ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

DEPARTMENT OF MARKETING MANAGEMENT

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

BY

ELSA BALCHA

JULY, 2023

ADDIS ABABA, EHIOPIA

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A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES OF ST. MARY'S UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF MARKETING MANAGEMENT

BY

ELSA BALCHA

ADVISOR: HAILEMARIAM K. (PHD)

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APPROVED BY BOARD OF EXAMINERS

_____	_____
Dean, Graduate Studies	**Signature**
_____	_____
Advisor	**Signature**
_____	_____
External Examiner	**Signature**
_____	_____
Internal Examiner	**Signature**

DECLARATION

I, Elsa Balcha hereby declare that a thesis work entitled “Investigating the Effect of E-Banking Service Quality on Customer Satisfaction: the Case of Commercial Bank of Ethiopia” submitted to the School of Graduate Studies of St. Mary’s University in Partial Fulfillment of the Requirements for the Degree of Masters in Business Administration (Mba) is a record of original work done by me during 2022 academic year under the supervision and guidance of Hailemariam K. (PhD) and it has not formed the basis for the award of any Degree/ Diploma/ Associate ship/ fellowship or other similar title of any candidate of any university.

Elsa Balcha

_____ _____

Name **Signature**

St. Mary’s University, Addis Ababa June, 2023

ENDORSEMENT

This is to certify that the thesis entitled " Investigating the Effect of E-Banking Service Quality on Customer Satisfaction: the Case of Commercial Bank of Ethiopia" submitted to the School of Graduate Studies of St. Mary's University in Partial Fulfillment of the Requirements for the Degree of Masters in Business Administration (Mba) is a record of original research carried out by Elsa Balcha, under my supervision, and no part of the thesis has been submitted for any other degree or diploma. The assistance and help received during the course of this investigation have been duly acknowledged. Therefore, I recommend it to be accepted as fulfilling the thesis requirements.

Hailemariam K. (PhD)

_____ _____

Advisor **Signature**

St. Mary's University, Addis Ababa June, 2023

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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 general objective of this study was to investigating the effect of e-banking service quality on the customer satisfaction in the case of Commercial Bank of Ethiopia. The study considered six constructs of conceptual model of e-banking service quality (reliability, responsiveness, ease of use, personalization, website design and security) to investigate their effect of customer satisfaction. The study sample constituted 360 respondent consumers of Commercial Bank of Ethiopia chosen from the selected branches under Arada districts in Addis Ababa by using non probability sampling approach specifically convenient sampling technique. The data were collected, edited, coded and entries were made into statistical software (Statistical Package for Social Sciences, SPSS version 20). According to the findings, all the selected six dimensions (reliability; responsiveness; ease of use; personalization; security; and website design) of e-banking service quality have a significant and positive impact on customer's satisfaction. When compared to the impact of independent variables security is the most important factor in e-banking service quality then reliability is the second important variable and then responsiveness, ease of use, personalization and website design significantly affect customer's perception of e-banking service quality. According to the survey results of the customers' perspective, "security" was rated as the most significant e-banking dimension. This dimension was followed in ranking by Reliability. Finally based on the findings the researcher forwarded important implications to ensure quality services on a banking sector to retain repeat customers' patronage that may evolve to customer loyalty.

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

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

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). 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 was discussed to have a general picture of the adoption level in the country (Kinfe, 2016). The E-banking service in Ethiopia is at low stage, even though expansion of e- banking throughout the developed and the developing nation is rapid and Ethiopia's financial sector remains behind in expanding the use of the service. Certainly, the banking industry is not well developed with a growing number of international trades; increase the demand of the custom and international relations. Banks in the today's world has problems of providing efficient and dependable services (Tewodrs, 2021)

Al-samadi (2012) 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. In addition Aderonke, (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 and Computer banking (PC banking) (Kolodinsky et.al, 2004). Parasuraman and Zinkhan (2002) maintain that electronic services contribute two key advantages: information efficiency and transaction efficiency. Electronic service quality is a basic requirement for the good performance of electronic channels (José & Ainhize, 2009).

According to Yang (2001) and Zeithaml, (2002) e-service experience greatly affects the establishment of trust and relation with customers, and enterprises must pay attention in this regard. Electronic service quality can increase the competition of the company's requirement

fulfillment. A higher level of e-service quality contributes to achieving the main business goals. Electronic service (e-service) might be the key to long-term advantages in the digital times, and eservice 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. Importantly, effective management of e-service encounters (Cho and Menor, 2010) to deliver and maintain high quality is crucial for web sites in order to increase customer satisfaction and customer loyalty (Kim et al., 2009).

Zeithaml, Parasuraman and Malhotra, (2002) detailed five broad sets of criteria as relevant to e-services quality 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 (Lee and Lin, 2005). Responsiveness relates to flexibility, prompt delivery, consistency and accuracy of service delivered (Yang, 2003). Ease of use is the 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 (Zeithaml, et.al, 2000). Personalization is the 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 (Madu & Madu, 2002). Security is 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 (Yang and Jun, 2002). Website design: is 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 (Cox and Dale, 2001).

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 2012). 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.

1.2 Statement of the Problem

E-banking has been widely used in developed countries and is rapidly expanding in developing countries. Nevertheless, in Ethiopia cash is still the most dominant medium of exchange, and electronic payment systems are observed late to move with rapid expansion of electronic payment systems throughout the developed and the developing world, Ethiopia's financial sector remain behind in expanding the use of the technology. With a growing number of import-export businesses, and increased international trades, increase the demand of the customers and international relations, the current banking system is short of providing efficient and dependable services (Gardachew, 2010).

Lots of researches (Gardachew (2010), Njuguna et al., (2009), Angelakopoulos and Mihiotis (2011), Siam 2006) on E-banking system have been done in different countries in the world. Different factors in the adoption of E-banking have been taken as the main factors of the adoption of new technology by different researchers such as environmental factors (like lack of suitable legal and regulatory framework for e-commerce, poor ICT infrastructure, lack of competitive pressure in the industry), organizational factors (Lack of skilled man power, resistance to changes in technology among staff) and technological factors (security risk and functionality). However, despite the importance of these adoptions and development of E-banking, very limited number of research has been done on the challenges and opportunities of E-banking in developing countries like Ethiopia.

As per the knowledge of the researcher among several significant previous researches performed in our country regarding the E-banking service quality the study conducted by Mintesnot, (2018) assessment of customers' trust and awareness on the electronic payment system. Sintayehu, (2015) conducted his research on the title Impact of E-Banking on customer satisfaction in Ethiopia. The research by Mesfin, (2019) intended on the investigated the effect of E-payment system variables on customer satisfaction in Commercial Bank of Ethiopia. The study used the four quality dimensions (automatic teller machine, mobile banking, internet banking, and CBE

birr) have been selected as forecasters of customer satisfaction in E-payment. The study by Sisay (2016) seeks to examine the effect of e-banking service quality on customer satisfaction by using the five dimensions of service quality; these are reliability, responsiveness, assurance, empathy, and tangibles

They have used the dimensions that are developed for the general services it affect the result to be on limited scope and under the influence of few variables. This study by taking as a literature gap to evaluate the relationship of e-banking service quality and customer satisfaction by using of six constructs of conceptual model of e-banking service quality proven by Parasuraman et al. (2005) i.e. reliability, responsiveness, ease of use, personalization, website design and security to effect of e-banking service quality on customers' satisfaction at Commercial Bank of Ethiopia (CBE).

1.3. Basic Research Question

1. To what extent does the reliability of e-banking service affect customers' satisfaction at CBE?
2. How does the responsiveness of e-banking service affect customers' satisfaction at CBE?
3. To what extent does the personalization of e-banking service affect customers' satisfaction at CBE?
4. How does the ease of use of e-banking service affect customers' satisfaction at CBE?
5. To what extent does the website design of e-banking service affect customers' satisfaction at CBE?
6. How does the security of e-banking service affect customers' satisfaction at CBE?

1.4. Research Objectives

1.4.1. General Objective

The general objective of the study is to investigate the effect of e-banking service quality on the customer satisfaction in the case of Commercial Bank of Ethiopia.

1.4. Specific 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

1.5. 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.

1.6. 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 Arada district in Addis Ababa. For the purpose of the study 19 branches were selected by non-probability sampling approach and simple judgmental sampling technique. Three hundred eighty four respondent e-banking customers were selected by using non probability sample approach and convenient sample technique.

1.7. Organization of the Study

This study was organized from five chapters in order to provide clarity and coherence on the discussion of the study. The first part of the study was consisted the background, statement of the problem, Objectives, Research questions, significance and limitations of the study. The second chapter was discussed the relevance of the study in the existing literature. The third part of the study was discussed the methods and procedures used in the study. The chapter was comprised the presentation of applied techniques for data collection and research methodology. It also contained a discussion of techniques used for data analysis as well as the data collection tools. Chapter four of this study discussed the results of the study. Data's has been presented statistically in order to discover the relationship of variable involved in the study as said with the data. The last chapter covers three sections: the summary of the major findings, conclusions of the study, and the recommendations. With the three portions, the chapter has been able to address the problem stated in the initial chapters of the study. Reference and additional sources will also provide in the final part of the paper.

1.8. Definition of the Key Terms

Customer Satisfaction: involve customer expectation of the service provision, actual delivery of the customer expectation and experience that are either unmet or exceeded (Holjevac, Marković, & Raspor, 2010).

Electronic Banking: is any use of information and communication technology and electronic means by a bank to conduct transactions and have interaction with stakeholders (Abdi, 2006).

***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 (Zeithaml, et.al, 2000).

Personalization: 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 (Madu & Madu, 2002).

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 (Swaid and Wigand, 2009).

Responsiveness: relates to flexibility, prompt delivery, consistency and accuracy of service delivered (Madu and Madu, 2002).

Service Quality: is the result of an evaluation process where the user compares his expectations with the service he perceived he has consumed (Grooroos, 2007).

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 (Shaohan & Minjoon, 2003).

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 (Cox and Dale, 2001).

CHAPTER TWO

REVIEW OF THE RELATED LITRATURE

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

2.1.1 Overview of the E-Banking

The concept of electronic banking has been defined in many ways; (Daniel, 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 (Abdi, 2006) 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.

Simon, 2013) also defined electronic payment as a system of payment whereby transaction takes place electronically without the use of cash. (Magemhe, 2002) 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 (Uppal, 2007). (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. Common forms of E-Banking Technologies

PC banking: it is form of E-banking using proprietary software distributed and installed by the bank on customers 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 (Fikru, 2011). 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. Observe ability 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. 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.

Specifically for ON-US3 transactions the bank was 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 was 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.

2.1.3. 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 in Fikru, 2011) 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 freedom 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 (Aderonke, 2010).

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 & Mishra, 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 (Gemechu, 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 (Fikru, 2011).

2.1.4. 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 (Kindie, 2016; Worku, 2010; Zeleke, 2016). 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 (Gemechu, 2014). In 2010, Wegagen bank announced the starting of ATM banking services which make it the third bank to use E-banking technologies (Zeleke, 2016). Afterward, other private banks start to deploy such innovations with different varieties to compute for the market share.

According to Kinfe (2016), 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 was discussed to have a general picture of the adoption level in the country.

2.1.5. E-banking Trend in CBE

CBE, which is mentioned repeatedly as a pioneer bank in Ethiopia, is legally established in 1963 (Tefera, 2017). 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 (Gemechu, 2014; Kindie, 2016; Tefera, 2017; Worku, 2010; Zeleke, 2016). 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 (CBE, 2017). 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 (CBE Communication, 2016).

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 (CBE, 2017).

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 (CBE, 2017; CBE Communication, 2016).

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. CBE Communication (2016, p. 5) 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 CBE Communication (2016) 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 Kinfe (2016, p. 30), 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.

2.1.6. 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)

PSS is a third-party payment processor with a shared payment switch among six private banks (Yiheyis, 2015). Initially it was established as a share company between three private banks, named as Awash International Bank S.C, Nib International Bank S.C and United Bank S.C in February 2009 for comprehensive and equipped payment card processing and payment switching. Later, other three banks: Addis International Bank, Berhan International Bank and Cooperative Bank of Oromia, has joined the PSS consortium (PSS, 2017; Tefera, 2017; Zeleke, 2016). Premier Switch Solution and S2M (as cited in Tefera, 2017) reported that the company adopted the stateof-the art technology which plays significant role in E-banking development and customers' experience enhancement. Moreover, Yiheyis (2015) study found that this interoperable service increased customers satisfaction. That means, such kind of interoperable services play significant role in customers' adoption of E-banking.

According to Zeleke (2016), 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 (PSS, 2017).

Ethiopian National Payment Switch (EthSwitch)

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 (BPC Banking, 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.

According to Ethiopian Bankers Association 2009 report (as cited in Tefera, 2017), the interoperability among all banks facilitates the national bank strategy to expand technology-based transaction which in turn helps to create cashless society. It also used as an interface for five new banks which were neither member of PSS banks nor have their own payment switch. Moreover, the national payment switch has increase availability and convenience of payment service throughout the country that facilitates customers' adoption of E-banking which is key component of any electronic commerce (BPC Banking, 2016; Tefera, 2017).

2.1.7. 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.

As we see in the above paragraphs, yet it takes several years, E-banking service adoption by banks is increasing from time to time. Remarkable progress is observing in recent years specifically after PSS and Eth Switch create an expanded payment network to facilitate interoperability among banks. However, customers' adoption rate is still very poor comparing to the total account holder in each bank. Except for Zemen Bank, other banks' customer adoption rate is below one third of their total account holders for ATM banking. For other E-banking channels, the rate is even much lower than the above. For instance, the total number of Mobile banking users, for the country having 57.34 million mobile subscribers (Ethio telecom, 2017) is significantly low. For Internet banking, the rate becomes even much severe. 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.

2.1.8. Service

A lot of definitions have been given to service by different scholars. Two decades ago, According to (Webster, Reprinted 1983) 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 (Kotler & Armestrong, 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". Grooroos (2007) also defined service as activity or series of activities of more or less intangible nature that normally, but not essentially, take place in communications between the customer and service providers and/or their systems, which are provided as solutions to customer problems.

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. Gilmore (2003) explains the services feature as follows. Services are intangible i.e. that cannot be feel, see, or test. Services are perishable, if there is no one who will use the services, that particular service is lost and perishable. Inseparability or simultaneous provision and consumption, and it cannot be stored for future.

2.1.9. 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).

2.1.10. 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 (Zeithaml, Bitner, & Gremler, 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, Bitner, & Gremler, 2006).

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.

2.1.11. 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 Zinthamel and Parasuraman 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 (Lee and Lin,2005; Van Riel et al.,2003; Swaid and Wigand,2009; Tih and Ennis, 2004). 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). 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 skilful 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). 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). 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(Cox and Dale, 2001; Swaid and Wigand, 2009; Wolfinbarger and Gilly, 2003; Yoo and Donthu, 2001). 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.

2.1.12. 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 (Holjevac, Marković, & Raspor, 2010). 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). 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 (1997) 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 (1997) 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: Luke (2007) 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) Cited in (Ragavan & Mageh, 2013) also defined five factors used to evaluate customer satisfaction: service, product, overall performance of products, staff, and closeness to expectation.

2.1.13. 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 (Mueller, Palmer, Mack, & McMullan, 2003). 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 (Babikas, Bienstock, & Van Scotter, 2004). 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 (Burns, 2003).

According to (Babikas, Bienstock, & Van Scotter, 2004) 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. Burns (2003) 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).

A great deal of the attention given to service quality is motivated by the foundation that it will increase customer satisfaction and ultimately lead to better financial performance (Babikas, Bienstock, & Van Scotter, 2004). The quality of products and services has also been associated to external indicators of customer satisfaction like warranty, complaints, litigation and market share (Kandampully & –Hui-Hu, 2007). Pleased customers often lead to loyal customers who continuously repurchase the service or product. The industry challenges that not all companies are equally affected by customer satisfaction. Though, all organizations are relied upon repeated purchases that lead to higher profitability. Empirical evidence suggests that customer satisfaction arbitrates the relationship between service quality and firm performance (Babikas, Bienstock, & Van Scotter, 2004).

2.1.14. 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. Bauer et al. 2006; Collier and Bienstock, 2006; Fassnacht and Koese, 2006; Francis, 2009a; 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. 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.

Trabold et al. (2006), 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) 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.

Szymanski and Hise (2000) studied the role that customer perceptions of online convenience, merchandising (product offerings and product information), site design, and financial security play in satisfaction assessments. This study did not include aspects of customer service or fulfillment; rather, it dealt only with aspects of the Web site. Furthermore, it measured satisfaction rather than service quality. 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. Zeithaml et al. (2000, 2002) and Parasuraman et al. (2005) carry out a study on Internet service quality based on their earlier research on service quality in the traditional distribution channels, and develop an ESQUAL scale based on the 7 dimensions proposed by Zeithaml (Zeithaml 2000, 2002; Parasuraman et al. 2005).

Supportively, 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.

Zhenhua et al. (2006), on the basis of the data collected from Taiwai, survey the effects of the privacy protection, payment condition, online community and net service quality on the customers' trust under business-to-customer (B2C) purchase environment. 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.

In the empirical work of Ho and Lin (2010) in an emerging economy of Taiwan Internet banking sector, they developed and validated a five-dimension internet banking service quality with 17-item measurement scale for measuring the service quality in internet banking. The five emerged dimensions that were based on e-banking service quality model of Cristobal (2007) are: web design, customer service, assurance, preferential treatment and information provision.

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.

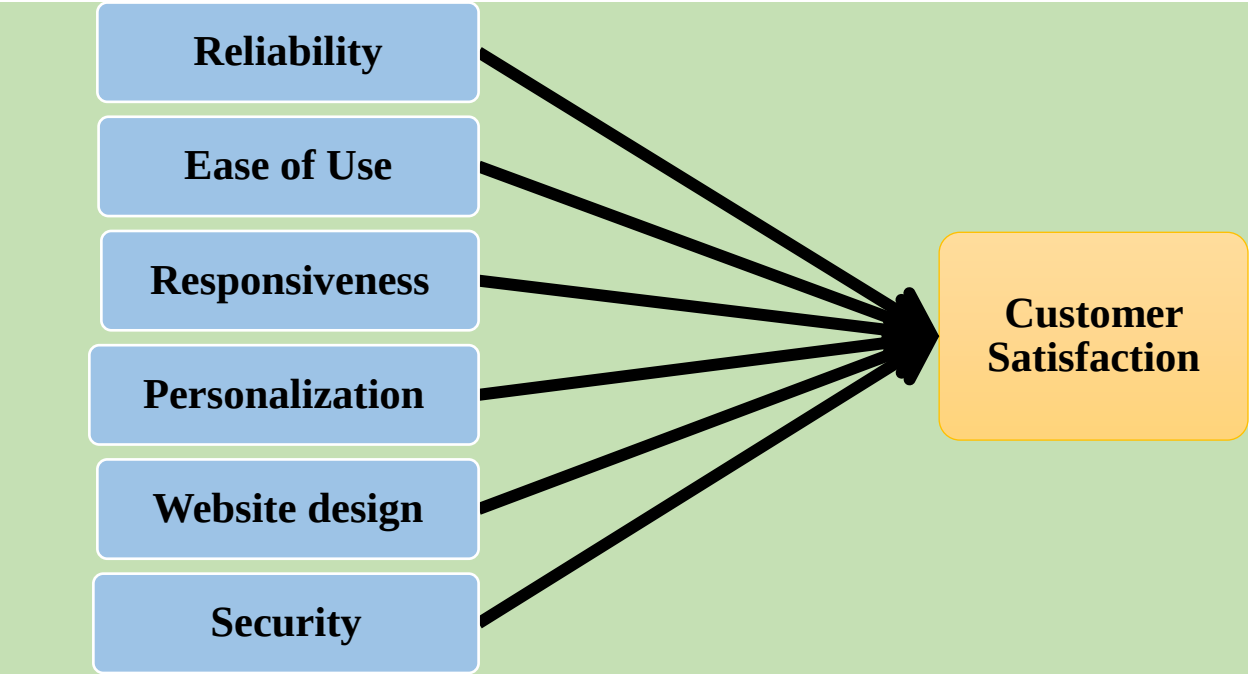
Loiacono et al. (2002) develop the WEBQUAL to scale the service quality. They point out that e-banking service quality includes 12 dimensions including the information adaptability, trust, design, visual requirement, flow, business process, interaction, response time, intuition, creativity, overall communication,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

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

2.3.1. Hypotheses of the Study

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

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter describes the methodologies that were used in this study: the choice of particular research approach, research designs, data type and source of data, research approach, 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 Approach

There are three different research approaches defined by Saunders et al. (2016), including deductive, inductive and abductive approaches. For this study deduction research approach was selected. In the deduction research approach the variable, or causal, relationship between two concepts tested. In addition, facts are measured through quantitative methods, where large and sufficient sample sizes are selected to allow for generalizations (Saunders, 2016). Accordingly the study was used the six steps involved in deduction research that is identified Blaikie (2009):

- The generation of a hypothesis (or more) and ideas with the aim of producing a theory.
- The deduction of measurable variables by using available literature or by identifying the circumstances, which contribute to the creation of the theory.
- An examination of the propositions and the logic of opinions that formed them compared with current theories to determine whether they can generate the further understanding of an issue.
- The collection of data to measure the variables or concepts and to analyze them.
- If the outcome from the analysis is not reliable, then the test fails. Therefore, the theory is rejected or must be modified.
- If the outcome from the analysis is reliable, then the theory is validated.

3.2. 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 will tries to establish the relationship between these two variables, it is descriptive design. In order to attain the objectives of the study descriptive research design was used. Descriptive

research is characterized by the prior formulation of specific research questions and hypotheses. Thus, the information needed is clearly defined. As a result, descriptive research is pre-planned and structured. It is typically based on large representative samples. A descriptive research design specifies the methods for selecting the sources of information and for collecting data from those sources.

This study was 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 was 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 was used. In the e-banking context, service quality measures consisted of 27 item scale (Parasuraman et al., 2005; Akinci et al., 2010), and customer satisfaction will measures with 2 item scale (Chen et al., 2012). Further, the questionnaire was divided into three sections (Section A-C). The sections A and B was 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 Arada District of the CBE. Currently, there are 58 branches under Arada District of the CBE. Of which four are Special, eight are Grade IV, 12 are Grade III, 22 are grade II and 12 grade I branches. Arada district was chosen for the following reasons: some of the long-established branches are found under this district (Addis Ababa (57yrs), IBD (57yrs), Arada Giorgis (56yrs), Arat Kilo (56yrs), and Thewodros (54yrs), ease of accessibility and proximity to the researcher, compared to other locations. Multi stage sampling techniques were employed to select the branches from the Arada district and respondent e-banking customers from the selected branches. For the purpose of this study the branches from the Arada district of CBE was selected by non-probability sampling approach and simple judgmental sampling technique. Non-probability sampling approach relies on the personal judgment of the researcher rather than on chance to select sample elements. The researcher can arbitrarily or consciously decide what elements to include in the sample. Judgmental sampling technique is a form of convenience sampling in which the population elements are selected based on the judgment of the researcher. The researcher, exercising judgment or expertise, chooses the elements to be included in the sample because he or she believes that they are representative of the population of interest or are otherwise appropriate. The study was considered 19 branches (32.8%) out of the total branches in the District.

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 $(1 - \alpha)$ 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.

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

Accordingly, the researcher used 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 ±6 and assuming p=0.5 and q is 0.5 putting the figures in the equation the sample size was determined 384.

Accordingly, 384 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 was used non-probability sampling approach particularly convenient sampling technique.

3.5. Method of Data Analysis

Both descriptive and inferential statistics was 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

3.6.1 Validity

Before the main questionnaire was administered to sample respondents, the questions were tested through pilot survey. The pilot test was conducted on individuals who were as similar as possible to the target population but not on those who will be a part of the final sample in order to avoid bias. The purpose of the pilot was to check if the design of the questionnaire worked in practice, and to identify and amend problematic as well as poorly constructed questions so that it was refined for the later stage. With the pilot testing, useful feedbacks were obtained on whether the survey's wording and clarity was apparent to all respondents, and whether the questions meant

the same thing to all respondents. The pilot was also used to ensure if the respondents understood the objectives of the study, felt comfortable in answering the questions, and if the questions were compatible with their experiences on the issue.

In order to ascertain the validity of data collection instruments, the questionnaire was reviewed, commented upon, modified, and finally approved by the advisor having experience within the research area. The questionnaire was given to the advisor of this research and was approved before distributing to the respondents. Moreover, the researcher addressed construct validity by examining whether or not there exist empirical relationships between the study measure of the underlying concept of interest and other concepts to which it should be theoretically related.

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.

3.6.2. 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 were 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.

3.7. 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 CBE in Addis Ababa. Accordingly the data collected from the questionnaire is analyzed as follows.

From the data assembled, out of the 384 questionnaires distributed, three hundred and sixty usable copies were completed and returned with a response rate of 93.75 %. 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 93.75% 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.

Thus, according to reliability statistics, Cronbach's Alpha coefficient of this study is 0.970 which is acceptable. This implies that both function of the covariance's among items and the number of items in the analysis is the mark of a "good" or reliable set of items and the question designed was accurately measuring the variable of interest of the study.

Reliability Statistics	
Cronbach's Alpha	N of Items
.970	48

Source; Own Survey, (2023)

On the other hand, to appraise the validity of the instrument, the questionnaire was reviewed, commented upon, modified, and finally approved by the advisor having experience within the research area. The questionnaire was given to the advisor of this research and was approved

before distributing to the respondents. Moreover, the researcher addressed construct validity by examining whether or not there exist empirical relationships between the study measure of the underlying concept of interest and other concepts to which it should be theoretically related.

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	93.75%
Unreturned Questionnaires	34	6.25

Source; Own Survey, (2023)

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 demographic information of the respondents indicates that the majority of them had good experience with the e-banking service of the bank and they were graduated this helps them to easily understand the ideas of the questionnaire. The summary of the demographic information of the respondents are shown in table (4.2).

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, (2023)

4.3. Descriptive Statistics of the independent and dependent variables

Descriptive statistics was used to present the data collected in relation to the demographic factors for more clarification. The detailed information on the main characteristics of the sample used in the study is gained from descriptive analysis. To determine the minimum and the maximum length of the 5-point Likert type scale, the range is calculated by (5 − 1 = 4) then divided by five as it is the greatest value of the scale (4 ÷ 5 = 0.80). Afterwards, number one which is the least value in the scale was added in order to identify the maximum of this cell. The range of the mean values interpreted in the scale of likert when: from1 to 1.80 represents (strongly disagree); from 1.81 until 2.60 represents (do not agree); from 2.61 until 3.40 represents (neutral); from 3:41 until 4:20 represents (agree); from 4:21 until 5:00 represents (strongly agree). The mean indicates to what extent the sample population averagely agrees or does not agree with the different statements. The higher the mean, the more the respondents agree with the statement. The standard deviation on the other hand indicates the variability of an observed response from a single sample.

Table 4.2.Descriptive Statistics for the independent and dependent variables

	N	Min	Max	Mean	Std. Deviation
Rel	360	2.20	5.00	3.8265	0.68622
Res	360	1.86	5.00	3.7840	0.79520
EofU	360	1.20	5.00	3.2746	1.04213
Per	360	1.40	5.00	3.8314	0.88972
Wd	360	1.78	5.00	3.7619	0.74359
Sec	360	1.50	5.00	3.7027	0.86224
Csat	360	1.30	5.00	3.7890	0.91468
Valid N (listwise)	360				

Source; Own Survey, (2023)

Note: Rel = Reliability, Res = Responsiveness, EofU = Ease of use, Per = Personalization, Wd = Website design, Sec = Security and Csat = Customer satisfaction

Table 4.2 indicates the means and standard deviations for the independent and dependent variables examined in this study. As can be seen from all the independent variables examined in this study have a mean score above 3.70 that could be considered as high level agreement but ease of use variable has the lowest mean value (3.27). This implies that the respondents included in the study are about higher level of agreement in terms of the reliability, responsiveness, ease of use, personalization, website design, security and customer satisfaction.

4.4. Correlation analysis and Hypothesis Testing

Pearson's correlation coefficient is the test statistics that measures the statistical relationship, or association, between two continuous variables. Accordingly, in this study Pearson correlation test was conducted to check the magnitude of correlation between the dependent variable, customer satisfaction and the various independent variables reliability, responsiveness, ease of use, personalization, website design and security.

The study also used the same test to prove or disprove the alternative hypothesis. The following measure of association developed by Mac Eachron (1982), the degree of correlation: perfect if the value lies between ± 0.80 and ± 1, then it said to be a perfect correlation as one variable increases, the other variable tends to also increase (if positive) or decrease (if negative); high degree if the coefficient value lies between ± 0.60 and ± 0.80, then it is said to be a strong correlation; moderate degree if the value lies between ± 0.40 and ± 0.60, then it is said to be a medium correlation; low degree when the value lies between ± 0.20 and ± 0.40, then it is said to be a weak correlation.

Table –4.4 Correlation

		Rel	Res	EofU	Per	Wd	Sec	Csat
Rel	Pearson Correlation	1	.532**	.538**	.534**	.679**	.605**	.530**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000	0.000
	N	360	360	360	360	360	360	360
Res	Pearson Correlation	.532**	1	.739**	.739**	.710**	.780**	.831**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	360	360	360	360	360	360	360
EofU	Pearson Correlation	.538**	.739**	1	.799**	.722**	.700**	.811**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	360	360	360	360	360	360	360
Per	Pearson Correlation	.534**	.739**	.799**	1	.770**	.790**	.810**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	360	360	360	360	360	360	360
Wd	Pearson Correlation	.679**	.710**	.722**	.770**	1	.751**	.874**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	360	360	360	360	360	360	360
Sec	Pearson Correlation	.605**	.780**	.800**	.790**	.751**	1	.944**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	360	360	360	360	360	360	360
Csat	Pearson Correlation	.530**	.831**	.811**	.810**	.874**	.944**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	360	360	360	360	360	360	360
**. Correlation is significant at the 0.01 level (2-tailed).								

Source: Own Survey, (2023)

From the above correlation matrix, the researcher found the following results under each constructs, supported with their related empirical evidences:

The result of Pearson correlation test between reliability (the independent variable) and customer satisfaction (dependent variable) showed that there is a positive relationship between the two variables at the significance level of (R=0.53), (P<0.01). According to MacEachron (1982) measure of association, the magnitudes of relationship between the two variables are medium. Compared to other relationship considered in this study, reliability is ranked last in its magnitude of correlation.

Pearson correlation test was conducted to the degree of association between customer satisfaction and responsiveness. Hence, the result of the study showed that, both variables are positively correlated to one another at a significant level of (R=0.831), (P<0.01). Based on MacEachron, (1982), measure of association, the magnitudes of relationship between the two variables are very strong. Compared to other relationship considered in this study, responsiveness is ranked third in its magnitude of correlation.

The result of Pearson correlation test between customer satisfaction and Ease of use showed that, there is a statistically significant positive relationship between the two variable at the level of (R=0.811), (P<0.01). MacEachron, (1982) classified this magnitude of relationship as a strong one. Compared to other relationship variables considered in this study, ease of use is ranked fourth in its magnitude of correlation.

The result of Pearson correlation test between customer satisfaction and personalization showed that, there is a statistically significant positive relationship between the two variable at the level of (R=0.810), (P<0.01). MacEachron, (1982) classified this magnitude of relationship as a strongone. Compared to other relationship considered in this study, personalization is ranked fifth in its magnitude of correlation.

The result of Pearson correlation test between customer satisfaction and website design showed that, there is a statistically significant positive relationship between the two variable at the level of (R=0.874), (P<0.01). MacEachron, (1982) classified this magnitude of relationship as very strongone. Compared to other relationship considered in this study, website design is ranked second in its magnitude of correlation.

The result of Pearson correlation test between customer satisfaction and security showed that, there is a statistically significant positive relationship between the two variable at the level of (R=0.944), (P<0.01). MacEachron, (1982) classified this magnitude of relationship as a very

strong one. Compared to other relationship considered in this study, security is ranked first in its magnitude of correlation.

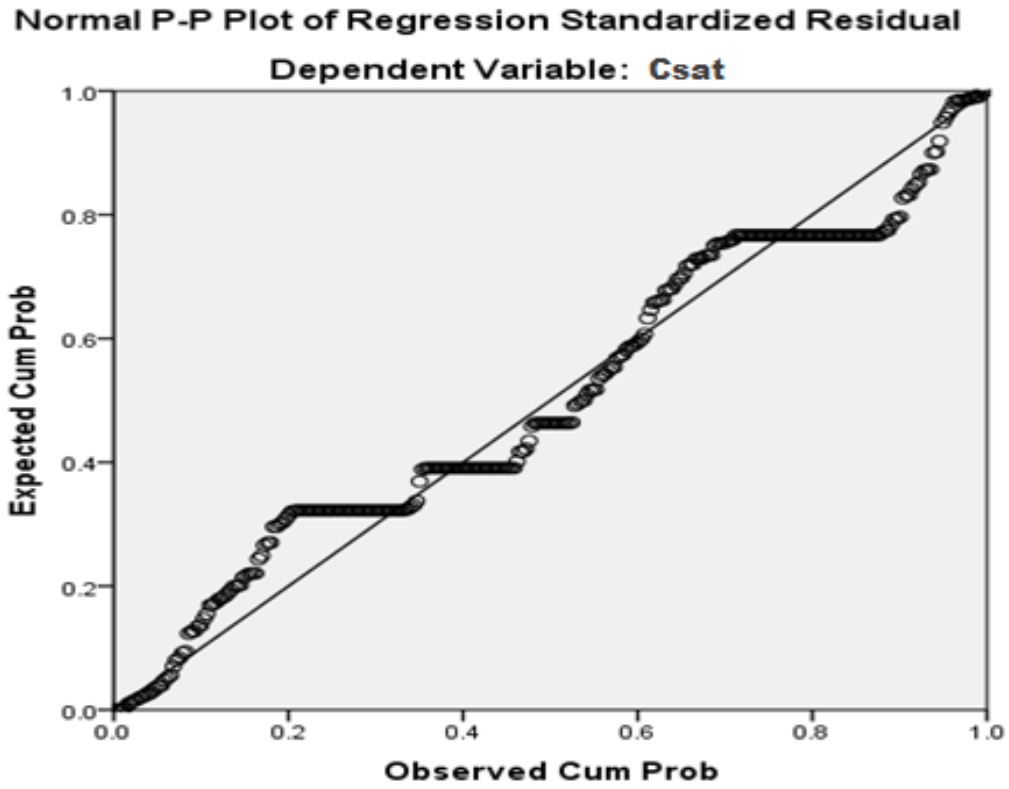
4.5. Regression analysis- Test of Assumptions

Statistical assumptions that must be met for the analysis of correlation and regression are tested and the results are presented in this section. Accordingly, basic assumptions were checked and found acceptable and their results are discussed as follows.

4.5.1. Linearity Test

Linearity refers to the degree to which the change in the dependent variable is related to the change in the independent variables.

Graph 4.1: Normal P-P plot graph



Source; Own Survey, (2023)

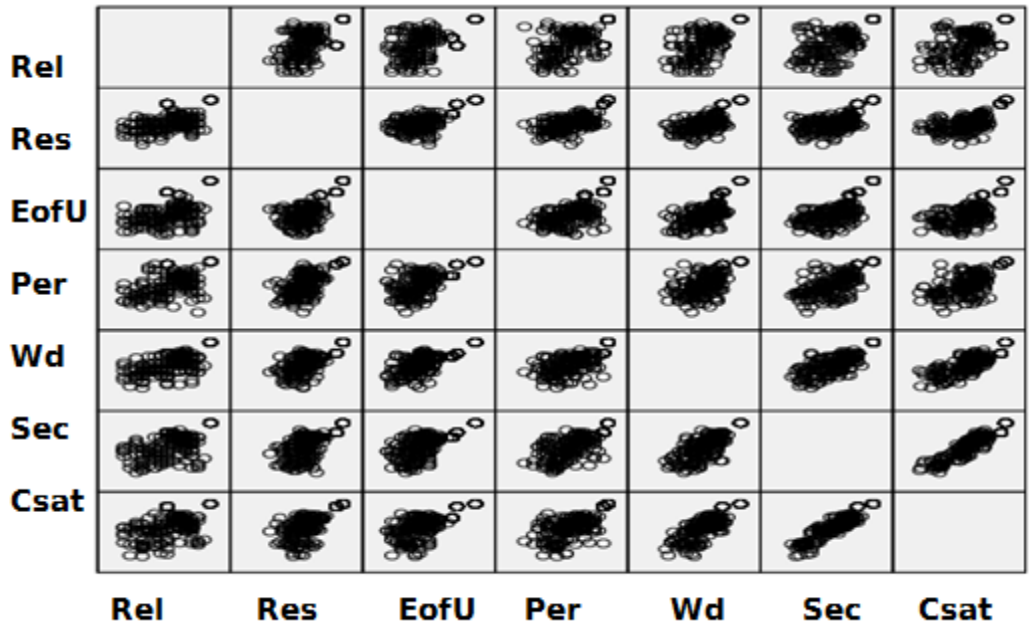
The p plot of residuals discloses that there is no large deviation in the range of the residuals. As we look from left to right on the figure it looks like almost all residuals lay on the linear straight line. Therefore, this tells us the relationships of independent variable with the dependent variable are linear.

4.5.2. Assumption 3- Homoscedasticity (equal variance)

Heteroscedasticity is a hard word to pronounce, but it doesn't need to be a difficult concept to understand. Put simply, heteroscedasticity (also spelled heteroskedasticity) refers to the circumstance in which the variability of a variable is unequal across the range of values of a second variable that predicts it. The model errors are generally assumed to have an unknown but finite variance that is constant across all levels of the predictor variables. This assumption is also known as the homogeneity of variance assumption (Weisberg, 2005, as cited by, Matt, Carlos, and Deson, 2013).

It means simply that, the variance of Y for each value of X is constant in the population. This assumption can be checked by visual examination of a plot of the standardized residuals (the errors) by the regressions standardized predicted value. The following scatter plot was obtained from the average results of the dependent variable, customer satisfaction and the various independent reliability, responsiveness, ease of use, personalization, website design and security to see whether homoscedasticity is really a pressing problem of this particular study.

Graph-4.2. homoscedasticity between variables



Source; Own Survey, (2023)

As it can be seen on the graph 4.2 the set of data exist on the same scatter, the points have the same distance from the line and the scatter plot roughly rectangular-shaped. This shows that the

sample fit with the assumption of equal variances (i.e. assumption of homoscedasticity). This implied that even if the data came from different samples have the same variance.

4.5.3. Assumption 2- Independent of residuals

Linear regression analysis requires that there is little or no autocorrelation in the data. Autocorrelation occurs when the residuals are not independent from each other. In other words when the value of y(x+1) is not independent from the value of y(x). For instance, this typically occurs in security variable, where the security is not independent from the previous security. A value of 2.0 means there is no autocorrelation detected in the sample. Values from zero to 2.0 indicate positive autocorrelation and values from 2.0 to 4.0 indicate negative autocorrelation (Chatterjee & Hadi, 2012; Fox, 1997; Weisberg, 2005). Breach of this assumption leads to, biased estimate of standard errors and significance, even if the estimate of the regression coefficient remain unbiased but yet inefficient (Chatterjee & Hadi, 2012, as cited by, Matt, Carlos, and Deson, 2013).

The Durbin Watson (DW) statistic is a test for autocorrelation in the residuals from a statistical regression analysis. The Durbin-Watson statistic will always have a value between 0 and 4, a value of 2.0 means that there is no autocorrelation detected in the sample. Values from 0 to less than 2 indicate positive autocorrelation and values from 2 to 4 indicate negative autocorrelation. The table below showed the Durbin-Watson test of this study. .

Table –4.6 Durbin-Watson test result Model Summary[b]

Model	Change Statistics		Durbin-Watson
	df2	Sig. F Change	
1	280[a]	.000	1.480
a. Predictors: (Constant), Rel, Res, EofU, Per, Wd, Sec			
b. Dependent Variable: Csat			

Source; Own Survey, (2023)

The value of the Durbin-Watson statistic ranges from 0 to 4. As a general rule, the residuals are independent (not correlated) if the Durbin-Watson statistic is approximately 2, and an acceptable range is 1.50 - 2.50 (Babatunde O.S, Oguntunde P.E, Ogunmola A. O and Balogun O.S, 2014).

In this case, Durbin-Watson is 1.48, close to 2 and within the acceptable range and hence, we assumed independence of residuals assumption**.**

Autocorrelation, also known as serial correlation, can be a significant problem in analyzing historical data if one does not know to look out for it. A positive autocorrelation would indicate that the reliability, responsiveness, ease of use, personalization, website design and security

yesterday has a positive correlation on the reliability, responsiveness, ease of use, personalization, website design and security today so if they fell yesterday it is also likely that falls today. Having the negative autocorrelation, on the other hand, has a negative influence on itself over time so that if the reliability, responsiveness, ease of use, personalization, website design and security fell yesterday, there is a greater likelihood it was raised today.

4.5.4. Assumption 3- Multicolinearity

The term multicollinearity describes a perfect or exact relationship between the regression exploratory variables. Multiple linear regression analysis assumes that there is no perfect exact relationship among exploratory variables. In regression analysis, when this assumption is violated, the problem of Multicollinearity occurs. Multiple linear regressions assume that there is little or no multicollinearity in the data. Multicollinearity occurs when the independent variables are not independent from each other. A second important independence assumption is that the error of the mean is uncorrelated; that is that the standard mean error of the dependent variable is independent from the independent variables.

Multicollinearity is checked against three key criteria:

1) Correlation matrix – when computing the matrix of Pearson's Bivariate Correlation among all independent variables the correlation coefficients need to be smaller than 0.9.

2) Tolerance – the tolerance measures the influence of one independent variable on all other independent variables; the tolerance is calculated with an initial linear regression analysis. Tolerance is defined as $T = 1 – R^2$ for these first step regression analysis. With T

3) Variance Inflation Factor (VIF) – the variance inflation factor of the linear regression is defined as VIF = 1/T. Similarly with VIF > 10 there is an indication for multicollinearity to be present.

Basically this study used two ways to detect multicollinearity. One way is by computing tolerance values and Variance Inflation Factor (VIF) for each independent variable. Multicollinearity exists when Tolerance is below 0.10; and the average variance inflation factor (VIF) is greater than 2.5. The other method is to assess multicollinearity by examining correlations among the independent variables. If a correlation matrix demonstrates correlations of 0.90 or higher among the independent variables, there may be a problem with multicollinearity.

Table 4.7 Pair-wise correlation among the independent variables

	Rel	Res	EofU	Per	Wd
Res	0.53				
EofU	0.54	0.74			
Per	0.53	0.74	0.70		
Wd	0.68	0.71	0.72	0.77	
Sec	0.61	0.78	0.70	0.79	0.75

Source; Own Survey, (2023)

According to (Hair et al., 2006) the pair-wise correlation among the independent variable should not exceed 0.90. As it is portrayed in the above table, the bold values showed the pair-wise correlation result and hence none of them exceeded the tolerable range of 0.90 to the maximum. Armed with this, we can say that multi co linearity was not a problem in this particular study.

Table 4.8: Tolerance and Variance Inflation Factor Coefficients[a]

Model		**Collinearity Statistics**	
		Tolerance	**VIF**
1	(Constant)		
	Rel	.531	1.882
	Res	.201	4.975
	EofU	.218	4.593
	Per	.240	4.167
	Wd	.176	5.676
	Sec	.221	4.521

a. Dependent Variable: Csat

Source; Own Survey, (2023)

As it can be seen on table 4.8 the Multicollinearity test by computing tolerance values and Variance Inflation Factor (VIF) for each independent variables. In this case all the tolerance values are greater than 0.10 and VIF is less than ten. Hence, the researcher assumed Multicollinearity was not a problem.

4.7. Regression Analysis Results

Once all the regression assumption was met, the researcher decided on the data and further processed it. Analysis of variance (ANOVA) is a method of splitting the total variation into meaningful components that measure different sources of variation. In other words, it split the total sum of squares into 'between groups (sample) sum of squares' and 'within group (sample) sum of squares'. Analysis of Variance (ANOVA) is a parametric statistical technique used to compare datasets. It is similar in application to techniques such as t-test and z-test, in that it is

used to compare means and the relative variance between them. However, analysis of variance (ANOVA) is best applied where more than 2 populations or samples are.

Under this part, the researcher was mainly focused on the three most important elements of regression output, i.e. the Model summary, the ANOVA test and the Beta coefficient. The average response obtained from the customers under the dependent variable, customer satisfaction and each of the predictor variables, the reliability, responsiveness, ease of use, personalization, website design and security were used**.**

Table 4.9.Model Summaryof the regression result

Model Summary[b]							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.966[a]	.932	.931	.24051	.932	642.754	6
a. Predictors: (Constant), Rel, Res, EofU, Per, Wd, Sec b. Dependent Variable: Csat							

Source; Own Survey, (2023)

The regression model considered customer satisfaction as dependent variable and the reliability, responsiveness, ease of use, personalization, website design and security scores as the independent variables. The regression analysis is conducted to evaluate how well the reliability, responsiveness, ease of use, personalization, website design and security predict customer satisfaction. As it is depicted under the model summary table, the linear combination of the six variables significantly related to customer satisfaction (R^2 =0.932 and P<0.001). This means that, 93.2 percent of the positive variance of customer satisfaction in the sample can be accounted for by the linear combination of the reliability, responsiveness, ease of use, personalization, website design and security.

Table 4.10.ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	223.081	6	37.180	642.754	.000[b]
	Residual	16.197	280	.058		
	Total	239.278	286			
a. Dependent Variable: Csat						
b. Predictors: (Constant), Rel, Res, EofU, Per, Wd, Sec						

Source; Own Survey, (2023)

ANOVA (Analysis of variance), Used to compare whether the mean of one dependent variable differ significantly across the categories of another independent variables. ANOVA provides, the

result of test of significance for R and R^2using an F-statistic. According to Cohen, J (2010), if the result of the test is significant, with P-value below 0.05, then we reject the null hypothesis that $R^2$is equal to zero and accept the research hypothesis that $R^2$is significantly different from zero and there is a relationship between the independent and dependent variable in the population.

As it is depicted on the ANOVA table above, the P-value of the dependent variable customer satisfaction and the independent variables the reliability, responsiveness, ease of use, personalization, website design and security is well below .05 (P<0.001).

Therefore, we concluded that the **R** and $\mathbf{R^2}$ between the dependent variable customer satisfaction and the independent variables the reliability, responsiveness, ease of use, personalization, website design and security are statistically significant (different from zero), based on the opinion collected from respondents.

Table 4.11– Beta coefficient of regression result

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.111	.094		1.177	.000
	Rel	.200	.028	.150	7.038	.000
	Res	.185	.040	.161	4.648	.000
	EofU	.039	.029	.045	1.342	.000
	Per	.050	.033	.049	1.535	.000
	Wd	.325	.046	.264	7.133	.000
	Sec	.723	.035	.682	20.623	.000

Source; Own Survey, (2023)

Under the Beta Coefficient table, the researcher highly emphasized on the values of the standardized Beta coefficient in order to figure out the relative importance of each independent variable, in predicting the dependent variable and on the unstandardized Beta coefficient in order to formulate the linear regression equation.

A. Standardized Beta Coefficient

Standardized beta coefficient is sometimes called relative importance weight. More specifically, RIWs are the proportionate contribution from each predictor to R^2, (i.e. in our case to the R^2=0.932), after correcting for the effects of the inter-correlations among predictors (Lorenzo-

Seva et al., 2010). This method is recommended when the researcher is examining the relative contribution each predictor variable to the dependent variable (Johnson, 2000 and 2004).

From table 4.11 we can infer that, security in determining the variation in customer satisfaction which accounted for 68.2% of the beta coefficient. The second most important element of website design that contributed most, to the positive variation in the dependent variable customer satisfaction is accounted for 26.4% of the beta coefficient, followed by, reliability and responsiveness,, which had a beta coefficient share of 15% and 16%,.

In the case of Commercial Bank of Ethiopia, ease of use and personalization contributed least to the variance in the response variable among the others, accounted for only 4.5% and 4.6% and it is statistically significant at p-value less than Alpha,(0.00<0.05).

Note that: This doesn't mean that ease of use and personalization has no contribution; rather its contribution was significant.

B. Unstandardized Beta Coefficient

This is sometimes called, the Beta Weights. According to Pedhazur, (1997), a β weight coefficient informs us, as to how much change in the criterion variable (i.e. customer satisfaction in our case) we might expect with a one-unit change in the predictor variables, (i.e. reliability, responsiveness, ease of use, personalization, website design and security in our case) holding all other predictor variables constant.

The linear regression formula for one dependent variable, customer satisfaction and more than one independent variables of the constructs reliability, responsiveness, ease of use, personalization, website design and security, took the form of:

$Y' = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + e$

Where, Y'= the dependent variable customer satisfaction

a = y axis intercept (the constant beta value)

b_1, b_2, b_3,b_4, b_5,b_6=beta weight for each independent variables

X_1, X_2, X_3, X_4, $X_5$and X_6= reliability, responsiveness, ease of use, personalization, website design and security respectively.

e = the error term (0.05 in our case)

Taking in to consideration the unstandardized beta value in the table above, the regression equation of this particular study to the nearest decimal was written as:

$Y' = -0.111 + 0.2X_1 + 0.185X_2 + 0.039X_3 + 0.05X_4 + 0.325X_5 + 0.723X_6 + 0.05$

This simply means that, the expected value of the dependent variable customer satisfaction was less than zero when all independent variables are set to zero.

Findings from the equation

- For every unit increase in the value of reliability, setting all other predictor variable to zero, the value of response variable customer satisfaction will increase by 20%.
- For every unit increase in the value of responsiveness, setting all other predictor variable to zero, the value of response variable (customer satisfaction) will increase by 18.5%.
- For every unit increase in the value of ease of use, setting all other predictor variable to zero, the value of response variable (customer satisfaction) will increase by 3.9%.
- For every unit increase in the value of personalization, setting all other predictor variable to zero, the value of response variable customer satisfaction will increase by 5%.
- For every unit increase in the value of website design, setting all other predictor variable to zero, the value of response variable (customer satisfaction) will increase by 32.5%.
- For every unit increase in the value of security, setting all other predictor variable to zero, the value of response variable (customer satisfaction) will increase by 72.3%.

Table 4.12: Summary of hypotheses testing

	Hypothesis	Result
H1	Reliability has significant positive effect on the customer satisfaction	Accepted
H2:	Responsiveness has significant positive effect on the customer satisfaction	Accepted
H3:	Ease of use has significant positive effect on customer satisfaction	Accepted
H4:	Organizational culture has significant positive effect on the customer satisfaction	Accepted
H5:	Website design has significant positive effect on the customer satisfaction	Accepted
H6:	Security has significant positive effect on the customer satisfaction	Accepted

4.7. Discussion

The discussion part is important to give a clearer understanding on the subject under study. The present research was conducted in order to see, the impact of reliability, responsiveness, ease of use, personalization, website design and security on the degree of customer satisfaction in the

Commercial Bank of Ethiopia. The study included these variables reliability, responsiveness, ease of use, personalization, website design and security, to see their effect on customer satisfaction.

Increased customer satisfaction is frequently argued to be the single most important driver of organizations' long-term performance.

The present study showed that, combination of the reliability, responsiveness, ease of use, personalization, website design and security has a significant positive relationship with customer satisfaction at a significance level of(R^2 =0.932 and P<0.001).

In the present study, the correlation between the dependent variable customer satisfaction and each of the independent variables, together with their relative importance was identified.

Based on the result obtained from Pearson correlation, there is a positive association between the dependent variable customer satisfaction and independent variables.

Compared to other relationship considered in this study, security is ranked first, website design is ranked second, responsiveness is ranked third, ease of use is ranked fourth, personalization is ranked fifth and reliability is ranked last in the magnitude of correlation.

The results of the present study also showed that: For every unit increase in the value of reliability, setting all other predictor variable to zero, the value of response variable customer satisfaction will increase by 20%. For every unit increase in the value of responsiveness, setting all other predictor variable to zero, the value of response variable customer satisfaction will increase by 18.5%. For every unit increase in the value of ease of use, setting all other predictor variable to zero, the value of response variable customer satisfaction will increase by 3.9%.

For every unit increase in the value of personalization, setting all other predictor variable to zero, the value of response variable customer satisfaction will increase by 5%. For every unit increase in the value of website design, setting all other predictor variable to zero, the value of response variable customer satisfaction will increase by 32.5%. For every unit increase in the value of security, setting all other predictor variable to zero, the value of response variable customer satisfaction will increase by 72.3%.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1. Summary of the Major Findings

The means and standard deviations for the independent and dependent variables examined in this study, all the independent variables examined in this study have a mean score above 3.70 that could be considered as high level agreement but ease of use variable has the lowest mean value (3.27). This implies that the respondents included in the study are about higher level of agreement in terms of the reliability, responsiveness, ease of use, personalization, website design, security and customer satisfaction.

The result of Pearson correlation test between reliability (the independent variable) and customer satisfaction (dependent variable) showed that there is a positive relationship between the two variables at the significance level of ($R=0.53$), ($P<0.01$). The measure of association, the magnitudes of relationship between the two variables are medium. Compared to other relationship considered in this study, reliability is ranked last in its magnitude of correlation.

The degree of association between customer satisfaction and responsiveness showed that, both variables are positively correlated to one another at a significant level of ($R=0.831$), ($P<0.01$). Based on MacEachron, (1982), measure of association, the magnitudes of relationship between the two variables are very strong. Compared to other relationship considered in this study, responsiveness is ranked third in its magnitude of correlation.

The customer satisfaction and Ease of use are statistically significant positive relationship between the two variable at the level of ($R=0.811$), ($P<0.01$). MacEachron, (1982) classified this magnitude of relationship as a strong one. Compared to other relationship variables considered in this study, ease of use is ranked fourth in its magnitude of correlation. The result of Pearson correlation test between customer satisfaction and personalization showed that, there is a statistically significant positive relationship between the two variable at the level of ($R=0.810$), ($P<0.01$). MacEachron, (1982) classified this magnitude of relationship as a strong one. Compared to other relationship considered in this study, personalization is ranked fifth in its magnitude of correlation. The customer satisfaction and website design are statistically significant positive relationship between the two variable at the level of ($R=0.874$), ($P<0.01$). MacEachron, (1982) classified this magnitude of relationship as very strongone. Compared to other relationship considered in this study, website design is ranked second in its magnitude of

correlation. The result of Pearson correlation test between customer satisfaction and security showed that, there is a statistically significant positive relationship between the two variable at the level of (R=0.944), (P<0.01). MacEachron, (1982) classified this magnitude of relationship as a very strong one. Compared to other relationship considered in this study, security is ranked first in its magnitude of correlation.

The regression analysis is conducted to evaluate how well the reliability, responsiveness, ease of use, personalization, website design and security predict customer satisfaction. As it is depicted under the model summary table, the linear combination of the six variables significantly related to customer satisfaction (R^2 =0.932 and P<0.001). This means that, 93.2 percent of the positive variance of customer satisfaction in the sample can be accounted for by the linear combination of the reliability, responsiveness, ease of use, personalization, website design and security.

Standardized beta infers that, security in determining the variation in customer satisfaction which accounted for 68.2% of the beta coefficient. The second most important element of website design that contributed most, to the positive variation in the dependent variable customer satisfaction is accounted for 26.4% of the beta coefficient, followed by, reliability and responsiveness, which had a beta coefficient share of 15% and 16%. In the case of Commercial Bank of Ethiopia, ease of use and personalization contributed least to the variance in the response variable among the others, accounted for only 4.5% and 4.6% and it is statistically significant at p-value less than Alpha,(0.00<0.05).

The finding from the unstandardized beta value and from the regression equation of this particular: for every unit increase in the value of reliability, setting all other predictor variable to zero, the value of response variable customer satisfaction will increase by 20%; for every unit increase in the value of responsiveness, setting all other predictor variable to zero, the value of response variable (customer satisfaction) will increase by 18.5%; for every unit increase in the value of ease of use, setting all other predictor variable to zero, the value of response variable (customer satisfaction) will increase by 3.9%; for every unit increase in the value of personalization, setting all other predictor variable to zero, the value of response variable customer satisfaction will increase by 5%; for every unit increase in the value of website design, setting all other predictor variable to zero, the value of response variable (customer satisfaction) will increase by 32.5%; for every unit increase in the value of security, setting all other predictor variable to zero, the value of response variable (customer satisfaction) will increase by 72.3%.

5.2. Conclusion

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.

5.3. Recommendation

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 and web site design) that are valued by customers.

5.4. 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, generalize ability 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.

Reference

Abdi, H. a. (2006). An exploratory research on adoption of e-banking and e-readiness among customers and commercial banks in Pakistan . 1-35.

Abreham. (2012). Challenges and Opportunities of Adapting electronic banking in Ethiopia.

Alabar, T. (2010). Electronic banking service and customer satisfaction in Nigerian Banking industries. International journal of business and investment, 1(1).

Andaleeb, S. S., & Conway, C. (2006). Customer satisfaction in the restaurant industry: an examination of the transaction-specific model.

Anisoara Niculina Apetri, L. P. (2008). The Importance of Modern E-Banks For Development of New Economy. The Annals of The "Ştefan cel Mare" University Suceava. Fascicle of The Faculty of Economics and Public Administration, 8.

Babikas, E., Bienstock, C. C., & Van Scotter, J. R. (2004). Linking perceived quality and customer satisfaction to store traffic and revenue growth.Decision Sciences,.

Bakr, A., Mustafa, M., & al-Din, M. M. (2005). the art of customer service and selling skills. Amman, Jordan:. University House.

Bolton, R., & Saxena-Iyer, S. (2009). nteractive Services: A Framework, Synthesis and Research Directions. Jornal of intereactive marketing.

Bordens, K. S., & Abbott, B. B. (2011). Research Design And Methods: A Process Approach (8 ed.). New York: McGraw-Hill.

Burns, R. C. (2003). Alternate measurement approaches to recreational customer satisfaction: Satisfaction-only versus gaps scores. Leisure .

c.rajendran, G. (1995). customer perceptions of service quality in the banking sector of developing economy a critical analysis . international journal of bank marketing .

Camelia Catalina Mihalciuc, L. P. (2008). The Importance of Modern E-Banks For Development of New Economy. The Annals of The "Ştefan cel Mare" University Suceava. Fascicle of The Faculty of Economics and Public Administration, 8.

Chang, J. C. (2009). Taiwanese tourists' perceptions of service quality on outbound guided package tours: A qualitative examination of the SERVQUAL dimensions. Journal of Vacation Marketing.

Cronin, J. J., & Taylor, A. S. (1992). Measuring Service Quality: Areexamination and extension. Jornal of Marketing,, 55-56.

Daniel, E. (n.d.). Provision of electronic banking in the UK and Republic of Ireland. International Journal of Bank Marketing. 17, 72-82.

Denscombe, M. (2014). The good research guide: for small-scale social research projects (5 ed.): McGraw-Hill Education (UK).

Dr. Geeta Sharma, M. S. (March 2014). Internet Banking Service Quality and Its Impact On Customer. Business and Management Invention, 3(3).

Garvin, D. A. (1988). Managing Quality: The Strategic and Competitive Edge. In D. A. Garvin. Harvard: Free Press.

Gilmore, A. (2003). Service Marketing and and Managment. London: SAGE publications.

Grooroos. (2007). service perspective on business relationship.

Grooroos, C. (2007). service quality model and its marketing implications. Emeraled backfiles, european jornal of marketing.

Holjevac, I. A., Marković, S., & Raspor, S. (2010). Customer Satisfaction Measurement in hotel industry:Content analysis study.

http://www.nbe.gov.et/History/history.html. (2010). The History of Banking and other Financial Institutions in Ethiopia . Retrieved from. NBE.

Huang, M. C. (1998). An Empirical Study on the Model of Relationship Value-Loyalty for the Banking Industry. Master Disertation. National YunLin University of Science & Technology.

Ibrahim, J. a. (2006). efficiency of service delivery chanels in the bankng industry an importance performance gap analysis in the philipine setting.

Jain, S. K., & Gupta, G. (2004). Measuring Service Quality: SERVQUAL Vs. SERVPERF scales.

Kandampully, J., & –Hui-Hu, H. (2007). Do hoteliers need to manage image to retain loyal customers ? international Journal of contemporary Hospitality Management.

Karen Furst, W. W. (2002). Internet Banking: Development and prospects. Harvard University.

Kotler, P., & Armestrong, G. (2011). Principle of marketing. Prentice Hall.

Kotler, P., & Keller, K. (2012). Marketing Managment.

Kumbhar, V. M. (2011). Factors affecting the customer satisfaction in e-banking: some evidences from Indian banks. journal of basic scientific research, 3(4), 1-14.

Laroche, M., Ueltschy, L. C., Shuzo, A., & Cleveland, Y. (2004). Service quality perceptions and customer satisfaction: Evaluating the role of culture. Journal of International Marketing.

Luke, G. J. (2007). An assessment of the service quality expectations and perceptions of the patients of Awali Hospital in the Kingdom of Bahrain .

McDougall, L. &. (1996). customer satisfaction with services puting percieved value in to the equation. 14(5), 392-410.

Millán, À., & Esteban, Á. (2004). Development of a multiple-item scale for measuring customer satisfaction in travel agencies services. Tourism Management.

Mirabi, V. R. (2008). Investigating the degree of customer satisfaction of lectronic banking services using the revised Cose model. .Journal of commerce surveys, 31.

Mueller, R. D., Palmer, A., Mack, R., & McMullan, R. (2003). Service in the restaurant industry: an American and Irish comparison of service failures and recovery strategies. International Journal of Hospitality Management.

Neeli Prameela, D. B. (2012). Loyality in E-banking. international journal of trends in economics managmnet and technology, 1(6).

Nukpezah, D., & Nyumuyo, C. (2009). What drives customers Loyality and Profitability? Analysis of Prespectives from retail Customers in Ghana's Banking Industry.

Nupur, J. M. (2010). .E-Banking and Customers' Satisfaction in Bangladesh: An Analysis. International Review of.

Olanipekun, W. D. (April 2013). Role of Electronic Banking in Enhancing Human Resource Performance and Customer Satisfaction: Evidence from Guaranty Trust Bank PLC, Nigeria. International Journal of Business and Behavioral Sciences, Vol. 3, (No 4).

Oliver, R. (1997). Satisfaction: A Behavioral prespective On the Consumer. New york.

Parasuaman, A., & Zeithmal, V. (1988). Multiple-items scale for measuring customer perceptions of service quality. Jornal of retailing, 64(1).

Parasuaman, A., & Zeithmal, V. (1988). A multiple item scale for measuring a customer perception of service quality . Journal of Retailing.

Parasuraman, A., Berry, L., & Zeithaml, V. (1985). A conceptual Model Of service Quality and it implication for Future research. jornal of marketing.

Parasuraman, Z. &. (1991). Delivering Quality Service - Balancing Customer perceptions and Expectations. New York: The Free Press.

Quinn, B., & Gagnon, C. E. (1986). will services Follow Manufacturing in to Decline?

Ragavan, N., & Mageh, R. (2013). A Study on Service Quality Perspectives and Customer Satisfaction in New Private Sector Banks. Journal of Business and Management.

Rahman, M. S., Khan, A. H., & Haque, M. (2012). A Conceptual Study on the Relationship between Service Quality towards Customer satisfaction. Asian Social Science.

Samea, S. &. (2010). an integrated approach for service quality and effectiveness. 16(3).

Siddiqi, K. O. (2011). Interrelations between service quality Attributes customer satisfactions and customer loyality in the retail banking sector. International journal of business an management.

Simon Gyasi Nimako, N. K. (2013). Customer Satisfaction With Internet Banking Service Quality In The Ghanaian Banking industry. International Journal Of Scientific & Technology Research

Sulaiman, C. a. (2005). effectiveness of electronic banking system .

Toyin, A. C., David, A. C., & Stodnick, M. (2008). Drivers of Customer Loyalty in a Retailing Environment,. " Journal of Service Science".

V.M, K. (2011). Factors affecting customer satisfaction in E-banking.

Wahid Damilola1, B. A. (2013, April). Role of Electronic Banking in Enhancing Human Resource Performance and Customer Satisfaction: Evidence from Guaranty Trust Bank PLC, Nigeria. International Journal of Business and Behavioral Sciences, 3.

Webster, N. (Reprinted 1983). Webster's new twentieth century Dictionary of the english language Unabridged (second ed.). New York: Prentice Hall Press.

Yilmaz, K. (2013). Comparison of quantitative and qualitative research traditions: Epistemological, theoretical, and methodological differences. European Journal of Education, 48(2), 311-325.

Yin, R. K. (2014). Case study research: Design and methods: Sage publications.

Yoo, D., & Park, J. (2007). Perceived Serviced Quality-Analyzing Relationship among employees, customer and financial performance. International jornal of Quality & Reliability Managment.

Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2006). “Services Marketing: Integrating Customer Focus Across the Firm,”. McGraw-Hill Irwin.

APPENDICES

APPENDIX I

ST MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

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 ☐

2. 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 service tells you what to do if your transaction is not processed.					
8	The E-banking services take 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 you.					
14	It would be easy for you to become skillful at using the E-banking services.					
15	You 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	The degree of customization that is available.					
	V. Security					
22	The E-banking services keep secrets of information of your transactions.					
23	The E-banking services will not share your personal information with other.					
24	The E-banking services will protect your 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	Customer's Satisfaction	5	4	3	2	1
1	Based on your previous experience, You feel the E-banking services quality is good.					
2	The E-banking services quality is better than you're 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					

"THANK YOU"