bank is known for

its variety of banking services from which E-banking is among the core banking services offered to its customers. Many studies showed that while the bank was pioneer in E-banking technology by deploying few ATMs during the early 2001, it was stagnant for number of years without successful enhancement (Bultum, A.G., 2014; Worku, 2010). However, after privately owned commercial banks like Dashen and Wegagen banks started to compute in E-banking services, CBE turns to pay more attention for its E-banking development. Currently it is a leading bank in terms of number of ATMs, POS and Payment card users.

In CBE, the E-banking service is governing by E-payment directorate level under the direct supervision of the bank president. According to the bank's structure there are three divisions for Mobile and Internet banking, ATM banking, and POS channel management. This shows that how much the bank is giving focus to its E-banking service in general. According to its official website, the bank is adopting the following technologies for corresponding E-banking services:

Payment Cards: CBE issues different types of payment cards with generic name called 'Reliable Card'. These cards include debit card for the bank account holders and pre-paid cards for non-account holders. Using these cards, customers can get different services using ATMs and POS terminals as mentioned below (Worku, 2010)According to the bank's communication publication, there were 2.8 million payment card holders to use 889 deployed ATMs and 6,269 POS terminals as of September 30, 2016 (Worku, 2010)

ATM: for cash withdrawals, bill payments, forex (foreign exchange), fund transfer, mobile top up and balance inquiry using payment cards of all its and other local bank cards, Visa international cards, MasterCard. The website further mentioned that the number of ATM card holders exceeds 3 million from which, about 61% are active ATM users4 (Worku, 2010)

POS: for cash advance (taking cash from branch tellers), purchase (payments in hotels, supermarkets, shops, …), fund transfer, mobile top up and bill payment using payment cards of its own cards and; cash advance, balance and purchase for Visa international and MasterCard (Worku, 2010)

Mobile banking: for fund transfers, payments and balance inquiries as well as get instant notifications on all CBE accounts linked with Mobile banking services using the SMS, XHTML and mobile Apps. (Worku, 2010) mentioned that, among around 13 million account holders, the number of Mobile banking users was only 716,454 as of September 30, 2016. CBE birr is the other form of Mobile banking service provided by the bank by opening special type of account with some amount only for this purpose. This service is commonly associated with Agent banking in which customers can deposit or cash withdraw from any nearby agent or branch 4 Active cards are defined in internal reports as a card which make at least 12 transactions per year of the bank along with fund transfer to any other user, pay bill, top up air and related services using their mobile phone.

Internet banking: as its motto "why inline when you can be online", it gives instant service of accessing the bank anytime from anywhere including viewing account balances and transactions, making fund transfers between a customer's own current accounts and savings accounts, effecting payments to third parties predefined CBE customers within Ethiopia, viewing and downloading Current and Saving account statements, requesting for Stop Payments on cheque, and other services. However, according to Worku, (2010) report, the number of Internet banking users was only 15,481 as of September 30, 2016, which was less than 1% of the total account holders. According to Worku, G., (2010)though the bank has started Internet banking since 2012, the service didn't show progress other than providing services of viewing financial reports and checking balances until 2016.

2.1.8. Local Payment Switches and Processors

Electronic payments require flow of data which represent conventional financial instruments in digital format. A server that handles the process of electronic payment that includes creating digital representation of the conventional money, conduct authorization and forwards payment orders to their corresponding conventional networks and financial institutions is called a Payment switch (Gifford, Stewart, Payne, & Treese, 1995). All local banks discussed above uses their own payment switch. However, there are two

other giant payment switches in the country where one is owned by six private banks and the other is a national payment switch.

Premier Switch Solution (PSS)

According to Worku, G., (2010) PSS is a certified third party by National Bank of Ethiopia to provide a payment switch solution and certified for membership of Visa, MasterCard and Union pay which enables it to acquire Payment cards from international banks which has a membership relation to one of such international brands. Beyond providing a common payment network for six banks with relatively less initial investment, it enabled customers of these banks to use variety of services from ATMs that includes cash withdrawal, balance and mini-statement check, fund transfer, check back request, E-top up and cash deposits (Worku.G, 2010).

The national E-payment switch named as EthSwitch S.C is formed by all Ethiopian commercial banks through their association and the country's National Bank of Ethiopia. It has started its operation to provide common payment network for all seventeen commercial banks on May 12, 2016 .This interoperability enables customers of any bank to perform payment card related transactions using any bank's ATM. With successive similar projects, the interoperability is expected to include banks' POS terminals in near future.

2.1.9. Summaries of E-banking services in Ethiopia

E-banking services in Ethiopia have been dormant for number of years though it took more than 15 years. Passing through sluggish change, currently all banks started to give E-banking service in one or more forms. ATM is the first and still the most dominant type of E-banking service in Ethiopia. Most banks provide cash withdrawal, balance inquiry and mini-statement as common services through ATMs. Few banks started to use additional service like fund transfer and foreign currency exchange. Other services like bill payment and air top up are introduced as available services in the above literature even if the researcher, as a customer of about five banks, has found none of these services were fully functional through ATMs.

In case of Mobile and Internet banking, most banks are giving services like fund transfer to the same bank account holder, fund transfer to non-account holder, balance inquiry and mini statement. Some banks also offer additional services like bill payment to specific organizations and air top-up services by integrating Mobile banking with Agent banking. Few banks are also giving advanced services like payroll upload, full account follow-up and bill payment using Internet banking.

Though there are different researches made to study the reason behind the slow adoption of E-banking, the area is still very sensitive that demands such kinds of study which particularly focus on customers' E-banking adoption factors in Ethiopia.

2.1.10. Service

A lot of definitions have been given to service by different scholars. Two decades ago, According to Berry, L.L.(2002) cited in (Nukpezah & Nyumuyo, 2009) service is defined as "Anything provided by a dealer or manufacturer, that is helpful for people who have bought things from him like maintenance, supplies installation, assemblies, repairs, etc, ". But now, this definition is not sufficient to explain what service means. Currently, many scholars are modifying the definition of service which makes it compatible with today's business world.

According to Armestrong,G &Kotler (2011) service is "Any activity or benefit that one party can offer to another that is essentially intangible and does not result in the ownership of anything".

Quinn and Gagnon (1986) mention that services have different characteristics and they differ based on the nature of the service. The main purpose of service industry is to manage customer satisfaction.

According to Grooroos (2007) services are provided with high customers' involvement and it is intangible. According to Parasuraman, Berry and Zeithaml (1985) services are characterized by inseparability, intangibility, heterogeneity, and Perish ability.

2.1.11. Service Quality

Service quality has been defined as a breach between the customer's prospect of a service and the customer's perception of the service providers (Parasuraman, Berry, & Zeithaml, 1985). Now, there is no practical, worldwide, or all-inclusive definition of service quality. Grooroos (2007) defines it as "the result of an evaluation process where the user compares his expectations with the service he perceived he has consumed". Definitions of quality incorporated: (a) satisfying the customer or exceeding expectations; (b) product of service features that please declared needs; (c) conformance to obviously specific necessities; and (d) robustness for use, whereby the product meets the customers' needs and is free of deficiency (Toyin, David, & Stodnick, 2008).

2.1.12. The Five Service Quality Dimensions

Exploratory research by Parasuraman, Berry, & Zeithaml (1985), first identified ten overlapping dimensions of service quality which consumers use to assess the quality of a service. The dimensions were: - responsiveness, reliability, competence, courtesy, communication, access, credibility, understanding, security and tangibles. In their 1988 work, the ten dimensions reduced to five: reliability, tangibles, responsiveness, remained the same, but the other seven components merged into two aggregate dimensions called empathy and assurance.

Kotler & Keller, (2012) in their book defined the five service quality dimensions as follows,

Reliability – the ability to perform the promised service dependably and accurately. This dimension is critical as all customers want to deal with firms that keep their promises and this is generally implicitly communicated to the firm's customers (Andaleeb & Conway, 2006).

Responsiveness:-willingness to help customers and provide prompt service. This dimension is concerned about dealing with the customer's questions, requests, and complaints attentively and promptly (Andaleeb & Conway, 2006).

Assurance: - the Knowledge and courtesy of employees and their ability to convey trust and confidence. The trust and confidence may be represented in the personnel who link the customer to the organization (Bolton & Saxena-Iyer, 2009).

Empathy: - the provision of individualized attention and caring to customers. There are numerous ways that empathy can be provided: knowing the customer's preference, his name, and his needs. Many small companies use this approach to render customized services as a competitive advantage over the larger firms (Zeithaml, V,A .2002).

Tangibles: - the appearance of equipment, physical facilities, personal and communication materials. It translates to the restaurant's the appearance and condition of the cutlery, interiors, uniform of the staff, the appearance and tableware, and design of the menu, restaurant signage and promotion system (Andaleeb & Conway, 2006).

Service quality is an elusive and abstract construct that is difficult to define and measure (Parasuaman & Zeithmal, 1988).As a result of the difficulty in defining quality, the service quality measurement has also turned to be a debating issue. In terms of methodologies and measurement, some authors recommended that the service quality concept results from the comparison of performance perceptions with expectations (Cronin & Taylor, 1992). While others argue that it is derived from perceptions of performance alone (Parasuaman & Zeithmal, 1988).and that the expectations are irrelevant and even provide misleading information for a model intended to evaluate perceived service quality. Thus, the inclusion or not of the expectations as a determinant of the service has led to two distinct paradigms: the disconfirmation paradigm and the perception paradigm.

There have been a variety of service quality models SERVQUAL was one of the widely used model, which was developed by (Parasuraman, Berry, & Zeithaml, 1985). The model proposed that service quality is measured by five dimensions: assurance, reliability, empathy, tangibles and responsiveness. Each dimension is measured with four to five items. SERVQUAL consists of 22 pairs of items: one member of each pair assessing the customer's expectations, while the other assesses perceptions of service

quality. Service quality is determined by calculating the difference between expectations and perceptions for each item (Jain & Gupta, 2004).

This aspect of the administration of SERVQUAL has been criticized on the grounds that there is a lack of evidence supporting the expectation-performance gap as a predictive measure of service quality (Cronin & Taylor, 1992). Other researchers suggested that the calculation of difference scores could result in poor reliability, especially if the expectations scale was truncated by ceiling effects (Jain & Gupta, 2004). This would occur if customer expectations of service were very high.

However, one serious trouble with the SERVQUAL scale is that it entails enormous data gathering task. Employing a long questionnaire, one is necessary to collect data about consumers' expectations as well as perceptions of the performance on each of the 22 service quality scale attributes (Jain & Gupta, 2004). Cronin and Taylor (Cronin & Taylor, 1992) found that the performance element out-performed SERVQUAL in case of reliabilities, providing some proof to sustain these concerns.

2.1.13. Electronic Banking Services Quality Dimensions

Electronic services quality is also a concept studied so much. Nevertheless, the dimensions composing these services quality and applied items for evaluating these dimensions are changing. Electronic services quality dimensions have developed by (Parasuraman, Berry, & Zeithaml, 1985), in order to measuring consumers' comprehended services quality. In this research fourfold dimensions of electronic services quality have been studied. According to Parasuraman, Berry, & Zeithaml (1985) viewpoints these dimensions include six dimensions reliability, responsiveness, ease of use, personalization, Website design and security.

Reliability: refers to the ability to perform the promised service accurately and consistently, including frequency of updating the web site, prompt reply to customer enquiries, and accuracy of online purchasing and billing four items were adopted from (Agrawal, V., Tripathi, V. and Seth, N., 2014). The four items were: "This site performs the service right the first time," "Services are provided when they are promised," "This

site doesn't always live up to it promise," and "You never know what is happening on this site."

Responsiveness relates to flexibility, prompt delivery, consistency and accuracy of service delivered. Four items were adopted from (Madu and Madu, 2002; Swaid and Wigand, 2009; Surjadjaja et al., 2003; Tan et al., 2003; Yoo and Donthu, 2001; Yang, 2003) as cited by (Hussain, S.M, 2014). The four items were: "This site handles product returns well," "It tells me what to do if my transaction is not processed," "It takes care of problems promptly," and "Providing answers to your questions."

Ease of use*:* Site contains functions that help customers find what they need without difficulty, has good search functionality, and allows the customer to maneuver easily and quickly back and forth through the pages. Five items were adopted from (Zeithaml, et.al, 2000; Yang 2001, Fassnacht and Koese, 2006). The five items were: "The text on the web site is easy to read," "Web site text/labels/menu items are easy to understand," "Learning to operate the web site is easy for me," "It would be easy for me to become skillful at using the site," and "I find the web site easy to use."

Personalization dimension could involve individual designs for clients in accordance with their pattern of consumption and preferences which also results in an optimum online service, saves the customer time and increases their perception of service quality Four items were adopted from (Madu & Madu, 2002; Yang et al., 2003; Field et al, 2004; Srinivasan, Anderson, & Ponnavolu, 2002) as cited by (Hussain, S.M, 2014).. The four items were: "ability to customize your use of the site," "designed to make future transactions easier," "site adaptation to your future needs," and "degree of customization that is available."

Security*: addresses the* technical specifications of a website's security and payment methods, this dimension also incorporates company reputation, confidence and general confidentiality among consumers and those operating from within the company, engaging in the communication process. Four items were adopted from (Shaohan & Minjoon, 2003; Yang and Jun, 2002; Wolfinbarger and Gilly; 2003; Van Riel, et al., 2003) as cited by (Askari, M., 2016). The four items were: "This site keep secret of information of my

transactions," "This site will not share my personal information with other sites," "This site will protect my bank cards information," and "Payment was submitted in a safe mode."

Website design: A multidisciplinary pursuit pertaining to the planning and production of Web sites, including, but not limited to, technical development, information structure, visual design, and networked delivery. Four items were adopted from (Al-dweeri, R.M., Obeidat, Z.M., Al-dwiry, M.A., Alshurideh, M.T. and Alhorani, A.M., 2017). The four items were: "Easy completion of online transactions." "Easy logging on bank's online portal.," "Easy understanding which button to be clicked for the next step.," and "Ability of this internet portal in helping customer to complete a transaction quickly..".

Customer is the key player for the development of trade, industry and service sector particularly in financial services. So, the significance of customer service in the banking sector came to force to compete in a market driven environment. Measuring service quality in the service sector particularly in the banking sector is more difficult than measuring the quality of manufactured goods. The service sector as a whole is very heterogeneous and what is heterogeneous may hold true for one service and may not hold for another service sector. For example, the nature of banking services is very different provided by a hospital and hotel. In fact, in banking industry there are a variety of services like retail banking, corporate banking, investment banking, commercial banking, personnel banking, wholesale banking, internet banking etc.; each banking having a variety of services. Due to this differentiation, services in this industry could not be standardized, moreover these services are intangible in nature which could not be compared or seen.

The concept of customer satisfaction and service quality is interrelated with each other. Moreover satisfaction of customer depends upon service quality and service quality is increasingly offered as a strategy by marketers to position themselves more effectively in the market place (Parasuraman et.al 1988; Cronin and Taylor 1992). Due to the era of e-banking quality of service has been improved a lot as compare to traditional banking services. Internet banking, Mobile banking, automated teller machine, electronic fund transfer has totally changed the way of providing services by the banks. However some

banks like in private sector are providing it in a very efficient way while others are making efforts to adopt it.

According to Shahin and Samea (2010) customer's perception is much more crucial to managing customer's relation management because it shows how customers perceive the quality of the services. This is the result of the comparison customer's expectation to the real view or experiences of the customers. According to Grooroos (2007), the view of customer's over the bundle of services provided to them, the dimension may be the technical and functional. And he added that the result of the difference between the evaluated (measuring) expectation and received service process.

Customer satisfaction has become a major area of marketing that has received considerable publications from practitioners and scholars in the last two decades. Satisfaction is a person's feeling of pleasure or disappointment resulting from comparing a product's performance (outcome) in relation to his or her expectation. Customer satisfaction has been recognized as an important element that drives customer retention, loyalty and post-purchase behavior of customers. It is well documented that the measurement of customer satisfaction regarding the service quality of firms is a necessary means by which organizations delve into the minds of its customers for useful feedback that could form the basis for effective marketing strategy. Since firms exist to satisfy customers by meeting their requirements, it is crucial for banks that offer internet banking services to periodically and consistently measure the satisfaction of their customers. As customers use the banking internet services, it might be that they are not satisfied, to some extent, with certain dimensions of the service quality.

Customer satisfaction is more critical in internet companies because customers demand a high quality products or services and if they are unsatisfied, it is easy for them to move away to another site and leave those companies forever. Thus, the internet companies need to know the customer's requirements for satisfactory level. Some parameters of customer's satisfaction include numbers of clicks needed to find what they want, amount of information they need, response time and speed of webpage. Service quality has found as one of the significant factors in distinguishing services and products. Service quality is an important tool to measure customer satisfaction. There is a close relationship between

service quality and customer satisfaction. Customer satisfaction can be protected by providing products or services with high quality.

2.1.14. Customer Satisfaction

Satisfaction became a popular issue in marketing during 1980s and is a doubtful topic during both business expansions and recessions. Most thoughts on customer satisfaction involve customer expectation of the service provision, actual delivery of the customer expectation and experience that are either unmet or exceeded (Saleem, H. and Raja, N.S., 2014). If expectations are exceeded the perception, positive disconfirmation occurred, while a negative disconfirmation occurred due to customer experience is poorer than expected, the key to sustainable competitive advantage lies in delivering high quality service that will in turn result in satisfied customers (Yoo & Park, 2007)as cited by (Akram, A., 2009). Regarding customer's perception of e-banking service quality, two items used to measure it. The two items were "Based on my previous online experience, I feel the online banking service quality is good," and "The online service quality is better than I expected."

Kotler and Keller (2012) explained customer satisfaction as the customer's observation that compares their pre-purchase expectations with post purchase observation. Oliver (1996) defines satisfaction as "the consumer's final response about their consumption", after utilization choice by the consumer that a service provided an enjoyable level of consumption-related fulfillment, including under or over-fulfillment. Oliver (1996) point of view Customer satisfaction is the assessment a customer makes to a certain exchange, which reflect the relationship of the customer's anticipation and their real opinion to products and services they receive (Rahman, Khan, & Haque, 2012).

Some authors think customer satisfaction can be measured. For example: Keiningham (2014) suggested using overall measurement to record customers' response to different attributes of products and services. Luke recognized seven factors that manipulate customer satisfaction: price, service content, corporate image, convenience, equipment, staff and procedure. (Huang, 1998) also defined five factors used to evaluate customer

satisfaction: service, product, overall performance of products, staff, and closeness to expectation.

2.1.15. The Relationship between Service Qualities and Customer Satisfaction

Pleased customers tend to be devoted to the company and more likely to return. Understanding satisfaction is vital in the sense that dissatisfied customers hardly ever complain, but rather simply purchase from another service provider (Chang, 2009). Satisfaction is most commonly described in terms of the disconfirmation approach, which describes it as the difference between a customer's pre-purchase expectations and post-purchase perceptions of the concrete service performed (Chang, 2009).The general thought is that satisfaction mediates the relationship among perceived service quality and firm performance (Chang, 2009).. However, some researches propose that satisfaction is a precursor to service quality (Millán & Esteban, 2004).

Substantial confusion continues to exist concerning the relationship between customer satisfaction and service quality. Millán and Esteban (2004), maintains that service quality and satisfaction have frequently been used interchangeably. Differences between customer satisfaction and service quality include: a) satisfaction is a post- experience decision customer experience while quality is not; b) in the satisfaction literature "expectations reflect anticipated performance" made by customers about levels of performance during their contact (Swaid, S.I. and Wigand, R.T., 2007).

According to Swaid, S.I. and Wigand, R.T (2007), there is no obvious definition of satisfaction, although most definitions would include "affective, evaluative or emotional response." The distinction between perceived service quality and satisfaction is important because higher officials need to know whether their purpose is to present the maximum level of perceived service quality or to have satisfied customers. The standard of contrast in forming satisfaction is predictive expectations, or what the consumers consider will happen. Perceived service quality is the consequence of a comparison of performance and what the consumer senses a firm should provide. Swaid, S.I. and Wigand, R.T., (2007), explains negative disconfirmation as a happening when performance is less than

expectations. Positive disconfirmation is obvious when performance is greater than expectations. Customer satisfaction results in the disconfirmation of prior expectation that is if the service provider meets or exceeds expectations then the customer is more likely to be pleased (Laroche, Ueltschy, Shuzo, & Cleveland, 2004).

Millán and Esteban (2004) assert that satisfaction is perceived as the final result of all actions carried out during the process of purchase and consumption. All evaluated definitions entail: a) the existence of an objective that the consumer wishes to reach; 2) the attainment (satisfaction) of this objective can only be judged by taking a standard of comparison as a reference; and c) the evaluation process of satisfaction involves the intervention of at least two stimuli; a result and a reference or standard of comparison (Kandampully & –Hui-Hu, 2007).Satisfaction is related to size and direction of "non-confirmatory: experience defined by the difference between initial expectations of the individual and the real outcome resulted." While expectations are the needs or desires of the consumer, based on what the consumer senses should be delivered prior to receiving it. Perceptions are the viewpoints of the consumer relative to the service received. The consumer's judgment of satisfaction or dissatisfaction relay on how the consumer perceives the real result obtained relative to what was anticipated (Bakr, Mustafa, & al-Din, 2005).

2.1.16. Difference between Physical and Virtual Banking

Physical banking has been the usual way that customers make use of a banking transaction and financial services company. Physical banking involves physical branches that are located around the most populated areas to serve their clients and allow people to compete their transactions and services in person (Sulaiman, 2005). Virtual banking, which does not involve any physical action (going to a bank building, standing in a line, and face to face communication), exists in the form of ATMs, phone banking, home banking, and Internet banking. A virtual bank is a non-branch bank that involves the provision of fully automated banking services. Online shopping has become available and more convenient, and secure because of the appearance of online banking (McDougall, 1996).

The major function of banking is to mobilize savings and transfers to entrepreneurs. Banks, financial organizations, or financial applications such as Microsoft banking, Quicken, ADP, and Bank of America have found easy and secure ways to complete commercial and individual transactions through the use of Internet and also emphasized that Internet banks are the most important financial tools and services in the modern economy.

2.2. Empirical Review

How to appraise e-banking service quality has become the study object of various scholars.Against this background, several contributions have sought to delineate the domain of e-banking service quality and identify its dimensions (see, e.g. Collier and Bienstock, 2006; Fassnacht and Koese, 2006; Al-Tarawneh, K.A., 2012.; Kim et al. 2009; Parasuraman et al. 2005; Wolfinbarger and Gilly, 2003: Collier and Bienstock (2006) adopt Mentzer et al.'s (2001) service quality model as a basis to conceptualize e-banking service quality. But in Ethiopia there are limited number of studies conducted on E-banking Technology .They argued that in a similar fashion to logistics customers, online customers require information quality and ease of order during the process, order condition and accuracy in the outcome of online transactions

Chang and *et al*. (2009) aimed to construct a model to represent linkages between e-banking service quality, customer satisfaction, and customer loyalty. Also, they assumed a moderate role for customer perceived value between customer satisfaction and loyalty. Data were collected by means of a questionnaire survey from customers of an online website. The results of statistical analysis indicate e-banking service quality positively affects customer satisfaction which leads to loyalty. Also, the results revealed customers with higher perceived value have higher degree of loyalty.

Nupur (2010) conducted a study focusing on e- banking and customer satisfaction in Bangladesh .The main objective of the study was to measure customer satisfaction on e-banking service delivery. He adopted SERVQUAL method to collect necessary data. The finding of the research indicated that, the measured variables; reliability, empathy,

responsiveness, assurance and tangibility have relationship with e-banking customer service.

Wolfinbarger and Gilly (2003) analyzing the impact of online retailers' e-banking service quality dimensions in several sectors, found it to be generally similar across the piece, though ease of return and experience of security in particular exhibited sector-by-sector differences in performance. Wolfinbarger and Gilly (2003) developed a 14-item scale which contains four factors: website design (involving some attributes associated with design, personalization, and product selection), reliability/fulfillment (related to accurate product representation, on time delivery, and accurate orders), security /privacy (safety and trust), and customer service (willingness to solve problems, willingness to help, and prompt answers to inquiries). According to their scale the dimensions of security/privacy and reliability/fulfillment indicated strong validity. In contrast, dimensions of website design and customer service appear less internally consistent and distinct.

Chen and Hitt (2002) found that system quality, product line breadth, and product line quality factors of e-SQ reduce customer switching and attrition.

Wenying and Sun (2010) as cited By Paschaloudis .D And Tsourela,.M, (2015) aimed to examine relationships among e-banking service quality, e-customer satisfaction, perceived value and loyalty empirically. Data were collected from online customers and structural equation.

According to Zeithaml, Parasuraman, & Malhotra (2002) there are several quality dimensions related to the commercial websites: ease of navigation, flexibility, efficiency, site aesthetics and security. Modeling was applied to test the relationships. The results revealed that e-banking service quality positively influences customer satisfaction, perceived value and e-loyalty. Also, findings showed both e-customer satisfaction and perceived value directly affect e-loyalty.

Yen and Lu (2008) found that the e-SQ dimensions of efficiency, privacy protection, contact, fulfillment, and responsiveness have statistically significant influences on buyer's disconfirmation of online auctions which are subsequently, positively associated

with their satisfaction, which is then is positively associated with loyalty intentions to repurchase a product or reuse a service.

Yaobin and Tao (2005) believe that the serviceability and accessibility of the web site, goodwill, network security, and customers' trust liability will all affect the establishment of customers' initial trust in the web site, which will directly exert effects on their online purchase motivation.

Sun and *et al*. (2009) identified Privacy, Fulfillment, System availability and Efficiency as the variables of e-banking service quality. They aimed to examine causal linkages among dimensions of e-banking service quality, customer satisfaction, perceived value and loyalty. The results showed that dimensions of e-banking service quality affect customer satisfaction and perceived value. Also, results indicated that e-customer satisfaction and perceived value influence loyalty.

Al-Hawari and Ward (2006), taking the bank as an example, verifies the positive effects exerted by e-banking service quality on customers' satisfaction while these effects increase the bank's benefits.

Sahadev and Purani (2008) identified Privacy, Fulfillment, System availability and Efficiency as the variables of e-banking service quality. They examined relationships among dimensions of e-banking service quality, customer satisfaction, trust and loyalty. The results indicated dimensions of e-banking service quality positively affect both customer satisfaction and trust. Also, results revealed customer satisfaction and trust directly affect loyalty.

Yang and Jun (2008) measured e-banking service quality using two groups: Internet purchasers and Internet non-purchasers. They found that reliability was the most important dimension for Internet purchasers even when compared to access, ease of use, personalization, security, and credibility. Internet non-purchasers, in contrast, consider security as their most critical concern. Customers actually evaluate a website's reliability based on whether it provided them with reliable information and safe transactions.

Yen and Lu (2008) identified some variables such as efficiency, system availability, privacy and fulfillment as the dimensions of e-banking service quality. Then they examined the linkages among dimensions of e-banking service quality, customer satisfaction and loyalty. Results revealed the dimensions of e-banking service quality directly influence customer satisfaction. Subsequently, customer satisfaction positively affected loyalty.

According to Lee & Lin (2005) website design is an important factor in determining the customers-perceived e-banking service quality and it has significant and positive impacts on the customers' perceived e-banking service quality.

Kassim and Abdullah (2010) examined the relationships among e-banking service quality dimensions, customer satisfaction and trust. The results indicated direct effect of service quality on customer satisfaction. Further, the results showed customer satisfaction positively influence e-trust.

Loiacono et al. (2002) develop the WEBQUAL to scale the service quality. They point out that e-banking service quality includes 12 dimensions including the information adaptability, trust, design, visual requirement, flow, business process, interaction, response time, intuition, creativity, overall communication, and replace ability.

Collier and Bienstock (2009) identified privacy as one of the dimensions of e-banking service quality. They concluded privacy positively influences customer satisfaction. Building upon these findings, we posit that E-banking service quality dimensions directly relates to customer's perception of e-banking service quality. The author proposes a model that describes the relationship between reliability, responsiveness, ease of use, personalization, website design and security, and customer's perception of e-banking service quality.

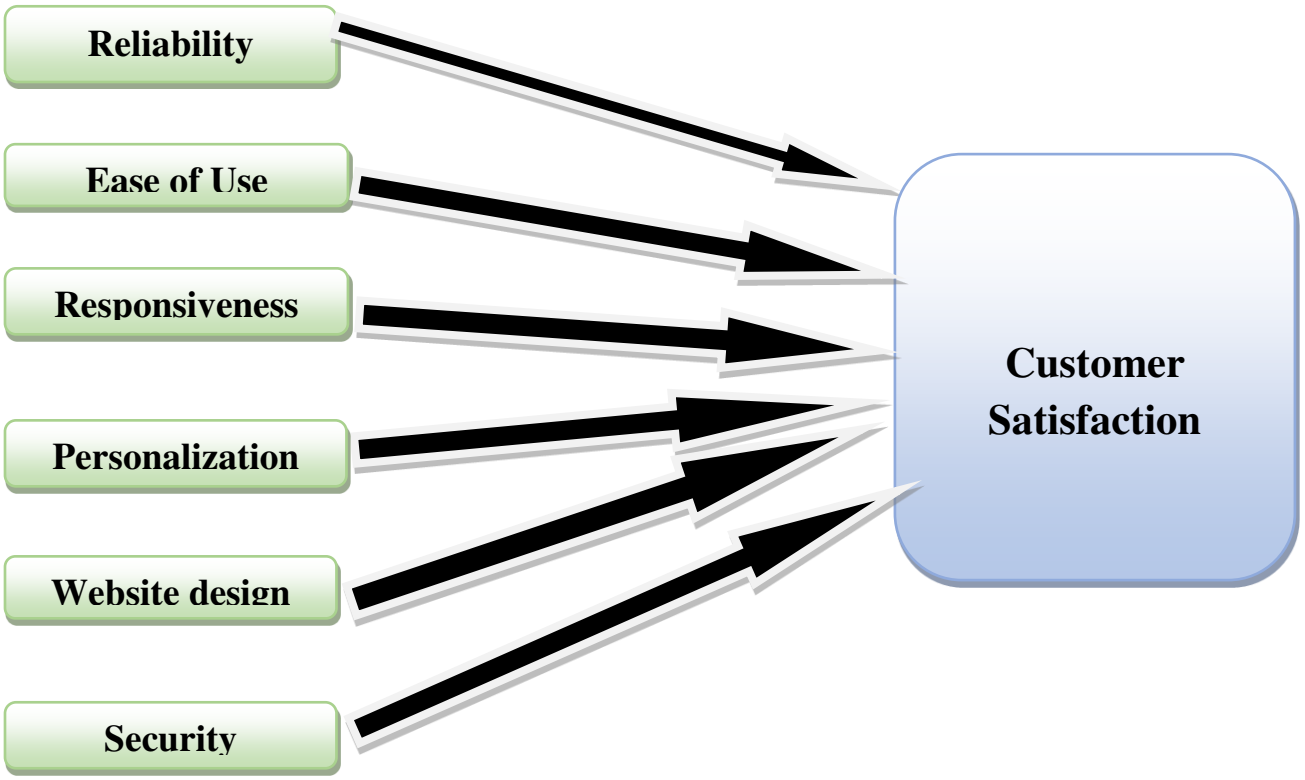
Olanipekun, (2013) in another study investigated the realization of electronic banking in Improving Banks' customer satisfaction in Iran Melli Bank. Their findings show that Melli bank's electronic services which are provided via various ways such as ATM, sale terminals, telephone banking, Internet and mobile, are among the customer needs and this

means that the relationship between their development and customer satisfaction degree is a direct-linear relationship.

2.3. Conceptual Framework

The general idea from past literature is that there is a relationship between customer satisfaction and E-banking service quality; also that E-banking service quality could be evaluated with the use of six constructs of conceptual model of E-banking service quality proven by Parasuraman et al. (2005) reliability, responsiveness, ease of use, personalization, website design and security taking as the dimensions.

E-Banking Service Quality Dimensions



Independent Variables **Dependent Variable**

Figure.1:- Conceptual Framework; Relationship between Customer Satisfaction and E-Banking Service Quality (Parasuraman et al., 2005).

CHAPTER THREE

RESEARCH METHODOLOGY

This part describes the methodologies that were used in this study: the choice of particular research approach, research designs, data type and source of data, data gathering technique and instruments, sampling and sampling techniques and data analysis techniques along with an appropriate justification associated with each approach.

3.1 Research Design

This study aims at understanding the relationship between the dependent and independent variables, which are respectively Customer Satisfaction and E-Banking Service Quality. As the study tries to establish the relationship between these two variables, it is Explanatory design. In order to attain the objectives of the study Explanatory research design were used. Explanatory research is characterized by the prior formulation of specific research questions and hypotheses. The main aim of Explanatory research is to identify any causal link between the factors or Variables that pertain to research problem. This study also employed quantitative research method. Quantitative research design method is used to establish and study the relationship between two variables or concepts; therefore, it is used to test a theory. These variables are measured numerically, and the results are analyzed numerically through statistics or graphs. Researchers who adapt this method usually tend to be more deductive in their research approach and tend to follow the positivism epistemological position, where highly structured data collection techniques are used (Creswell, 2014; Saunders, 2016). .

3.2 Data Type and Source of Data

The researcher used primary data for the entire analysis of this study. The information was gathered through questionnaire from the selected sample of respondents of e-banking customers of CBE. The data that was collected from the respondents through questionnaires were used as primary data. According to Biggam, (2008) primary data is the information that the researcher finds out by him/herself regarding a specific topic. The main advantage with this type of data is that it was collect with the research's

purpose in mind. It implies that the information resulting from it is more consistent with the research questions and objectives.

3.3 Data Gathering Technique and Instruments

The primary data was gathered particularly using survey questionnaire. A questionnaire, whether it is called a schedule form or measuring instrument, is a formalized set of questions for obtaining information from respondents. Measurements of service quality and customer satisfaction in e-banking context was adopted and modified from the previous studies, and a five-point Likert scale ranging from 1=Strongly Disagree to 5=Strongly Agree are used. In the e-banking context, service quality measures consisted of **25** item scale (Parasuraman et al., 2005; Akinci et al., 2010), and customer satisfaction was measures with **2** item scale (Chen et al., 2012). Further, the questionnaire was developed in English and it was divided into three sections (Section A-C). The sections A and B were developed to measure service quality and customer satisfaction, respectively, whilst section C was developed to measure demographics, including gender, age, income and occupation.

3.4 Population, Sample Size and Sampling Technique

According to Hair *et al.* (2010), target population is said to be a specified group of people or object for which questions can be asked or observed made to develop required data structures and information. Therefore, for this study, the target populations were e-banking customers from five branches from each four districts of CBE in Addis Ababa. For the purpose of this study five branches were selected by probability sampling approach and stratified sampling technique.

For populations that are large, Cochran (1963:75) developed the equation yields a representative sample for proportions. Which is valid where n_0 is the sample size, Z is the abscissa of the normal curve that cuts off an area α at the tails (1 – α) equals the desired confidence level, e.g., 95%) e is the desired level of precision, p is the estimated proportion of an attribute that is present in the population and q is 1-p. The value for Z is found in statistical tables which contain the area under the normal curve e.g. Z = 1.96 for 95 % level of confidence.

$$n_o = \frac{Z^2 pq}{e^2}$$

no= ((1.96)2 (0.5) (0.5)) / (0.05)2 = 385

Accordingly, the researcher will use the recommendation of (Yamanie, 1967) and formula by Cochran (1963) will determine the sample size as follow. Taking 95% confidence level Z tered to be 1.96 precision of ±5 and assuming p=0.5 and q is 0.5 putting the figures in the equation the sample size was determined 385.

Accordingly, 385 respondent e-banking customers were taken as the representative sample size in order to have sufficient and reliable data. In order to select the sample size of the study the researcher used non-probability sampling approach particularly convenient sampling technique.

3.5. Method of Data Analysis

Both descriptive and inferential statistics were used to analyze and interpret the findings. Demographic variables of the respondents and mean scores of the service quality dimensions are interpreted using descriptive statistics whereas inferential statistics were used to find out the relationship between service quality dimensions and customer satisfaction using correlation analysis via SPSS Version 20. The study was adopted multiple linear regression and Pearson correlation analysis to establish the relationship between variables of interest. Specifically, multiple linear regression analysis was used to determine the joint relationship between independent and dependent variables.

3.6 Validity and Reliability

The ultimate goal of any research study is to obtain high-quality, trusted, valid and reliable results (Yilmaz, 2013). Therefore, researchers should ensure that the adopted research methodology meets the defined standards and criteria. Common criteria used to achieve these standards in research methodology are validity and reliability.

3.6.1 Validity

Yilmaz (2013) and Denscombe (2014) described the term 'validity' as the appropriateness and accuracy of collected data. Yilmaz (2013) defined reliability as 'consistency or the degree to which a research instrument measures a given variable consistently every time it is used under the same condition'. Accordingly, to maximize the quality of the research, Yin (2014) suggested three tests for validity that are commonly used in social research regardless of the data collection technique. The tests include, Construct validity, internal validity and Construct and External validity

3.6.1.1 Construct validity

Construct validity is referred to as the establishment of the correct operational measures for the research topic under study (Yin, 2014). Yilmaz, (2013) stated that this type of validation is largely based on testing proper instruments during the data collection phase. This ensures that the most accurate and rich information is collected after a rigorous review of previous documents, an academic literature review and the conducted interviews; however, accuracy can be achieved through a focused use of different techniques/tactics, which include referring to multiple sources of evidence and establishing a chain of selections. The establishment of a rich chain can help immensely in producing a complete draft of evidence for further validity evaluations. For this research, construct validity was achieved through the triangulation of research techniques using different sources of evidence.

3.6.1.2 Internal Validity

This criterion refers to the appropriateness of the data analysis techniques utilized to analyze the collected data. It is therefore important that the theoretical propositions are linked with the data accurately in addition to the appropriate application of the analytical strategies. For this research, to increase the internal validity, a careful and comprehensive review of the literature related to the topic of choosing a research design to enable the selection of an accurate data analysis technique was conducted, and the analysis steps were followed precisely.

3.6.1.3 External validity

External validity refers to the degree to which the research findings can be generalized or stratified in other research studies. For quantitative research, the generalization of results is applicable, as generalization can only occur for theoretical propositions. The findings of this research was generalized or transferred to a context similar to Ethiopia the context. Therefore, as this research involves the study of customer satisfaction and e-banking service quality within the four districts of CBE in Addis Ababa, the findings of this study could be generalized to other regional CBE branches within the same country which are prone to the same e-banking service rendering.

3.6.2 Reliability

Reliability means that the process (such as data collection procedures) of the study can be repeated to obtain the same results (Yin, 2014). For this research, reliability was achieved by selecting and following an appropriate research methodology model to ensure that the aim and objectives were fulfilled. In addition, to further ensure reliability, all participants were provided with an overview of the research background to ensure all questions will be understood in the same way.

In order to measure the consistency of the questionnaire and the overall reliability of constructs that it is measuring, the reliability test were carried out based on Cronbach‘s Alpha coefficient. Cronbach‘s Alpha can be interpreted like a correlation coefficient. Its coefficient range lay on the value from 0 to 1. A reliability coefficient (alpha) higher than or equal to 0.7 is considered as acceptable. That means the targeted questions raised in the questionnaires are capable to meet the objective of the study.

3.8 Ethical Consideration

The respondents were never mention about their ethnicity, political and religious view points and their private concerns. Because these whole things are their personal backgrounds that they were not want to explode. Confidentiality was the researcher’s concern and duty to keep the respondents safe under psychological discipline.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

This chapter presents the results of the data analysis according to the research methodology discussed in chapter three. The general background of the characteristics of the respondents and detailed discussion regarding the specific objectives of the study are also presented. Demographic variables of the respondents and mean scores of the service quality dimensions are interpreted using descriptive statistics whereas inferential statistics used to find out the relationship between service quality dimensions and customer satisfaction using correlation analysis via SPSS Version 20.

Multiple regression and Pearson correlation was analysis to establish the relationship between variables of interest. The questionnaires are distributed to the customers of 20 branches (five branches from each four districts) of CBE in Addis Ababa. Accordingly the data collected from the questionnaire is analyzed as follows.

4.1. Descriptive Analysis for Demographic Data

This descriptive analysis is used to look at the data collected and to describe that information. It is used to describe the demographic factors for more clarification. It is mainly important to make some general observations about the data gathered for general or demographics questions. The demographics factors used in this research are gender, age, education qualification, occupation, monthly income, and types of service they used the banks services.

From the data assembled, out of the 385 questionnaires distributed, three hundred and sixty usable copies were completed and returned with a response rate of 93.51 %. This rate concurs with Mugenda and Mugenda (2003) who explains that for hypothesis a response rate of half is palatable for examination and reporting, 60% is extraordinary and a response rate of 70% and over is awesome, thus 93.51 % was surprising for an examination. This high response rate can be credited to the data gathering systems, where the researcher pre-told the potential individuals and associated the drop and pick

technique where the surveys were picked at a later date to allow the respondents rich time to fill the reviews.

Table 4.1: Response Rate

The table illustrates the breakdown of the questionnaires sent out. It indicates the ones returned and those that were not returned.

Response	Frequency	Percentage
Filled-in Questionnaires	360	93.51%
Unreturned Questionnaires	25	6.49%

Source; Own Survey, 2019

4.2: Demographic Information

As it can be seen on the table 4.2 regarding the customers experience with the e-banking services of the CBE 0.9% of the respondents used for less than 1 year, 15.3% of them used for 1 to 3 years, 33.8% of them used for 4 to 6 years and the rest 50% of them used for over 6 years.

Concerning the educational qualification, 3.1 per cent were grade 12 completed, 25.6 per cent did hold a college diploma, 63.1 per cent were first degree, 8.1 per cent were second degree and above. The summary of the demographic information of the respondents are shown in table (4.2) below.

Table 4.2: Demographic Information

Variable		Frequency	Percentage
Years using the e-banking services	less than 1 year	3	0.9
	1 to 3 years	55	15.3

	4 to 6 years	122	33.8
	Over 6 years	180	50
	Total	**360**	**100**
Educational Qualification	Grade 12 completed	12	3.2
	College Diploma	92	25.6
	First Degree	227	63.1
	Second Degree and above	29	8.1
	Total	**360**	**100**

Source; Own Survey, 2019

4.2.1 Interpretation on Demographic Analysis

From the above table anyone can understand Demographic Information which were collected by the researcher has two part first the respondent year of Experience with the bank and Second their Educational Background. For the first element the collected data shows 83.8 % of the respondent are customer of the CBE for more than four year even 50% of them were customer for the bank for more than Six year. This can be interpreted as there is still very big opportunity to attract new customer for using E- Banking service provided by the bank using those long Period customers as good Example.

Educational Background information collected from the respondent indicated that more than 60% of them are first Degree Holder , One thing; which the researcher understood from the above response rate was that E-banking Service are currently being used by Educated people and it can tell to the management of the bank that they are not addressing to the largest part of the population in the country who are illiterate so they should have to focus on creating awareness about E-banking Service Features and how they can get and use this services.

4.3. Research Variables and Measurement

The constructs in this study were developed by using measurement scales adopted from prior studies. Modifications were made to the scale to fit the purpose of the study. All constructs were measured using five-point Likert scales with anchors strongly disagree (= 1) and strongly agree (= 5). All items were positively worded.

4.3.1 Cronbach's Alpha Test of Reliability

As indicated in chapter three, to ensure that there is reliability of the model used, the Cronbach's Alpha Test of Reliability was performed. The various dimensions of E-banking services quality were tested the results of the test show that each dimension was internally consistent. The table below shows the results of the test performed

Table 4.3 Cronbach's Alpha Test of Reliability

Construct and item	Reliability
Reliability (R)	0.72
Responsiveness (RE)	0.74
Ease of use (EU)	0.81
Personalization (P)	0.77
Security (S)	0.75
Website design (WD)	0.7
Customer's perception of e-baking service quality (EBSQ)	0.83

According to, Nunnally and Bernstein, (1994) the closer the Cronbach's alpha is to 1, the higher the internal consistency reliability of the research instrument. The Cronbach's Alpha score ranges from 0 to 1. The Cronbach's Alpha score greater than 0.70; show that high internal reliability of the scaled item (Nunnally and Bernstein, 1994). From table 4.3 above indicated that the cumulative Cronbach's alpha scores were above 0.76 or it approaches to 1, meaning that they are highly reliable. This means that it fulfill the argument mentioned by Nunnally and Bernstein. The above reliability result shows that,

the instrument in which the researcher was used essentially very much measured the dependent variable.

4.4. Descriptive Statistics Analysis

This type of analysis helps to know the overall mean and standard deviation of each variable used in the study.

Table 4.4 Descriptive Statistics

Construct and item	Mean	N
Reliability (R)	3.56	360
Responsiveness (RE)	3.75	360
Ease of use (EU)	3.68	360
Personalization (P)	3.84	360
Security (S)	3.65	360
Website design (WD)	4.10	360
Customer's perception of e-baking service quality (EBSQ)	3.81	360

Source: own survey, 2019

As we see from the above descriptive statistics table 4.4 it contains the mean value of each independent Variables. According to, Best (1997) the mean score that ranges from 1-1.80 is considered to be lowest, from 1.81-2.61 is lower, from 2.62-3.41 is deemed to be average/moderate, from 3.42-4.21 is good/high and from 4.22-5 is going to be considered as very good/excellent.

Besides this, the decision rules used in any analysis fall in the average mean less than 3 was considered as low, average mean equal to 3 has to be considered as medium and the average mean greater than 3 was deemed as high throughout the study (Best and Khan, 1995). As we understand from the above table 4.4 based on the mean measurement of the mentioned authors, the mean score of all independent and dependent variables were greater than 3. This implies that the dependent variable highly described by all independent variables it means that all the independent variables have positive influence

on the e-banking customers of the bank. Especially Website Design and personalization Dimension of E-banking Service Quality has a big influence on Customer Satisfaction of the bank. Comparatively the above analysis indicated there should be some improvement on Reliability and Security Aspects of E-banking service based on the current satisfaction level of the respondent. Which were lower that other independent Variables.

4.5. Multiple Regression Analysis

Table 4.5: Regression Summary. (N= 360)

Model	Unstandardized Coefficients		Standardized coefficients	T	Sig.	Collinearity statistics	
	B	Std. error	ß			Tolerance	VIF
(Constant)	0.977	0.176		5.558	0.000		
Reliability	0.186	0.047	0.184	3.935	0.000	0.795	1.258
Responsiveness	0.175	0.053	0.156	3.302	0.001	0.774	1.293
Ease of use	0.114	0.043	0.123	2.635	0.009	0.794	1.259
Personalization	0.061	0.046	0.060	1.337	0.008	0.868	1.152
Security	0.214	0.033	0.305	6.503	0.000	0.791	1.264
Website design	0.134	0.054	0.118	3.116	0.002	0.794	1.259
Notes: R^2 = 0.332 ; Adj. R^2 =0.323 ; Sig. F = 0.000 ; F-value = 38.249 ; dependent variable, p < 0.01							

Source; Own Survey, 2019

The regression results have indicated that the impact of six dimensions of e-banking service quality on customer satisfaction in the banks in Ethiopia with the survey of CBE selected Branch from each 4 District. In the present study, it has been represented that out of the six dimensions; two dimensions have significantly influenced customer satisfaction of e-banking service. Security (β = .305, p = .000) and Reliability (β = .184 p = .000); and have been found to be significant at 5 percent level of significance. From the customers'

point of view, Security and reliability are the most important dimensions in the context of using e-banking services.

Furthermore, as shown in table 4.5 based on the standardized Beta estimates, Security (β = .305) has occurred as the most important dimension which has highest impact on the customer satisfaction, followed by Reliability (β = .184). Today, more and more services are being delivered through technology, particularly with the advent of mobile and internet applications. According to this study in the e-banking services encounters, customers always seek about the security and Reliability in transactions.

4.6. Factor Analysis

A principal component factor analysis was conducted to validate the underlying structure of e-banking service quality dimensions (Table 4.3). Results of the factor analysis indicated the existence of seven significant dimensions with eigenvalues greater than one.

Table 4.6: Factor Analysis of the Study Variables

Construct and item	Mean	Factor Loading	Eigenvalue	%of Variance	Reliability
Reliability (R)			1.974	33.124	0.72
R1	3.62	0.599			
R2	3.48	0.567			
R3	3.49	0.706			
R4	3.67	0.735			
Responsiveness (RE)			2.51	32.148	0.74
RE1	3.64	0.69			
RE2	3.77	0.59			

RE3	3.97	0.57			
RE4	3.62	0.66			
Ease of use (EU)			2.123	40.112	0.81
EU1	3.54	0.71			
EU2	3.91	0.69			
EU3	3.57	0.68			
EU4	3.64	0.64			
EU5	3.74	0.71			
Personalization (P)			2.012	32.148	0.77
P1	4.01	0.55			
P2	3.94	0.6			
P3	3.67	0.71			
P4	3.75	0.58			
Security (S)			1.846	44.187	0.75
S1	3.68	0.64			
S2	3.59	0.69			
S3	3.64	0.72			
S4	3.71	0.8			
Website design (WD)			1.887	51.258	0.7
WD1	4.08	0.74			

WD2	4.15	0.67			
WD3	4.07	0.68			
WD4	4.12	0.7			
Customer's perception of e-baking service quality (EBSQ)			1.924	42.574	0.83
EBSQ1	3.87	0.58			
EBSQ2	3.76	0.61			

Source; Own Survey, 2019

The KMO measure of sampling adequacy value for the items listed below (table (4.4)) indicating sufficient inter-correlations with the Bartlett's Test of Spehericity was also found to be significant. These dimensions were six dimensions listed under e-banking service quality namely Reliability (4 items), Responsiveness (4 items), Ease of use (5 items), Personalization (4 items), Security (4 items), and Website design (5 items), respectively and e-banking service quality perception (2 items).

Table 4.7: Kaiser-Meyer-Olkin and the Bartlett's Test of Sphericity

Variables	**Kaiser-Meyer-Olkin Values**	**Bartlett's Test of Sphericity**	
		Approx. Chi-Square	**Sig.**
Reliability	0.687	305.145	0.000
Responsiveness	0.712	360.124	0.000
Ease of use	0.774	240.127	0.000
Personalization	0.684	210.547	0.000

Security	0.614	198.857	0.000
Website design	0.740	217.235	0.000
e-banking service quality perception	0.709	220.478	0.000

Source; Own Survey, 2019

4.7. Correlation Analysis: Relationships between the Variables

A correlation matrix was constructed using the variables in the questionnaire to show the strength of relationship among the variables considered in the questionnaire. According to Kline (1998), correlation matrix is defined as ``a set of correlation coefficients between a number of variables''**.** ** Correlation is significant at the 0.01 level (2-tailed)

Variables	R	RE	EU	P	S	WD	ESQ
Reliability	1	.326(**)	.463(**)	.458(**)	.478(**)	.254(**)	.374(**)
Responsiveness		1	.421(**)	.514(**)	.331(**)	.267(**)	.395(**)
Ease of use			1	.367(**)	.289(**)	.394(**)	.276(**)
Personalization				1	.443(**)	.337(**)	.381(**)
Security					1	.419(**)	.512(**)
Website design						1	.467(**)
e-banking service quality perception							1

Table 4.8 Summary of Mean, Standard Deviation and Correlation

Source; Own Survey, 2019

As shown in table above (4.8), the correlation matrix indicates that the highest coefficient of correlation in this research between Responsiveness and Personalization, is 0.514, which is below the cut-off of 0.90 for the collinearity problem. Thus, multicollinearity

problem does not occur in this research (Hair et al., 1998). These correlations are also further evidence of validity and reliability of measurement scales used in this research (Barclay et al., 1995; Hair et al., 1998). There was a significant positive relationship between Responsiveness and Personalization ($r = 0.514$, $n = 160$, $p \leq 0.01$). The weakest correlation was for Reliability and Website design ($r = 0.254$, $n = 160$, $p \leq 0.01$).

4.8. Diagnostic Analysis

Before run a multiple regression analysis diagnostic checking of there is no multi-collinearity occurs and normality test were done.

4.8.1 Multicollinearity

The regression is designed to allow for this, and provides the proportions of the overlapping variance (Cortina, J.M., 1993).Ideally, independent variables are more highly correlated with the dependent variables than with other independent variables. If this assumption is not satisfied, autocorrelation is present (Poole & O'Farrell, 1971). Multicollinearity can result in misleading and unusual results, inflated standard errors, and reduced power of the regression coefficients that create a need for larger sample sizes (Little, T.D., Bovaird, J.A. and Widaman, K.F., 2006). Interpretations and conclusions based on the size of the regression coefficients, their standard errors, or associated *t*-tests may be misleading because of the confounding effects of collinearity (Mason & Perreault Jr., 1991). The result is that the researcher can underestimate the relevance of a predictor, the hypothesis testing of interaction effects is hampered, and the power for detecting the moderation relationship is reduced because of the inter correlation of the predictor variables (Little, T.D., Bovaird, J.A. and Widaman, K.F., 2006). One way to prevent multicollinearity is to combine overlapping variables in the analysis, and avoid including multiple measures of the same construct in a regression (Dodd, S et.al, 2006)Statistical software packages include collinearity diagnostics that measure the degree to which each variable is independent of other independent variables. The effect of a given level of collinearity can be evaluated in conjunction with the other factors of sample size, R^2, and magnitude of the coefficients (Mason & Perreault Jr., 1991).

Widely used procedures examine the correlation matrix of the predictor variables, computing the coefficients of determination, R^2, and measures of the eigenvalues of the

data matrix including variance inflation factors (VIF) (Mason & Perreault Jr., 1991). Tolerance measures the influence of one independent variable on all other independent variables. Tolerance levels for correlations range from zero (no independence) to one (completely independent) (Dodd, S et.al, 2006) The VIF is an index of the amount that the variance of each regression coefficient is increased over that with uncorrelated independent variables (Dodd, S et.al, 2006)

When a predictor variable has a strong linear association with other predictor variables, the associated VIF is large and is evidence of multicollinearity (Dodd, S et.al, 2006)The rule of thumb for a large VIF value is ten (Dodd, S et.al, 2006) Small values for tolerance and large VIF values show the presence of multicollinearity (Keith, 2006).

Detect Multicollinearity

1. As the squared correlation (r^2) increases toward 1.0, the magnitude of potential problems associated with multicollinearity increases correspondingly.

2. Tolerance ($1-R^2$)

One minus the squared multiple correlation of a given IV from other IV's in the equation. Tolerance values of 0.10 or less Indicate that there may be serious multicollinearity.

3. The Variance Inflation Factor [$VIF=1/(1-R^2)$]

VIF is the reciprocal of the Tolerance. Any VIF of 10 or more provides evidence of serious multicollinearity.

4. Condition Number (k)

The square root of the ratio of the largest eigenvalue to the smallest eigenvalue k of 30 or larger indicate that there may be serious multicollinearity.

Regression analysis is used to predict the value of a variable based on the value of another
variable. The variable the researcher wants to predict is called the dependent variable (or sometimes, the outcome variable). The variables are using to predict the other variable's

value is called the independent variable (or sometimes, the predictor variable). Multiple regression analysis was employed to examine the effect E-Banking Service Quality on Customer Satisfaction.

In order to determine the extent to which the explanatory variables explain the variance in the explained variable, multiple regression analysis was performed. Multicollinearity Test: in multiple regression analysis, multicollinearity refers to the correlation among the independent variables.

According to the rule of thumb test, multicollinearity is a potential problem if the absolute value of the sample correlation coefficient exceeds 0.7 for any two of the independent variable, (Anderson et al., 2011). Before conducting the multiple regression analysis, the researcher examined the result of multiple correlations among the independent variables and found that, the pair wise correlation between the independent variables below 0.7.

4.9 Interpretations of Data findings

The objective of this study was to assess the effect of e-banking service quality on customer satisfaction in the case of CBE. Two Demographic factors I.e. Respondent Year of Experience with the bank and their educational qualification, monthly income and types of e-banking service have been used to know some basics of the respondents.

Based on the above mentioned Demographic data collected the researched understood most of E-banking service user (Customer) of the bank has long year relationship with the bank meaning they have more loyal customer and also it give insight to the management of the bank that they have to work aggressively to attract more New customer and also to widening up their Coverage. Interims of Educational background of the respondent among all about 60% has first degree and only 3.2% were had educational background below Grade 12.from this result one can understand that CBE were not giving Emphasis to get more customer which have low level of Educational Achievement or Only concentrated with upper class customer for this Service and can be good opportunity for the bank if they want to Expand this service.

This study have been also found outcomes by using inferential statistic. First from Collected Data about E-banking Service Quality dimension and their impact on customer Satisfaction all of the Six Dimension have significant impact on Customer Satisfaction and no Variables observed that don't have /Negative influence on Customer satisfaction, so the management of the bank should have to give concern to each Dimension. But when we put in their Order of Influence Security dimension has big influence followed by Reliability meaning if the bank want to focus on one or two dimension they should have to know which dimension should have bigger impact and will benefit the most.

The researcher compared this finding with previous empirical research and found that in terms of overall service Quality dimension on Customer Satisfaction this finding have some similarity in that the as most of the previous researcher which Shows there is positive relationship between E-banking Service Quality and Customer Satisfaction which this research finding also supported it, but in terms of the dimension and their order of Significance as observed like other previous Literature this research finding showed there is a difference in terms of order of Importance of Each service Quality Dimension. For instance this research result identified Security as most important Dimension followed by Reliability but the researcher have reviewed literature which web-design was the most significant independent variables affecting Customer Satisfaction.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1. Summary of Findings

E-banking service can play a critical role in improving the services quality delivered to its customers as it can achieve survival, increase satisfaction and trust and then generate the competitive success for organizations (Feindt et al. 2002). Customer perceived e-banking service quality is one of the critical determinants of the success of online business (Yang et al. 2004).

Accordingly, there is a rise of research on the construct of e-banking service quality. The aim of this study was to explore the measurement of e-banking service quality in the banking services setting, finding that a combination of six dimensions relating to Reliability, Responsiveness, Ease of use, Personalization, Security, and Website design., best represents the measurement of e-banking service quality within the e-banking service context in Commercial Bank of Ethiopia in Addis Ababa.

According to the survey results of the customers' perspective, "security" was rated as the most significant e-BSQ dimension. This dimension was followed in ranking by Reliability. A comparison with previous surveys of customers' views reveals that "reliability" was reported by Zeithaml (2002) to be the most important dimension in all services. Similarly, Wolfinbarger and Gilly (2003), who examined consumers' perceptions of online retailers, found that "reliability" was the strongest predictor of e-BSQ.

Results of this study indicated that E-banking service quality was directly associated with customer perceived service quality. Accordingly, six hypotheses established in light of the direct associations among variables were strongly supported as results of correlation analysis. In summary, findings provided evidence that E-banking service quality dimensions were influential on customer perceived service quality. Also, the findings have important implications to ensure quality services on a banking sector to retain repeat customers' patronage that may evolve to customer loyalty.

5.2 Conclusion and Recommendation

5.2.1 Managerial Implications

Management needs to view and think from a customer's perspective so that it is helpful for management to meet or exceed its service quality to customers' expectations. Therefore, findings from this study may be helpful for practitioners to better understand the sources of customer perceived service quality, as well as customer behavior on their e-banking service.

The management of bank needs to view and think from customers' perspectives so that the management understands customers' expectations. It was theorized in this study that E-banking service quality was determined by six major dimensions: Reliability, Responsiveness, Ease of use, Personalization, Security, and Website design, company by providing online customers with valuable services.

Marketing practitioners require frameworks and models that enable them to better understand their consumers in the internet environment. Thus, the model in this study offers practitioners "a clear picture" and a useful tool to better understand their consumers, why they are attracted to the e-banking service, and how they react within the business to consumer internet environment.

For example, the theory developed here shows that consumers evaluate the quality of an e-banking service via six key dimensions including: Reliability, Responsiveness, Ease of use, Personalization, Security, and Website design, which practitioners need to consider in ensuring the quality of a content driven e-banking service.

This study identified six key E-banking service quality dimensions, namely; Reliability, Responsiveness, Ease of use, Personalization, Security, and Website design. Obviously in order to provide a high level of overall service quality, banks management and decision makers should pay attention to all of the six dimensions which were identified in this study.

However, in order to improve their banking service quality and in order to increase satisfaction, service providers should focus particularly on three dimensions- Security,

reliability, and Responsiveness, which are more related to customer's perception of e-banking service quality.

So to improve e-BSQ, the priorities of managers need to be harmonized with customers' perceptions. It would seem from the present study that certain criteria (such as Security, reliability, and Responsiveness) are likely to be overestimated in importance by providers; conversely, providers appear to undervalue some of the criteria (such as Personalization, Ease of Use and web site design) that are valued by customers.

5.3. Limitations and Future Research Directions

This study has offered some valuable insight into studies on e-banking service quality, which involves a number of limitations that need to be acknowledged.

First, the main limitation of the research relates to the small sample sizes, studies required with larger sample sizes to deal with any issues in terms of making inferences or generalizations regarding the population as a whole.

Second, The 25 E-BSQ items were selected through the literature review. It can be claimed that the results may differ if a different combination were implemented or other E-BSQ items were included.

Third, data collected for the study focused on one particular type of service domain, being bank. Generalization of the findings to other service contexts (such as travel, sport and e-retail shopping web sites) should be taken with care and would require further investigation.

Forth As the sample is derived from one region of Ethiopia, generalizability of the results is limited. Replication in other settings is recommended.

Another limitation is related to the use of the methods employed to test the model. Owing to the sample size, multiple regression analysis was chosen over path analysis and structural equation modeling (SEM). Because of sensitivity to sample size, path analysis and SEM were not deemed appropriate for this study. Thus, further research with SEM and a large sample size could provide more complete understanding of the relationships among variables.

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APPENDIX

APPENDIX I

ADDIS ABABA UNIVERSITY

FACULTY OF BUSINESS AND ECONOMICS

SCHOOL OF COMMERCE

MA PROGRAM

Questionnaire to be distributed for the Customers of the Commercial Bank of Ethiopia

Dear Respondents;

This questionnaire is developed for an academic effort planned for the collection of data to conduct a thesis paper on the title **"*Investigating the Impact of E-Banking Service Quality on Customer Satisfaction in the case of Commercial Bank of Ethiopia*"**, in order to fulfill the University's requirement set for awarding of a Master of Business Administration. The information obtained from this questionnaire will be kept confidential and will not be used for any other purposes. Hence, I am kindly asking respondents to give your candid information.

NB:

- It is not necessary to write your name
- Try to address all the question given below
- For the closed ended questions use (√) mark for your choice in the given box

Thank you for your cooperation!

PART I: Demographic Information

1. Educational Qualification:

Grade 10 completed ☐ Grade 12 completed ☐ Certificate ☐

College diploma ☐ First Degree ☐ Second Degree and above ☐

3. Years using the e-banking services:

Under 1years ☐ 1–3 years ☐ 4–6 years ☐ over 6 years ☐

Part II: Questions Directly Related with the Study

Here under the questions with regard to the E-banking Service quality, therefore, you are kindly requested to put "√" "X" mark on the box which represents your degree of agreement. 1= strongly disagree, 2= Disagree, 3= Neutral, 4= Agree 5= strongly agree

No	I. Reliability:	5	4	3	2	1
1	"The E-banking performs the services right the first time,"					
2	"E-banking services are provided when they are promised,"					
3	"The E-banking services don't always live up to it promise,"					
4	"You never know what is happening on the E-banking services."					
	II. Responsiveness					
6	"The E-banking services handles product returns well,"					
7	"The E-banking services tells me what to do if my transaction is not processed,"					
8	"The E-banking services takes care of problems promptly,"					
9	"Providing answers to your questions."					
	III. Ease of use:					
11	"The text on the E-banking services is easy to read,"					
12	"Web site text/labels/menu items are easy to understand,"					
13	"Learning to operate the E-banking services is easy for me,"					
14	"It would be easy for me to become skillful at using the E-banking services,"					
15	"I find the E-banking services easy to use."					
	IV. Personalization					
17	"You have the ability to customize your use of the E-banking services,"					

18	"The E-banking services designed to make future transactions easier,"					
19	"The E-banking services adaptation to your future needs,"					
20	"Degree of customization that is available."					
	V. Security					
22	"The E-banking services keep secrets of information of my transactions,"					
23	"The E-banking services will not share my personal information with other,"					
24	"The E-banking services will protect my bank cards information,"					
25	"Payment was submitted in a safe mode."					
	VI. Website design					
27	"Easy completion of online transactions."					
28	"Easy logging on bank's online portal."					
29	"Easy understanding which button to be clicked for the next step"					
30	"Ability of this internet portal in helping customer to complete a transaction quickly"					

Here under the questions with regard to the Customer satisfaction, therefore, you are kindly requested to put "√" "X" mark on the box which represents your degree of agreement.

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

No	Regarding customer's perception of e-banking service quality	5	4	3	2	1
1	"Based on my previous online experience, I feel the E-banking services quality is good."					
2	"The E-banking services quality is better than I expected."					
3	The E-banking services completely meet your expectations.					
4	You feel absolutely delighted with the E-banking services					
5	In your view, the E-banking services are customer-oriented					
6	You would like to recommend the E-banking services to friends and people you know.					

7	You would like to keep close relationship with the E-banking services.					
8	You will say positive things about the E-banking services to other people.					
9	You would like to remain as a customer of the E-banking services					