

ADDIS ABABA UNIVERSITY FACULTY OF BUSINESS AND ECONOMICS  
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*Addis Ababa*  
*University*  
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THE IMPACT OF ELECTRONIC BANKING SERVICE QUALITY ON  
CUSTOMER SATISFACTION: IN THE CASE OF SELECTED COMMERCIAL  
BANK OF ETHIOPIA IN ADDIS ABABA

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A Thesis submitted to Addis Ababa University School of Graduate Studies in partial fulfillment of the requirements for the degree of Master of Science in Management.

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Certification

Addis Ababa University

School of Graduate Studies

This is to certify that the thesis entitled, “the impact of electronic banking service quality on customer satisfaction: in the case of selected commercial bank of Ethiopia in Addis Ababa ” is an original piece of work carried out by Dereje Eritiro under the supervision of Zelealem G.(PhD), and is submitted in partial fulfillment of the requirements for the degree of Master of Science in Management. It complies with the regulations of the university and meets the accepted standards with respect to originality and quality.

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### **Declaration**

I Dereje Eriro declare that this work entitled to “the impact of electronic banking service quality on customer satisfaction: within the case of CBE in Addis Ababa”, is outcome of own study which all sources of materials used for the study are absolutely acknowledged. I even have created it severally aside from the steering and suggestion of the research Advisor. This study has not been submitted for any master’s degree during this university or the other university. It’s offered for the partial fulfillment of the degree of M.sc. in management.

By: Dereje Ertiro signature \_\_\_\_\_

Date \_\_\_\_\_

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## **Abstract**

*Nowadays, the banks are concentrate on promoting the concept of e-banking among their customers since it can provide speedier, faster and reliable services to the customers better than traditional banking. Therefore, the purpose of this research is to investigate in to the impact of electronic banking (E-banking service quality on customer satisfaction using service quality dimensions (SERVQUAL) model proposed by Parasurman et al., (1988) and its relationship with that of demographic characteristics (educational level, occupation, gender, income level and age) and major challenges of e- banking service quality in commercial bank of Ethiopia Addis Ababa . required data was collected through customer's survey which adopted descriptive, explanatory and exploratory research design primarily used quantitative and qualitative data that was collected through a structured questionnaire and informal interview. In terms of sampling techniques stratified proportionately technique which is a type of probability sampling technique was used among customers of the selected branches with the aid of randomly administered questionnaire. The target population of study was randomly selected branches of CBE in Addis Ababa. Primary and secondary sources of data are extensively employed in this study. Tables, percentage, linear regression and chi-square independence test statistic are specifically used in the study to see the relationship between demographic characteristics and e-banking service quality. Collected primary data from questionnaire and interview were gone to be analyzed using statistical tools such as mean, standard deviation, correlation and multiple regressions to determine the impact of e-banking service quality on customer satisfaction in selected commercial banks Addis Ababa. A result indicates that, reliability, responsiveness, assurance, accessibility, security, ease of use and efficiency have significant impact on customers satisfaction. There by improves customer service delivery, better management, deals with customer complaints improves customer satisfaction in CBE Addis Ababa.*

**Keywords: Electronic Banking, Customer Satisfaction, Service Quality, SERVQUAL**

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## **Acronyms**

ATM	Automated Teller Machine
CSEB	Customer Satisfaction in electron banking
ICT	Information and Communication Technology
SPSS	Statistical Package for Social Science
POS	Point of Sale
ANOVA	Analysis of variance
EBSQ	Electronic banking service quality
EFT	Electronic fund transfer
SERVQUAL	Service quality
SMS	Short message service
TA	Technology associate
TOE	Technology organization environment
CBE	Commercial bank of Ethiopia

# CHAPTER ONE

## 1. INTRODUCTION

### 1.1 Background of the Study

This chapter presents the background information of the study, statement of the problem, research objectives and research questions, It more highlights the importance of the study, clarifies the scope of the study as well as the organization of the study. Technology has a significant role in today's world. In recent years, the adoption of e-banking began to occur quite extensively since it's the automatic delivery of recent and ancient banking merchandise and services to customers through electronic channels because of quick advances in IT and intensive competitive banking markets (Toor et al., 2016). And also, electronic banking offers many advantages to customers like convenient, quick, time-saving and higher money management. CBE branches have already introduced ATM, mobile banking, web banking and POS to their customers. The application of data and communication technology ideas, techniques, policies and implementation methods to banking services has become an issue of fundamentals, importance and considerations to any or all banks and so a requirement for native and international aggressiveness in banking system. As a results of this technological improvement business surroundings in monetary sector is very dynamic and knowledge speedy changes demands banks to serve their customers electronically.

The evolution of e-banking started from the utilization of cash dispenser Machine (ATM), European nation is that the 1st country within the world to own taken a lead in e-banking. E-banking has been wide employed in developed countries and in developing economies but, unfold of e-banking is far restricted. As steered by Claessens, Glaessner and Klingebiel, developing countries normally have a bonus as they can learn from the expertise of advanced economies. Today, most banks square measure adopting electronic banking as a way of enhancing service quality of banking services. They're providing electronic banking to their customers to extend customers' satisfaction in banking service. Customer satisfaction could be alive of however merchandise and services provided by a corporation meet or surpass Customer expectation. Customer satisfaction is additionally outlined because the variety of shoppers, or share of total customers, whose rumored expertise with a firm, its merchandise or its services

(ratings) exceeds fixed satisfaction goals. Though there square measure few researches done concerning electronic banking in Ethiopia. Electronic banking could be a helpful topic to review the way to create it applicable victimization the out there information Communication Technology infrastructures alongside the present monetary and legal frameworks in order that the standard of services in Ethiopian banking sector is increased for the long run. What is more electronic banking has been wide studied in developed countries and additionally to some extent in developing countries however not in Ethiopia. Only a few studies are worn out developing countries, and it's not been well investigated in Ethiopia. Customers in Ethiopia are late adopters of the net and its applications with regards to electronic baking. Ethiopian industry remains underdeveloped compared to the remainder of the globe. The e-business, e-commerce is concerning victimization electronic techniques to form opportunities, new markets, new processes and growth.

The event of Ethiopian industry has for the most part been stricken by the dominance of money. In Ethiopia, money could be a king since the majority of non-public consumption is finished through the medium of money. For being firms specifically this has resulted in issues of value and delay, arising from the tally bundling, transporting and depositing of huge volumes of money, yet because the risk and inconvenience of handling counterfeiting and also the treatment of broken notes. From the expertise of different countries banking services, electronic payment systems square measure found to learn industrial banks by extending bank customer base, reducing operational prices, enhancing customer services and up banks competitive blessings. National Bank of Ethiopia created CORE industry obligatory since Gregorian calendar month 2011 so as to facilitate the payment of the industry and additionally obligatory to use electronic banking that's alter banks to produce mobile, web and card banking services. Once the directive has been issued all industrial banks operated within the country square measure on the thanks to get the system from completely different firms.

There are **46.75 million** mobile holders in Ethiopia in January 2020 which gives a lot of opportunities for monetary establishments to achieve the unbanked areas. The numbers of mobile holders square measure around fold of the amount of checking account holders within the country. Ethiopian banking system additionally getting in to the present ICT based mostly service to customers so as to bring potency operative by minimizing disbursal thereby increasing

customers' satisfaction. The state closely-held banking concern of Ethiopia Federal Democratic Republic of Ethiopia is pioneer in introducing electronic banking service within the Ethiopia with eight ATMs machine in 2001 in New Flower. Banking concern of Ethiopia is often pushing the shoppers to have interaction in e-banking services since it's a lot of convenient, speedier and time saver than ancient banking. Here this study wants to answer the above problems through identifying factors which impact electronic banking service quality on customer satisfaction and help CBE to maximize the level of customer satisfaction.

## **1.2 Problem of the Statement**

Banks in Ethiopia are involved in tough competition to attract customers by launching a new technology based products and services such as Internet banking, Mobile banking, ATM and POS to deliver attractive services for customers to keep their competitive advantages over other banks. It is normal that banks do not supply electronic banking services might lose their competitors (Kwarteng, 2015). they're providing electronic banking to their customers to extend to extend in banking services (Shittu, 2010).Applegate (1996) described the benefit of e-banking from customers point of view (10); convenient and valuable supply to upset funding as a result of it provides convenience to access account 24/7 that access isn't restricted to banking operation hours and obtainable round the clock, where the customer's settled. Abraham (2012) conjointly represented many advantages of electronic banking like transferring cash, collection owed, paying bill, productivity gains, dealing value reduction, customer service improvement and at same time establishing a means to control the overall activities on bank accounts gives competitive advantage for banks by reducing operational cost and providing best satisfaction of customer needs.

Customers in Federal Democratic Republic of Ethiopia are late adopters' applications with regards to internet baking. However, problems like machine out of order, lack of spare different system that substitutes ATM service once temporary drawback happen within the machine, and innovation, resistance to changes in technology among customers and service providers as result of fear of risk creates doubts in the minds of customers thereby affecting their level of satisfaction. Because of these existing problems, this study intends to fill in the gaps by examining the impact of e-banking service quality on customer's satisfactions in commercial bank of Ethiopia In response; several financial establishments area unit leading their ways

towards increasing customer satisfaction and loyalty through improved service quality as it. Customers in commercial bank of Ethiopia seem not willing to adapt to these services the evidence is increased queues in the banking halls, customers are still carrying large amount of cash, which may be points to their being dissatisfied with e-banking services. However, commercial bank of Ethiopia have trying to improve their systems by building more infrastructures and new services like Internet banking, Mobile banking, ATM and POS to increase customer satisfaction. Limited studies in Electronic banking are available in Ethiopia both in terms of number and scope of study.

Assefa (2013) conducted a study on the impact of e- banking services quality on customer satisfaction in the case of two private banks which are located in Gonder city. The researcher used qualitative approach to analyzing the study he was limited only on ATM, customers' perspective of electronic banking and in customers who have been using electronic banking up to maximum of three years in commercial bank of Ethiopia. Bulltum (2014), also studied factors that affect adoption of e- banking in Ethiopia. Sintayehu (2016), conducted a study on the impact of e- banking service on customer satisfaction in two private and commercial bank of Ethiopia. This study was also limited to purposive type of sampling technique. Purposive type of sampling technique does not provide equal chance for all customers, not suitable for large samples and leads for personal bias. Therefore this research bridges the gap of methodology and sampling technique by using stratified sampling techniques.

This study adopts, explanatory, descriptive, and exploratory which are suitable to explain the relationship between variables as quoted in Mark, Philip and, Adrian (2009), to describe the characteristics of the sample by using means and percentages respectively. Survey study research methodology will be conducted for this study. This study attempted to look in to the impact of electronic banking service quality of commercial bank of Ethiopia and customer satisfaction by using service quality dimensions and sampling techniques which has not been done by other researchers as well.

### **1.3 Objectives of the study**

#### **1.3.1 General objectives:**

- To identify electronic banking service quality dimensions that have impact on customers' satisfaction in commercial bank of Ethiopia Addis Ababa.

#### **1.3.2 Specific objectives:**

- To see the relationship between demographic variables and customer satisfaction in Electronic banking.
- To identify major challenges in e-banking services in commercial bank of Ethiopia Addis Ababa.
- To recommend necessary actions that ought to consider by commercial bank of Addis Ababa so as to extend customer satisfaction.
- To analyze the level of customer satisfaction in electronic banking service quality,

### **1.4 Research Questions**

- What are the major electronic banking service quality dimensions that have impact on customer satisfaction on case of commercial bank of Ethiopia Addis Ababa?
- Is satisfaction in electronic banking services are related to demographic variables (age, gender, educational level, occupation, marital status and Customer's Monthly Income)?
- What are the major challenges in electronic banking activities to satisfy customer satisfaction in commercial bank of Ethiopia Addis Ababa?
- What is the level of customer satisfaction in electronic banking service in commercial bank of Ethiopia Addis Ababa?
- What are the measures to be taken by commercial bank of Ethiopia to increase the level of customer satisfaction?

## **1.5 Research Hypothesis**

Based on the research objectives and questions of the study the following hypotheses are developed and tested in this study:

H1 (alt): Electronic banking service quality has significant positive impact on customer satisfaction.

H2 (alt): Reliability dimension have significant positive impact on customer satisfaction

H3 (alt): Responsiveness dimension have significant positive impact on customer satisfaction

H4 (alt): Assurance dimension have significant positive impact on customer satisfaction.

H5 (alt): Ease of use dimension has significant positive impact on customer satisfaction

H6 (alt): Security dimension have significant positive impact on customer satisfaction

H7 (alt): Accessibility dimension have significant positive impact on customer satisfaction.

H8 (alt): Efficiency dimension have significant positive impact on customer satisfaction.

H9 (alt):- demographic characteristics have significant positive impact on customer satisfaction.

## **1.6 Significance of the Study:**

Banks are continually pushing the customers to interact in e-banking services since it's a lot of convenient, speedier and cost saver than traditional banking. Therefore, this research will help Commercial Bank of Ethiopia to

- Identify the factors which impact e- banking on customer satisfaction and help them to further maximize the level of customer satisfaction.
- It helps in understanding what attitude customers' have towards e-banking.
- It would be a good indicator for the managers to identify the gap between the perception about electronic banking and the actual customer satisfaction generated from this service. This will shade some light on what actions to be taken in order to benefit from the opportunities and how to overcome the challenges
- Realize the existing limitation of e banking with in the sector
- Add value to the existing knowledge related to electronic banking and customer satisfaction in Commercial Bank of Ethiopia

- Additionally, the findings will help Commercial Bank of Ethiopia to identify challenges faced by their customers and formulates appropriate strategies in building customer satisfaction towards e banking service.
- The study will be of great importance to future scholars and academicians as it will form basis for future research as well as providing literature for future studies on electronic banking.

### **1.7 Organization of the study**

**Organization of the study** is the arrangement of research contents. It contains varied elements that are also divided into paragraphs. It's essential to the flow of ideas in a research paper and to serving the reader navigates the ideas.

The study is organized in to five chapters. The primary chapter deals with background of the study, statements of the problem, objective of the study, the research questions, and scope and significant of study, limitations of the study, definitions of terms and organization of the research. The second chapter presents related research that was done on e-banking, and customer satisfaction. Both wiped out the country, outdoors country (empirical study) and theoretical background of issues related to e-banking. The third chapter explains types and source of data that was used for the study, sampling techniques used to determine the sample size, method of statistical data analysis tools and collection. The fourth chapter presents analysis and results of the study that arrived using descriptive and inferential statistical tools and The last chapter presents conclusion and recommendation of the study.

### **1.8 Delimitation of the Study (Scope)**

The scope of this study is delimited to see the impact of e-banking service on customer satisfaction by using the SERVQUAL dimensions of service quality. This study is descriptive ,exploratory and explanatory type of research .uses survey type of research method, Quantitative and qualitative type of approach ,data will be collected from both primary and secondary data sources ,Statistical package for social science (SPSS) will be used in data analysis to compute for statistical tables, Correlation and ANOVA tests are also uses to test the data, The study conducts from selected branches of Commercial Bank of Ethiopia and that only focuses on Electronic banking services (ATM, Internet, POS and Mobile banking).

## **CHAPTER TWO**

### **2. LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter outlines the relevant literature on customer satisfaction and therefore the conceptualization of service quality within the context of banking more specifically E- banking and customer satisfaction. The conceptualization of the key terms served as a framework inside that this study was conducted.

#### **2.2 Theoretical Framework**

##### **2.2.1 Electronic Banking**

The conception of electronic banking has been outlined in several ways; Daniel (1999) outlined that electronic banking is that the delivery of banks data and services by banks to customers through varied delivery platforms which can be used with totally different terminal devices like personal computers and mobile phones with browser or desktop computer code, phone or digital tv. Abod and Noreen (2006) outlined electronic banking as any use of data communication technology and electronic suggests that by a bank to facilitate transactions and network with stakeholders. Timothy (2012), electronic banking is that the utilization of the net as a foreign provide channel for providing services, like opening a savings account, transferring funds among totally different accounts and electronic bills presentment and payment.

Stan (1997) conjointly outlined electronic payment as a system of payment within which case group action is finished electronically while not the utilization of money. E-banking is that the universal term for delivery of banking services and product through electronic banking, like the phone, the net, cell phone, etc. notion of electronic banking remains growing. It ensures an efficient payment and accounting as a result of augmenting the promptness of delivery of banking services considerably (Uppal and Jatana, 2007). Advances within the technology had given new dimensions, net allowable to access big selection of self-service technologies (like e-banking, net banking, E-shopping, on-line auctions, etc). As these technological aspects square measure spreading over, what is more corporations also are interested to use these technological

dimensions as a result of potential price savings and delivering the product in an efficient method can build massive distinction in increasing sales growth, further on win the competition and conjointly to create the customer happy with the offerings.

Simon Nahu senay Ejigu (2016). Present day E-banking supply varied services that embody primarily withdrawals, deposits, checking of accounts balances and last accepted and process cheques. Most of them square measure connected to interbank networks enabling people to interact from machines not happiness to the bank wherever they need their accounts or within the countries wherever their accounts square measure command (enabling transactions outside native countries) Simon Nahu senay Ejigu (2016). Bhosale (2013) Electronic banking as a substitute provision channel, offers several opportunities for the expansion and development of monetary establishments. E-banking offers money services to its customers through the net. the foremost necessary electronic channels in e-banking square measure the net, wireless communications networks, automatic teller machine Machines (ATMs), phone bank (Schaechter and Ugolini, 2002), cell phone, fax, and sales terminal and booth (Fathian, et al. 2009).

Internet bank is considered a virtual and 24-hour branch of a bank that permits customer's do money transactions empty of time and placement limits (Saffar and Moghaddam, 2012). Electronic banking are often outlined because the chance for purchasers to access bank services while not the necessity of physical presence within the bank and creating use of safe mediums. E-banking encompasses systems that permit customers to use bank services at 3 levels including:

- Communication
- Information and
- Transaction (Bakhshali, Hosseinifard and Rahmati, 2010). Electronic banking reduces the price of implementation of bank services like transportation prices, necessities, and personnel and at identical time, maximizes wages ensued by providing varied prime quality services, that maximizes banks revenues. Electronic banking has been living for a few time within the kind of automatic teller machine machines (ATMs and phone transactions. in additional recent times, it's been remodeled by the internet- a brand new delivery channel that has enabled banking transactions for each customers and banks (Nitsure, 2003). There are varied electronic banking delivery outlets to produce banking services to customers. Among them are ATMs,

Telephone/Mobile banking, net banking and, POS, that are measure the foremost wide used, which are the most widely used, are conversed below:

### **2.2.2 Types of E-Banking**

There are several electronic banking delivery channels to produce banking service to customers. Among them ATM, POS, Mobile banking and net banking are the foremost wide used and mentioned below.

#### **ATM**

Automated Teller Machine (ATM) may be a machine wherever money withdrawals are often revamped the machine while not stepping into to the banking hall. It additionally sells recharge cards and transfer funds; it is often accessed twenty four hours/7 days with account balance enquiry (Fenuga, 2010).

#### **INTERNET BANKING**

Internet banking permits customers of an establishment a financial organization to conduct monetary transactions on a secure web site operated by the institution which may be a retail or virtual bank, banking company or society. It's going to embody of any transactions associated with on-line usage. Banks progressively operate websites through that customers area unit in a position not solely to inquire concerning account balances, interest and exchange rates however additionally to conduct a spread of transactions. Unfortunately, knowledge on net banking area unit scarce, and variations in definitions create cross-country comparisons tough (Alabar, 2010).

#### **POS**

Point of sale (POS) additionally generally remarked as purpose of purchase (POP) or checkout is that the location wherever a group action happens. A "checkout" refers to a POS terminal or additional typically to the hardware and software package used for checkouts, the equivalent of associate electronic cash box. A POS terminal manages the commercialism method by a salesman accessible interface. Constant system permits the creation and printing of the receipt. Due to the expense attached a POS system, the e-Bay guide recommends that if annual revenue exceeds the brink of \$700,000, investment in a very POS system are advantageous. POS systems

record sales for business and tax functions. Smuggled software package dubbed "zappers" is progressively used on them to falsify these records with a read to evading the payment of taxes (Shittu Olorunsegun, 2010).

## **MOBILE BANKING**

Mobile banking (also referred to as M-Banking ) may be a term used for performing arts balance checks, account transactions, payments, credit applications and alternative banking transactions through a mobile device like a portable or Personal Digital Assistant (PDA). Mobile banking is employed in several components of the planet with very little or no infrastructure, particularly remote and rural areas. This side of mobile commerce is additionally well-liked in countries wherever most of their population is un-banked. In most of those places, banks will solely be found in huge cities, and customers got to travel many miles to the closest bank.

### **2.2.3 Customer**

Customer may be a one that maintains associate degree account with the bank. One read of this question is that someone doesn't become a bank Customer unless associate degreed till he/she opens an account with a bank (Adebayo, 2013). Supported this study, Customer is outlined as a person United Nations agency seeks for banking services or product from the business banks.

### **2.2.4 Customer Satisfaction**

Ms. Sujeewa Kodithu wakku, (2018) Customer satisfaction is outlined supported the confirmation/ disconfirmation theory that states satisfaction results from a method of comparison wherever customers decide product satisfaction against their expectations concerning product performance. per Hansemark & Albinsson (2004) satisfaction is associate degree overall Customer perspective towards a service supplier, or associate degree emotional reaction to the distinction between what customers anticipate and what they receive, relating to the fulfillment of some would like, goal or want. (Ho,Chan& Hsu,1999).The world celebrated trafficker Phillip Kotler (2000) defines customer satisfaction as a person's feelings of enjoyment or disappointment ensuing from comparison a product's perceived performance or "outcome" in relevancy his or her expectations. Once it's associated with a service, Customer satisfaction would depend upon a group of determinants and therefore the model introduced by Gegeckaitė

(2011). Jamil Hammoud<sup>1</sup>, Rima M. Bizri<sup>1</sup>, and Ibrahim El Baba<sup>1</sup> (2018) defines customer Satisfaction is one in every of the foremost vital ideas within the field of promoting studies nowadays. Loosely, it links processes culminating in buying with post purchase phenomena like perspective modification, repeat purchase, and complete loyalty (Churchill & Surprenant, 1982). Variety of varied definitions is projected to clarify customer satisfaction. However the notion of comparison post product/service performance with pre-formed expectations looks to be common to most definitions. Jazz musician (1981) defines satisfaction as associate degree emotional post consumption critical judgment regarding a product or service. Satisfaction may be represented because the feedback of a post purchase assessment of sure service/ product's quality, and compared with the expectation of the prior-purchasing stage (Kotler& Helen Keller, 2011).

In distinction, alternative researchers have ascertained that the impact practiced among the buying and intense stage of the product/service can also have a vital result on the customer's judgments toward satisfaction (Homburg, Koschate, & Hoyer, 2006). Thus, Customer satisfaction may be a customer's feeling of enjoyment or vexation once he or she has distinguished a performance of a product/service with regard to his or her expectancy (Keller & Lehmann, 2006). in line with these definitions, and in up to now as this study thinks about, customer satisfaction is that the perspective of the Customer developed in response to exploitation any sort of E-Banking services.

Consequently, E-Banking attributes might increase, decrease, or keep an equivalent customer satisfaction. Customer Satisfaction and E-Banking One main objective of this analysis is to grasp to what extent the standard of electronic services offered by banks would have an effect on the satisfaction of the customer within the Ethiopia banking sector. per Grönroos (1998), there's a gentle and positive relationship that gathers each the E-service quality and customer satisfaction Saha and Zhou (2005) outlined shopper satisfaction because the “result of perception, assessment and mental responses to the employment expertise with a product or service”; in alternative words, it's a results of associate degree intellectual and emotional assessment whereby some utilization commonplace is contrasted with the extremely seen execution.

Thus, if the performance ascertained is a smaller amount than what was expected customers won't be happy, whereas if the performance skilled exceeds expectations then they'll be thought-about to be happy customers, that represents positive outcomes for each the bank and therefore

the Customer Loiy Bani Ismail and Mahomet Alawamleh (2017). Resou dam Ahmed genus Musa Hamid<sup>1</sup>, Nabil Mohamed Abdo Alabsy<sup>2</sup>, Mohanad Abbas Mukhtar<sup>2</sup> (2018) Customer satisfaction is outlined. Customer satisfaction may be a may be a pleasure or disappointment ensuing from comparison a product's perceived performance or outcome in relevancy his or her expectations (Musiime and Biyaki, 2010). Supported this study, Customer satisfactions are outlined because the live off however a product or service given to a customer meets the expectations of that specific Customer.

To check this relationship, jain modifies it in a better formula and reaches the conclusion that nice customer satisfaction vastly depends on receiving a much better and better quality service (Jain &—Gupta, 2004). Variety of further studies indicates to a relationship between customer satisfaction and E-Banking services. Asiyanbi and Ishola (2018) incontestable that the satisfaction degree of shoppers within the banking sector can increase once mistreatment E-Banking services. Similarly, Ranaweera and Neely (2003) verified that the standard of E-service is that the opening of customers' satisfaction Likewise, analysis conducted within the banking sector by Bei and Chiao (2006) recognized a serious relationship between the standard of the service and also the customer satisfaction degree of shoppers.

Dimensions of E-Banking Service touching customer Satisfaction With variety of studies convergence to indicate a relationship between E-Banking service and customer satisfaction, the Hammoud et al three questions becomes the following:

- What aspects or dimensions of E-Banking service affect customer satisfaction and in what ways?
- Our review of the literature reveals that these aspects could be grouped under efficiency, reliability, privacy and security, and responsiveness and communication.
- Speed in performing E-Banking services is a determining factor of customer satisfaction according to Parasuraman, Zeithaml, and Berry (1985).

A similar result was conjointly obtained in an empirical study done by Kettinger and Lee (2005). With relevancy privacy and security, variety of components were known and studied by researchers together with maintaining the confidentiality of operations, refraining from sharing

personal data, and insuring an honest level of security for the customer's information (Agarwal, Rastogi, & Mehrotra, 2009; Datta, 2010; Poon, 2007).

This type of service will be formed into four forms. • First, the E-Banking system will management and operate the service properly. • Second, the E-Banking channels will guide customers toward continuing properly just in case of any failing operations. • Third, it can even cowl a speedy answer for any doable error in E-Banking transactions. Finally, it will support the customer's queries with on-the spot response.

### **2.2.5 Service Quality**

Service quality is that the distinction between a customer's expectation of a service and his/her perception of the service's performance. In today's progressively competitive business surroundings, service quality is important for the success of any organization. Service quality is vital facet that affects the fight of business. Banks ought to increase the standard of service perpetually since there's no assurance that this outstanding service is additionally appropriate for future. Consequently, banks ought to "develop new strategy" to satisfy their customer and can offer quality service to tell apart themselves from rivalries (Siddiqi; 2011)

Theoretically customers' perception of service consists of two dimensions.

- Berry and parasuraman (1991) distinguish a process and an outcome dimension. Of the five dimensions of quality, reliability is primarily concerned with the service outcome,
- Whereas the rest are primarily concerned with the service process. However, all five dimensions emphasize the customer's perception of the service (functional quality) rather than the service provider's view of how the service should be delivered (technical quality).

In the case of the e-banking , how cash is processed is a functional benefit whereas effectiveness, less time spent on an AMT, easy to use and efficiency over the traditional methods are known as technical benefit. Most customers are unable to assess technical quality due to lack of technical knowledge which makes functional quality all the more important. Some problems connected to e-banking faults may require the attention of the service provider, the bank or the

communications company to intervene whereas the customer may view the problem differently due to the lack of adequate knowledge on the operations of an e-banking.

### **2.2.6 E-Banking & Customer Satisfaction**

E-service quality can be explained as an overall customer evaluation about e-service delivery in the marketplace which is virtual. One of the main reasons for the improvement of e-services quality is that customers have the opportunity to access the company's website from different places around the world and will be able to compare the company's service with others company's offering. So, online customers' expectation is higher than traditional customers. Hazlina Abdul Kadir, Nasim Rahmani and Reza Masinaei (2011).

Satisfaction has an intimate link with service quality. It is essential for the online banks to become more concern about customer's perception of the online banking services' quality as it is fairly easier for the customers to assess the advantages of competing services (Santos, 2003).

Researchers have verified that provision of quality service to customers make them to stay with an organization, also catch the attention of new ones, augment corporate image and assures endurance and profitability of an organization (Negi, 2009) (Ladhari, 2009). Customer pleasure is the contributor of absolute gains of a quality revolution, which is majorly contingent on customer's cognizance of overall service quality (Husnain&Akhtar, 2015). This is the reason that why it is very crucial to recognize how consumers perceive service quality and how it will affect their satisfaction level, through which banks can identify the gaps in service quality delivery to take essential curative actions to improve upon their activities.

Rapid delivery of innovations can be made possible by providing improved infrastructural services (Stewart, 1999). Liebana, Mufioz, and Rejon (2013) in their study posited that accessibility, ease of use, trust and usefulness has significant effect on customer satisfaction in the context of e-banking services. In evaluating electronic banking users' satisfaction, an important feature to be considered is website's user-friendliness as well as positive word of mouth. Convenience and accessibility are identified as the most important factors in improving performance of e-banking (Kaur&Kiran, 2015).

Deepened competition and deregulation has driven many services and retail businesses to seek profitable ways to distinguish them; one strategy that has been related to success in these businesses is the delivery of high service quality (Cheah, 2011). Service quality has therefore become an important research topic in past decade due to high revenues, increased cross sell ratios, higher customer retention, purchasing behaviors (Kaynak & Harcar, 2015) and increased market share.

Banking in Nigeria has come a long way from the time of ledger cards and other manual filing systems. Before the emergence of electronic banking in Nigeria, the provision of banking services were a tedious and cumbersome process, with large files kept and retrieved manually, and customers having to stand on queues for long hours and sometimes may not achieve their aim. Ogunlowore and Rotimi (2014) explain that there is no bank in Nigeria that does not render one form of e-banking service or the other, even the remote parts of the world. In the bid to measure up with the evolving nature of modern banking, the ATM was introduced into the Nigerian banking system in 1989 as an electronic delivery conduit followed by the introduction of mobile telephone in 2001. The growth of electronic banking in Nigeria can be traced to the decision of banks to utilize e-banking facilities efficiently in order to provide quality services (Abaenewe et al, 2013; Agwu and Murray, 2014).

Agboola (2012) studied the effect of computer automation services and discovered that electronic banking has vastly improved the services of some banks to their customers in terms of satisfaction in Lagos. He asserted that e-banking provided customers with a wide range of financial benefits such as lower transaction handling fees, higher deposit rates, opportunities to win prizes and extra credit card bonus points. It enables customers save time by carrying out their transactions quickly without having to queue up and to make use of paper documents. E-banking allows customers the opportunities to tradeoff electronic data to communicate with bank staff with the aim of improving customers' satisfaction. The objections of customers' are part of the business life of any corporate entity. This is more so for banks as they are a service providing organization, the satisfaction of their customers' should be their utmost concern.

Adewuyi (2013) posited that customers' complaints, grievances and dissatisfaction can be reduced by banks through proper service delivery and review mechanism. The extent to which the customers' of a bank are satisfied with the quality of service they are provided with has an

effect on the overall performance of the bank. E-banking is expected to expand banks service delivery in a form of transactional convenience, time saving, quick transaction alert and cost saving, and in the long run customers' satisfaction. The extent to which e-banking is related to customers' satisfaction is worth assessing and that is what this study seeks to achieve.

Abubakar (2014) posited that, the involvement of electronic banking in Nigeria is traceable to 1986 when the banking sector was deregulated resulting into an extensive transformation through computerization and improved bank service delivery. However, the non-provision of adequate security for fraud has impacted e-banking in Nigeria negatively. Likewise, the epileptic network connectivity services and intermittent power supply, in general, has hindered the maximum use of e-banking in Nigeria being a developing country, as customers are unable to transact businesses at their own convenience.

Chemtai (2016) opines that technological innovation has a direct impact on performance improvement. Abubakar (2014) revealed that, e-banking has the ability to improve productivity, growth and profitability performance of banks due to low cost advantages associated with the delivery of its service. To this effect, Nigeria being a developing country has seen its banking industry benefit from the advantages of e-banking to a great extent as well as improve customer satisfaction when compared to the pre and post e-banking period. The adoption of the services of electronic banking has consequently ushered in the services of Financial Technology , geared towards improving service delivery and customer satisfaction in Nigeria, as well as a more improved and standardized banking industry.

Foreign banks in Pakistan are pioneers of employing E-banking practices in mid-1990. Following them, domestic banks also adopted it in late 90's by introducing ATM cards and debit cards. E-Banking as compared to the conventional banking majorly comprises non-human interactions between customers and banking online systems (Furst, Lang, & Nolle, 2002). Banks are providing e-banking facilities through ATM's, POS networks, Internet Banking, Mobile Banking and Call center with catering the needs of general customers for payments. Microfinance institutions are also adding their contribution to country's payments infrastructure through branch less banking. According to State Bank of Pakistan's Payment System's Review (2014-2015), e-banking transactions have shown an exceptional escalation. Volume of e-banking transactions has risen by 100% i.e. 470 million over the last five years, while the value of these

transactions have increased 62% from fiscal year 2010-11 to 2014-15. The volume of just internet banking has increased by 3% and transaction value increased by 18% reaching 798 Billion as compared to FY 2013-14. These statistics are a proof of increased customer's divergence to online services from the traditional banking, making the assurance of quality service delivery a necessity. (Parasuraman, Zeithaml, & Berry, 1985) has developed a model (SERVQUAL) for measuring service quality on the basis of study on four service sectors;

- ✚ retail banking,
- ✚ credit card services,
- ✚ repair and maintenance of electrical appliances, and
- ✚ Long-distance telephone services. The model initially consisted of ten dimensions which were reduced to five as some of them were overlapping.

Considering the increasing importance of e-banking and then quality of service in e-banking, this research article focuses on five service quality dimensions identified by (Parasuraman, Zeithaml, & Berry, 1985) and presented as comprehensive model.

### **2.2.7 Dimensions of E-Banking Service Quality**

SERVQUAL model is considered as an appropriate scale to measure service quality in various industries. Dimensions of the model fit to a particular service in order to guarantee dependable and valid results (Ladhari, 2009). In Banking sector all these dimensions have been identified vital in determining service quality. (Rahimuddin & Bukhari, 2010) While conducting research on e-banking in Pakistan have identified that bank's performance is not dependent on the mean it is using to deliver the service i.e. manual or online. Therefore customers prefer to perform the required banking transactions while sitting at home rather than going to bank, thus saving their time and money. Gaining customers trust on electronic channels is the imperative element for the triumph of the internet banking. Swift delivery of innovations can be made possible by providing improved infrastructural amenities (Stewart, 1999).

Parasuraman, Berry and Zeithaml (1988) categorized service quality into five dimensions namely: reliability, tangibles, responsiveness, assurance, empathy whose descriptions are defined below. In the case of the e-banking service, the dimensions of service quality can be relayed as follows:

- **Reliability:** The ability to perform the promised service dependably and accurately. This relates to the ability to provide a service as expected by customers in terms of speed (how quick the Transaction is performed), accuracy (how correct the transaction is in terms of money withdrawn) and if the equipment is operational 24 hours as expected. Looking at the operations of the e-banking in state owned banks reliability is one aspect that brings up a lot of outcry from the customers. In some cases the e-banking are usually offline due to unreliable communications which results in long queues. At times the e-banking run out of cash especially during the month ends when a lot of civil servants customers want to access their accounts slow response by service providers in repairing faulty e-banking also results in unreliable service. However, the e-banking in other instances perform to expectations and beyond.
- **Tangibles:** The appearance of physical facilities, equipment, personnel and communication materials. This relates to physical appearance of the e-banking. It should be appealing to the customer and should be brightly lit at night. The surroundings should be maintained clean by way of banks providing waste bins for litter generated from receipts. The personnel that E-Banking Service Quality and its Impact on Customer Satisfaction in State Owned Banks in East Gojjam Zone provide guidance to the customers should also look presentable.
- **Responsiveness:** The willingness to help customers and to provide prompt service. They may refer to the help customers get when they bring forward E-banking complaints such as accounts being debited at the same time money has not been dispensed, cards being captured underpayment, lack of certain currency denominations, no receipts being issued and situations where the e-banking is out of service for very long hours and at times days. This is another area which needs attention as customers feel the service is below their expectation.
- **Assurance:** The knowledge and courtesy of employees and their ability to convey trust and confidence. The service provider should have staff who are knowledgeable on the operations of the e-banking so as to convey confidence in the customer even when things are bad in case of the e-banking having a major technical fault, which could take days to correct, the bank should be able to convey the message to customers in a manner that will generate confidence. another way of generating confidence is by making sure that

the e-banking is in good working condition most of the time and especially during peak periods when the civil servant takes their salary from state owned banks week – ends, public holidays and festive periods.

- **Empathy:** The provision of caring, individualized attention to customers. This brings out the issue on whether the banks care as they should for customers using the e-banking. there are times when the e-banking s are completely down and customers are left stranded and the end result are complaints that the banks do not care. However, there have been instances when the bank has selected to open doors to the customers way beyond the normal banking hours just to provide for their customer’s needs. This is in a situation where their e-banking are unable to provide a service to the customer and this is at the discretion of the bank.

### **2.3 Empirical Reviews**

Munusamy et al., (2010) conducted a study to assess Service quality delivery and its impact on customer satisfaction in the banking sector in Malaysia. The study uses the five dimensions of service quality (tangibility, reliability, responsiveness, assurance and empathy). The result of the study showed that the three service quality dimensions (assurance, empathy, and responsiveness) have positive and insignificant effect on customer satisfaction. Tangibility has a positive and significant impact on customer satisfaction. However, reliability has a negative and insignificant effect on customer satisfaction. Mohammad and Alhamadani (2011) conducted a research on the service quality perspectives and customer satisfaction in commercial banks working in Jordan again by examining the Five dimensions of Service quality(tangibility, reliability, responsiveness, assurance and empathy) and Investigated that The five service quality dimensions (tangibility, reliability, responsiveness, assurance and empathy) have a positive and significant effect on customer satisfaction.

Al-Hawary et al., (2011) in his study of Banking service quality provided by commercial banks and customer satisfaction using the five dimensions of SERVQUAL (tangibility, reliability, responsiveness, assurance and empathy examined that four service quality dimensions (tangibility, reliability, assurance, and responsiveness) have a positive and significant effect on customer satisfaction. Empathy has a negative and significant effect on customer satisfaction. Similarly, the study of Malik et al., (2011) tried to investigate an answer for how do service

quality perceptions contribute in satisfying banking customers? By using the five dimensions of SERVQUAL (tangibility, reliability, responsiveness, assurance and empathy) and concluded the two dimensions of service quality (reliability, assurance) have a significant and positive effect on customer satisfaction.

However, the rest three service quality dimensions (tangibility and responsiveness and empathy) have no contribution to customer satisfaction. The study of Kassa (2012) aimed at examined the effect of customer service quality on customer satisfaction in selected private banks in Addis Ababa. The results of this study indicate that, except responsiveness the four service quality dimensions (tangibility, assurance, empathy and reliability) have positive and significant relationship with customer satisfaction. The finding of this study also indicates that customers were most satisfied with the assurance dimensions of service quality. On the contrary, customers were less satisfied with reliability and empathy dimensions of service quality. An empirical study of automated teller machine service quality on customer satisfaction was conducted by Idowu & Fadiya (2015). The purpose of this paper E-Banking Service Quality and its Impact on Customer Satisfaction in State Owned Banks in East Gojjam Zone were to measure customer satisfaction as regards to e-banking services.

The research was carried through survey design which questioned respondents on e-banking services. The population of study mainly constituted of customers of united bank for Africa within Lagos. The sample in this study consisted of 200 respondents who are users of the e-banking services. The data collected was analyzed by use of multiple logistic regression analysis and Pearson correlation. The findings revealed that, necessary input to the bank management to increase customers' satisfaction through improving e-banking service quality. The focus should not be on e-banking service quality dimensions only. This aspect should be augmented and integrated with other aspects of the service quality of banks for satisfaction of customers. They concluded that among the e-banking service quality dimensions, reliability, responsiveness, and empathy are the most important factors to increase the satisfaction level. Whereas in measuring the customer satisfaction as regards to e-banking services, assurance dimension shows insignificant in comparison to other dimensions.

A study of Narteh (2013) was on "service quality in automated teller machines: an empirical investigation", managing service quality. The aim of this paper is to identify the dimensions of e-

banking service quality and to evaluate customers' perceptions of the relative importance of these dimensions. A structured questionnaire gleaned from the literature and focused group studies was used to collect data from 530 e-banking customers of 15 banks in Ghana. Descriptive statistics, exploratory and confirmatory factor analysis, as well as multiple regression, were used to identify the relative importance of the dimensions of e-banking service quality the paper identified five dimensions of the "e-banking QUAL" model. In order of importance, these dimensions are reliability, convenience, responsiveness, ease of use and fulfillment.

Furthermore (Assefa, 2013) conducted a study on the impact of E-banking on customer satisfaction in two private banks in Gonder city. the researcher employed descriptive and inferential statistics in analyzing this study and it was limited to customers of two private banks only .the results of the study implied that majority of users of E-banking are the young ,the educated ,salaried and students ,business men and women are not actively using the service E-banking. E-banking currently provided for saving and current accounts holders only, E-banking reduced frequency of bank hall for banking service, reduced waiting time for customers, there are customers who don't know the fee charged for being E-banking users, the bank customers satisfaction increased after being E-banking users, enabled customers to control their account movements and there is high opportunity to expand E-banking service in the city.

## **2.4. E-Banking Variables**

### **2.4.1 Determinants of Customer Satisfaction**

Exploratory research by (Parasuraman, Berry, & Zeithaml, 1985) first identified ten overlapping dimensions of service quality which customers use to assess the quality of a service. The dimensions are: - 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.

The best service quality is very important in banking today. Johnston (1997) noted that to particularly appraise and advance customer perceived service quality, it's significant to identify the determinants of service quality. Inferring from available literature, seven service quality dimensions has been identified for this study (Zethaml et al., 2002). These determinants used for

this study are Reliability, Responsiveness, Assurance, efficiency, security, Accessibility and ease of use.

### **Reliability**

Is a crucial dimension that affects users' intention to adopt e-banking services in the highly competitive banking industry? Many researchers argued that the success of e-banking depends on the reliability of the services since customers expect the promptness of delivering services in an accurate way (Addai et.al, 2015; Nupur, 2010; AlHaliq and AlMuhirat, 2016). Reliability involves accuracy in billing, keeping records correctly, performing the service at the designated time and providing services as promised (Nochai and Nochai, 2013). Accordingly, reliability is liable to ensure a positive and strong conviction among customers that the bank is working for their benefits as any deficiency in this belief will lead them towards dissatisfaction on e-banking services (AlHaliq and AlMuhirat, 2016). Banks should be reliable of performing the service right the first time and the firm should honor its promises to enhance customer satisfaction (Wang and Wang, 2006). To conclude, a reliability of e-banking will have a relationship with customer satisfaction

### **Responsiveness**

Responsiveness of the bank is an important element for enhancing the service quality and customer satisfaction in online banking since it concerns the willingness or readiness of employees to provide services (Wang and Wang, 2006). Accordingly, responsiveness based on problem handling, recovery of the problems; prompt services, timeliness services and helping nature of employees towards customers (Kumbhar, 2011). The consumers are always expecting to complete the transactions correctly, receiving personalized attention when performing transactions and desire to have their emails answered quickly (Marete, Gommans and George, 2014). When problems occur, customers must be able to contact customer representatives immediately and they are responsible to guide on how to solve them and teach the customers regarding the new innovations of e banking by maintaining a relationship like a good friend not like a business to increase customer satisfaction (Nochai and Nochai, 2013). Hence, it is hypothesized that there is a relationship between the responsiveness of e-banking and customer satisfaction

### Assurance

Assurance is 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).

### Efficiency

In this study efficiency is used as a measure of quality of variables (reliability, responsiveness, assurance, accessibility, security and ease of use) .Essentially, a more efficient estimator, experiment, or test needs fewer observations than a less efficient one to achieve a given performance.

### Security

Security plays a major role in making customers feel safe in their transactions and ensuring the physical safety, financial security and confidentiality (Nochai, 2013). According to Sharma (2016), security is the prime concern for banks as that affect the confidence to adopt e-banking services; therefore, they need to permit their customers to perform a broad range of banking activities without any fear. Indeed, security risks are one of the main obstacles for a customer to moves from traditional banking to online banking as an unauthorized individual may access to confidential information (Waheed, Khan and Ain, 2012) because the usernames and password combination is relatively easy to acquire and then relatively easy to commit financial fraud (Nupur, 2010). It is the responsibility of banks to ensure the customer's personal information remains safe and private. Steward (1999, cited in Waheed, Khan and Ain, 2012) stressed that organizations which strengthen their level of security and privacy can achieve easily the customer's loyalty since the security of e-banking services are closely related to customer's satisfaction.

### Accessibility

Accessibility is defined as the ability of users to access information and services from the web, this depends on many factors. They include: the content format; the user's hardware, software and settings; internet connections; the environmental conditions and the user's abilities and disabilities (Godwin-Jones 2001; Hackett and Parmanto, 2009). The term web accessibility

generally relates to the implementation of website content in such a way as to maximize the ability of users with disabilities to access it. For example, providing a text equivalent for image content of a web page, allows users with some visual disabilities access to the information via a screen reader.

The techniques and approaches that create more accessible web pages for people with disabilities also address many other access issues such as download speed and discoverability (Hackett et al., 2004; Hackett and Parmanto, 2009). Yang and Jun (2002) redefined the traditional service quality dimensions in the context of online services, and suggested an instrument consisting of seven online service dimensions (reliability, access, ease of use, personalization, security, credibility, and responsiveness). Joseph et al., (1999) considered banking service quality with respect to technology use, such as ATMs, telephone, and the internet and identified six dimensions.

#### **Ease of use**

Ease of use is important in using e banking which related to customer apprehension about the efforts required to learn to use electronic banking (david, 2010).it is considered as the factor influencing the adoption of electronic banking, and related to an easy to remember in codes and URL address, well-organized and usable software .easy of site navigability, concise and understandable contents, terms and conditions (alagheband, 2006)

In general, most of e- banking related studies are too remote for our cases and even the study of Assefa (2013) which is found to be similar to the present topic were done in only considered from customer perspective and qualitative approach also Sintayehu Yitbarek (2015), studies the case of selected commercial bank in Addis Ababa on the impact of e- banking services on customer satisfaction on explanatory variables (Reliability, Transaction efficiency, Customer Support, Service Security, Ease of Use, Performance and Service Content). Thus, this study is designed to examine the impact of E-banking on customer satisfaction in commercial bank of Ethiopia Addis Ababa to address the current gap in the literature, methodology and variable that was not done by Assefa and Sintayehu respectively.

## 2.5 Conceptual Framework

Conceptual framework indicates the crucial process, which is useful to show the direction of the study. The study will show the effectiveness of the five service quality dimensions in terms of customer satisfaction in E- banking service. Electronic Banking Services is a banking channel that allows consumers to do many transactions, either financial or non-financial through a bank's websites. The technological revolution produced modern technical instruments which have been used to facilitate and improve banking services. The electronic services represent the forms of self-services, so that the customer can do what he/she needs him/her selves. In this regard the electronic services should be designed on the basis of the needs, wants, expectations, and experiences of the customers according to the following standards:

- ✓ firstly the electronic services should have the easiness to use so that the customer can perform the tasks easily,
- ✓ Secondly the speed of electronic services should be high, and
- ✓ Finally the electronic services should have the credibility, and there should be compatibility between these services and other technical services.

It is based on the service quality dimensions developed by (Parasuraman, Berry, &Zeithaml, 1985) which are (Reliability, Responsiveness, Assurance efficiency, security, accessibility and ease of use) with the objective of assessing their impact on dependent variable.

The left side of the figure shows that the service quality dimensions while the right side shows customer satisfaction which is affected by service quality.

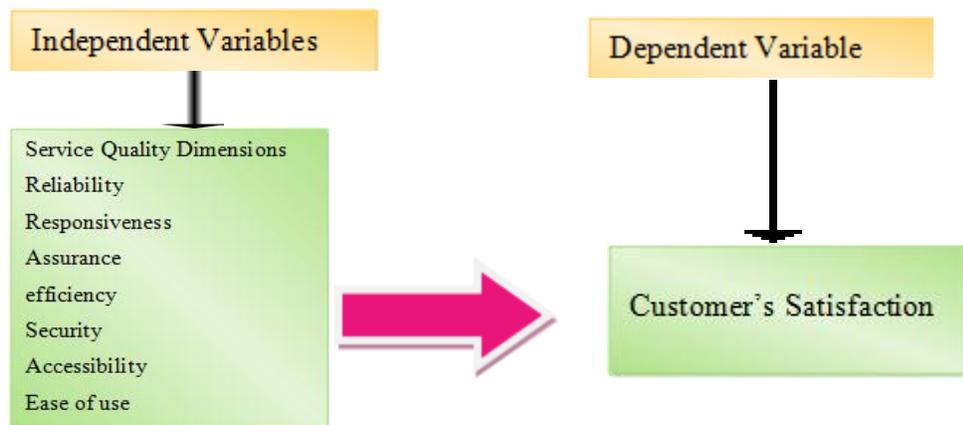


Figure 2.1: Conceptual Framework of the study.

## **CHAPTER THREE**

### **3. RESEARCH DESIGN AND METHODOLOGY**

This chapter presents methodology that the researcher used to carrying out the Study. According to Sharma; “methodology refers to as system of principles and methods of organizing and constructing theoretical and practical activity (Sharma, 1992).” similarly Collins wordbook (2010) has outlined methodology as “the techniques and methods used within a discipline to manipulate information and acquire knowledge.” It represented the analysis style, place of study, the targeted population sample furthermore as sampling ways in which and sample size. Furthermore, the chapter covered types of data and data collection procedures and goes on presenting the data management strategy, data analysis and interpretation.

#### **3.1 Research Philosophy**

This study adopts descriptive survey design. It is found appropriate because it involves collecting data in order to answer reliable questions concerning the current status of subjects under study and the research design provides facts and suggestions on major connections between the variables. The primary purpose of this study is to identify the impact of e-banking service quality on customer satisfaction in commercial bank of Ethiopia Addis Ababa.

#### **3.2 Source and Type of Data**

The population about which analysis made was the total customers of commercial bank of Ethiopia which are located in Addis Ababa. This study used primary moreover as secondary information .The required primary data collected through questionnaires and semi structured interviews. The secondary data is used for supporting the study and to get the findings of other researchers in the area (empirical study). The sources of secondary data is library books, newspapers on business, magazines on business, quarterly magazine published by public relation of NBE (Birtu), annual reports of different commercial banks, reports of national bank of Ethiopia, web sources, reports created by Ethiopian bankers association on establishing national electronic banking systems, fortune, newspaper that targeted on business reports, and other related materials will be used.

This study employed survey design because which is the most appropriate research design for management and business research. Survey method is preferred because it gives highly specific and precise data and also the population was relatively large, the population of the study comprised of customers and of the sample CBE. These customers are those who have been with commercial bank of Ethiopia for at least one year. The staff will comprise of selected branches of business manager, sales manager and marketing teams.

### **3.3 Sample Size and Sampling Techniques**

In terms of sampling technique stratified random sampling techniques was used which is a type of probability sampling technique. A research organization was branch off the complete population into multiple non- overlapping, homogenous teams (strata) and randomly select final members from different strata for research which reduces cost and improves efficiency. Members in every of those teams ought to be distinct so each member of all teams gets equal opportunity to be chosen straightforward likelihood.

#### **Sample size determination**

In determination of sample size three criteria are very important to gather the required data from sample respondents. These included:

- the level of precision
- Level of confidence and
- The degree of variability in the attributes being measured that enable the researchers to determine appropriate sample size (miauou & Michener, 1976).

Due to more homogeneous a population is the third criterion was selected for this study that is the degree of variability in the attributes being measured refers to the distribution of attributes in the population which requires small sample size to obtain a given level of precision.

Under this study the researcher randomly selected **21** Respondents from population to perform small pilot studies to estimate **standard deviation**.

Standard deviation was calculated using  $n = 21$ , which is got from pilot study:

$$n = (z_p/e)^2 \text{ where } n=21 \text{ formulas}$$

$$n = (z_p/e)^2 \text{ where } n=21$$

$$21 = (1.96p)/0.05)^2$$

$$p=0.12$$

To determine sample size for large and homogeneous using, Cochran (1963:75) formula and proportion that was calculated from pilot study applied to yield a representative sample size.

$$n_0 = Z^2 pq/e^2, \text{ where}$$

$n_0$  = is the sample size

$Z$  = is that the Cartesian coordinate of the conventional curve that cuts off a locality at the tails

$e$  = is that the desired level of exactness,

$p$  = is that the calculable proportion of associate degree attribute that's gift within the population, and

$q$  = is  $1-p$ .

$$n_0 = Z^2 pq/e^2 = (1.96^2 \cdot 0.88 \cdot 0.12 / 0.05^2), \text{ where } q=1-p$$

$$n=162$$

**Table 3.3.1 Number of customers those actively use E-banking.**

Name of branches	District	No of Mobile user	No of Atm user	No of internet user	Total no customers
Genetetsige	North	5504	7550	71	13125
Saris	South	3420	4240	45	7420
Kotebe	East	2010	5170	35	7150
Habtegiorgis	West	2270	2649	31	4950
Total=					=32645

Then sample size of each branch can be calculated using the above table as follows:

**To determine sample size from each branch:**

$$n_h = (N_h/N) * n, \text{ where}$$

$n_h$  = branch sample size

$N_h$  = total sample size

$N$  = total population

$n$  = branch number of customer

**1. No of customers selected from Habtegiorgis=**

$$n_h = (162/32645) * 4950$$

**$n_h=25$  therefore, 25 customers are selected from habtegiorgis branch.**

**2. No of customers selected from genetesige branch**

$$n_h = (N_h/N) * n$$

$$n_h = (162/32645) * 13125$$

$n_h=65$  therefore, 65 customers are selected from genetetsige branch.

**3. No of customers selected from saris branch**

$$n_h = (N_h/N) * n$$

$$n_h = (162/32645) * 7420$$

**$n_h=37$  therefore, 37 customers are selected from A branch.**

**4. No of customers selected from Kotebe branch**

$$n_h = (N_h/N) * n$$

$$n_h = (162/32645) * 7150$$

**$n_h=35$  therefore, 35 customers are selected from B branch.**

**Number of customers selected from four branches is:**

**Hbtegiorgis branch + Genetetsige branch + saris + kotebe = 25+65+37+35**

$$n_0 = 162$$

### 3.4. Method and Instrument of Data Collection

The primary data has obtained from the questionnaires, which is answered by the respondents. Questionnaires can measure both quantitative and qualitative data it also good tool for protection of the privacy of the participants. Questionnaires contain both closed and open-ended questions that are well administered by the researcher. This study used not only questionnaires but also semi structured interviews to guide illiterates and semi-literates customers.

Structured questionnaires has been developed containing close ended questions to ensure consistency, to coding the data, and to analysis the data properly. The variables have been measured using Likert scale with five response categories (Strongly disagree, disagree, neutral, agree, and strongly agree). The Likert scale methodology is most popular to create queries fascinating to respondents and thereby enhance their cooperation (Robson Colin, 2002).

The questionnaire for this study has four sections:

- Section ‘1’ has personal information (age, gender, occupation, income level, marital status and educational level) questions. In order to get the real picture of the mind of the respondents.
- Section ‘2’ has questions associated with E-banking service quality.
- Section ‘3’ has questions associated with customer satisfaction and
- Section ‘4’ has questions interview questions.

This form has been adopted with few modifications from:

- Jamil Hammoud<sup>1</sup>, Rima M. Bizri<sup>1</sup>, Ibrahim El Baba. (2018)
- Ms. Jyotsna Sharma, Research Scholar IKGPTU, Kapurthala (2020).
- Areeba Toor<sup>1</sup>, Mudassir Hunain<sup>2</sup>, Talha Hussain<sup>1</sup>, Shoaib Ali<sup>2</sup> & Adnan Shahid<sup>2</sup> (2016).

Glaser and Strauss (2009) explain that questionnaires are an important instrument for research as a tool for data collection. The use of questionnaires justifies to the extent that questionnaires are effective way of collecting information from a large literate sample in a short period of time and at a reduced cost than other methods.

Both primary and secondary data were employed. A questionnaire has four parts:

- The first part of the questionnaire is about the demographic characteristics of respondents.
- The second section designed to measure e-banking service quality.
- Third part is to identify customers' satisfaction about bank e-banking service deliver.

### 3.5 Validity and Reliability of Data

#### Reliability Test

Reliability Statistics

Cronbach's Alpha	N of Items
.971	8

Source: spss out put

The validity determined by the professional use of old researchers from the University of Eastern Africa continent, Baraton. Internal consistency of the information obtained from this research instruments determined by the utilization of Cronbach's constant Alpha. The reliability coefficient for each section of the questionnaire addressing different variables was computed based on the responses given by the customers from selected branches which were involved in a pilot study. The Alpha coefficient of the whole items for my source study was 0.748 and the coefficient that determined the reliability of the instrument for this study was 0.971 which is above 0.6 so the instrument was valid and reliable for data collection.

### 3.6 Research Design

Usually researches are grouped into three (Yin, 2003) supported the aim of the research or the research problems and objectives. These three types of researches are exploratory, descriptive and explanatory. Not with standing these categorizations a given research study can have more than one of these purposes (Saunders et al, 2000; Babbie, 2004). From the research problems, questions and objectives this study used mainly descriptive and explanatory research. Descriptive

research is employed to seek out data concerning this standing of a development to explain “what exist” with reference to variables or conditions in an exceedingly scenario (Yin, 2003). Additionally, it offers the number of times an event occurs, or the frequency and also helps in statistical calculation such as determining the average of occurrences or central tendencies (Yin, 1994). A key limitation to descriptive research is that it does not lend itself the calculation of causal relationship. This is where explanatory research comes in which helps to establish the relationship between independent and dependent variables. Also qualitative research approaches is uses partially to guide this subsequent research efforts.

### **3.7 Research Approach**

A research design is a plan or strategy used to get expected study results (Kothari, 2004). A hunt design includes an overview of what the investigator will do from untying the hypothesis, or research questions, and their operational implications to the ultimate analysis of data (Polit and Beck, 2006). Research design is categorized into different types betting on the characteristics of the study, which includes case study design, survey design and experimental design. The look of the study is quantitative in nature one of the characteristic of quantitative research made it suitable for the study is that the researcher uses semi structured interviews instrument (open ended questionnaire) and questionnaires to collect the data from each participants. However, the study makes use of mainly quantitative research approach although the qualitative research approaches is also partially uses to collect and analyze given data on the relationship between two variables namely impact of electronic banking service quality and customer satisfaction.

### **3.8 Method of Data Analysis**

For analysis of variable under investigation the statistical package for social science (SPSS 24.0) was used then the data was summarized through:

- ❖ Frequency tables and figures
- ❖ Chi square test (test dependency) which was used to determine the relationship between demography of individuals and customer satisfaction.
- ❖ The descriptive statistical results presented by tables, frequency distributions and percentages to give a condensed picture of the data.

This achieved through summary statistics of service quality variables (Reliability, Responsiveness, Assurance, accessibility, security, ease of use and efficiency) and Customer Satisfaction of E-Banking Service Quality and its Impact on Customer Satisfaction in banking concern of Ethiopia Addis Ababa. Means, standard deviations, which are computed for each variable in this study, Pearson's correlation coefficients were used to determine the relationships between service quality dimensions (Reliability, Responsiveness, Assurance, accessibility, security, ease of use and efficiency) and customer satisfaction.

Correlation analysis refers to the techniques used in measuring the relations that exists between the dependent variable and the independent variables while the regression analysis ascertains the impact of the independent variable on the dependent variable

Regression model specification and multiple regression analysis were used to investigate the impact of service quality dimensions (Reliability, Responsiveness, Assurance, accessibility, security, ease of use and efficiency) on customer satisfaction.

The equation of multiple regressions on this study is generally built around two sets of variables, namely dependent variables (customer satisfaction) and independent variables (Reliability, Responsiveness, Assurance, accessibility, security, ease of use and efficiency).The basic objective of using regression equation on this study is to make the researcher more effective at describing, understanding, predicting, and controlling the stated variables.

Regress customer satisfaction on the service quality dimensions as follows:

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7,$$

Where Y is the dependent variable( customer satisfaction)and Reliability, Responsiveness, Assurance, accessibility, security, ease of use and efficiency(X1,X2, X3, X4, X5, X6and X7)are the explanatory variables respectively..

B0 is the intercept term- it gives the mean or average effect on Y if all the variables are zero.

B1,  $\beta_2$ ,  $\beta_3$ ,  $\beta_4$ ,  $\beta_5$ ,  $\beta_6$  and $\beta_7$  are refer to the coefficient of their respective independent variables which measures the change in the mean value of Y, per unit change in their respective independent variables.

## CHAPTER FOUR

### 4. DATA PRESENTATION, ANALYSIS AND DISCUSSIONS OF RESULTS

#### 4.1 Descriptive Statistics

A total of 162 questionnaires were personally handed to the respondents with close follow up and guide in filling the questioners. But Due to various reasons, the total number of questionnaire did not returned from the respondents. From the total of 162 sample size, 141 questionnaires had been filled and returned without any ambiguity and missing questions. So to get the response rate, the returned questionnaire is divided by the total distributed questionnaire and any response rate more than half of the total sample size is acceptable for analysis (Kotler, 1997). The response rate for this study is 87.03% which is reliable and reasonable for analysis. Several questions were asked related to the E-banking service and their satisfaction level to the E-banking customers of the selected four branches from commercial bank of Ethiopia in Addis Ababa. The basic assumptions are that e-banking service quality dimensions namely (reliability, responsiveness, assurance, and accessibility, ease of use, security and efficiency) influence customer satisfaction.

A multiple regression modeling approach was planned as an efficient technique for finding out the relationships. The results of this multiple regression model is analyzed and mentioned during this chapter. The statistical analysis of this study was done by SPSS software, version 24. And the results of the study were shown in inference and descriptive section. In descriptive section, tables, charts, and statistics and in inference section, the result of multiple liner regression was analyzed. To estimate the reliability of the questionnaire a pilot sample of 21 people were selected from four branches and Cronbach Alpha was computed by SPSS software.

Cronbach Alpha is administered to evaluate the internal consistency of the data. If the Cronbach Alpha value is greater than or equal to 0.7, it is considered acceptable for the data to be reliable (Hair et al., 2006). As results of Cronbach's alpha of this study is.971 it consummated the minimum acceptable level of dependability that the service quality dimensions have internal consistency.

Table 4.1: Cronbach Alpha Coefficient for each Variable

	Scale Mean if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
RELIABILITY	86.1302	.852	.971
RESPONSIVNES	86.1905	.977	.973
ASSURANCE	86.0952	.984	.972
ACCECABLITY	86.2381	.960	.974
SECURITY	86.1429	.918	.976
EASEOFUSE	86.2857	.965	.973
EFFICENCY	86.5714	.707	.986
CUSTOMERSATSFAU CTION	86.1429	.990	.972

Source: SPSS output

## 4.2. The Respondents' Response Rate

### 4.2.1. Descriptive Analysis of Personal Information

The respondents' sex, age, level of education, marital status, occupation, monthly income, Length of e-banking usage and Frequency of e-banking usage in a month of selected commercial banks in Addis Ababa is included under the personal information of the customers/respondents. Based on the questionnaire outcome, personal information of the respondents has been discussed by using percentage and frequency on the following tables.

### 4.2.2 Gender

Table 4.2.2: Gender

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Valid MALE	83	58.9	58.9	58.9
FEMALE	58	41.1	41.1	100.0
Total	141	100.0	100.0	

SPSS output of the survey, 2021 Significance at 0.05

Table 4.2.2 indicate the result about Gender in the survey, the results show that majority of the population in 141 respondents are Males with a 58.9% (n=83) and 41.1% (n=58) are Females. The gender proportion explains that the majority of sample respondents of Commercial Bank of Ethiopia in Addis Ababa are male.

#### 4.2.3 Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25	14	9.9	9.9	9.9
	26-30	23	16.3	16.3	26.2
	31-40	61	43.3	43.3	69.5
	40+	43	30.5	30.5	100.0
	Total	141	100.0	100.0	

SPSS output of the survey, 2021 Significance at 0.05

In connection with the age group, table 4.2.3 shows that the majority of the respondents are with the age of 31-40, which contain 43.3 % (n=61), of the overall respondents. And this indicate that most of the economic activity is performed by these age groups as the same time this age group have a linkage with the bank as a customer than other age categories. The next 30.5% (n=43), is within the age of 40+, 16.3% (n=23), is within the age of 26-30, and 9.9% (n=14), is within the age of 18-25. The least percentage of 9.9% (n=14), indicates that at the age of 18-25 the customers/respondents are youth.

#### 4.2.4: Educational level

Table 4.2.4: Educational level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	PRIMARY	5	3.5	3.5	3.5
	SECONDARY	15	10.6	10.6	14.2
	CERTEFICATE	12	8.5	8.5	22.7
	TVTE	23	16.3	16.3	39.0
	DIPLOMA	44	31.2	31.2	70.2
	DEGREE	41	29.1	29.1	99.3
	MASTERS	1	.7	.7	100.0
	Total	141	100.0	100.0	

SPSS output of the survey, 2021 Significance at 0.05

Customers were asked to state the level of education they have attained to establish level of understand ability of e-banking. Table 4.2.4 shows that 31.2% of the respondents are at the diploma level from overall respondents, 29.1% are degree holders, 16.3% are TVTE, 10.6% are secondary school, 8.5% are certificate holder, 3.5% are primary school and 0.7% is masters holder. The majority of the respondents are diploma holders and small numbers of the respondents are master's holders this indicates that level of education might give the researcher a clue about respondents' understanding level about the issues raised on the survey questionnaires. Most of the respondents are in the age range of 18-40 it's about 69.5% of the total sample size. When it comes to the level of education, it is clear from the table 4.2.4 that above 60.3% of the respondents are degree and diploma holders. This indicates that most of the respondents can understand and evaluate banking service quality dimensions and their response is supposed to be rational.

#### 4.2.5: Marital status

Table 4.2.5: Marital status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SINGLE	53	37.6	37.6	37.6
	MARRIED	88	62.4	62.4	100.0
	Total	141	100.0	100.0	

SPSS output of the survey, 2021 Significance at 0.05

The result has been shown in table 4.2.5 related to the marital status of respondents who participated in this survey. The majority of respondents are married with 62.4% (n=88) and single with 37.6% (n=53).

#### 4.2.6: occupation

Table 4.2.6: occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	GOVERNMENT	14	9.9	9.9	9.9
	PRIVATE	47	33.3	33.3	43.3
	BUSINESS	40	28.4	28.4	71.6
	OWN JOB	21	14.9	14.9	86.5
	PENSIONERY	15	10.6	10.6	97.2
	STUDENT	4	2.8	2.8	100.0
	Total	141	100.0	100.0	

SPSS output of the survey, 2021 Significance at 0.05

as per the occupational status of the sample respondents majority of them who represents 33.3% (n=47) of the sample respondents are private employed and the second highest are doing business with the rate of 28.4% (n=40) followed this by 14.9% (n=21) employee in own job,

after these 10.6% (n=15) of respondents are pensioner and there is government employed by 9.9% (n=14) and the last lowest level has students with the rate of 2.8% (n=4).

#### 4.2.7: income level

Table 4.2.7: income level

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid BELOW 1000	16	11.3	11.3	11.3
1000-4500	67	47.5	47.5	58.9
4500-10000	52	36.9	36.9	95.7
10000-50000	5	3.5	3.5	99.3
50000+	1	.7	.7	100.0
Total	141	100.0	100.0	

SPSS output of the survey, 2021 Significance at 0.05

the result shown that the majority of respondents who receive the highest income are 47.5% (n=67) and their income between birr 1000 to 4500 , and the second highest income under birr 4500 to 10,000 who are 36.9% (n=52), followed by 11.3% (n=16) respondents their income below birr 1,000 ,the fourth highest income under birr 10000 to 50,000 by 3.5% (n=5) and income of respondents who are above birr 50000 with the rate 0.7% (n=1).

#### 4.2.8: length of E- banking usage

Table 4.2.8: How long have you been using E- banking?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid LESS THAN ONE YEAR	14	9.9	9.9	9.9
1-3YEAR	30	21.3	21.3	31.2
3-7YEAR	62	44.0	44.0	75.2
7YEAR+	35	24.8	24.8	100.0
Total	141	100.0	100.0	

SPSS output of the survey, 2021 Significance at 0.05

The highest respondents with the rate of 44% (n=62) are from 3 to 7 years and the second highest respondents are 24.8% (n=35) goes to using E- banking between more than seven years, and the third highest respondents who using E- banking between 1-3years with 21.3% (n=30) and the last lowest related to those respondents using E- banking are less than one year with the rate of 9.9% (n=14) the result .

#### 4.2.9: frequency of E-banking usage in a month

Table 4.2.9: frequency of E-banking usage in a month

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid NONE	2	1.4	1.4	1.4
ONCE	20	14.2	14.2	15.6
TWICE	50	35.5	35.5	51.1
THREE+	69	48.9	48.9	100.0
Total	141	100.0	100.0	

SPSS output of the survey, 2021 Significance at 0.05

The result has been shown in table 4.2.9 related to frequency of E-banking usage in a month who participated in this survey. The highest respondents with the rate of 48.9% (n=69) and the second highest respondents are 35.5% (n=50) using E- banking more than twice in a month, and the third highest respondents who used E- banking service once in a month with 14.2% (n=20) and the last lowest related to those respondents are none using E- banking in a month with the rate of 1.4% (n=2).

#### 4.3. Mean and Standard Deviation

Analysis has been done by comparing these mean scores and deviations among respondents. The reason for using descriptive statistics is to compare the different factors that affect the level of customer satisfaction of selected commercial banks in Addis Ababa by using the means and standard deviation values.

Table 4.3: Mean and Standard Deviation

**Descriptive Statistics**

	N	Items	Mean	Std. Deviation
Responsiveness	141	3	4.46	0.83
Assurance	141	3	4.47	0.80
Accessibility	141	3	4.5	0.83
Reliability	141	4	3.46	1.15
Security	141	3	4.49	1.87
ease of use	141	3	4.38	0.94
Efficiency	141	5	2.69	1.06
Customer satisfaction	141	4	3.35	1.12
Valid N (listwise)	141			

Source: SPSS regression results

This descriptive statistics is indicated that customer’s satisfaction on e–banking is above satisfactory level with a mean value of 3.30 on a 5 point Likert scale except efficiency with mean and st.dev 2.69 and 1.06 respectively. As indicated in Table 4.4 customers of commercial bank of Ethiopia in Addis Ababa were satisfied by the six service quality dimensions with a mean and standard deviation of (responsiveness4.46and . 0.83, assurance 4.47and 0.80, accessibility4.5and 0.83, reliability 3.46and 1.15, security 4.49 and 1.87 , ease of use 4.38 and 0.94 ) respectively.

The highest number of mean indicated that the customers are more satisfied by service quality dimensions and the highest number of standard deviation indicated that the customers are less satisfied by service quality dimensions of the bank. However, table 4.3 indicated that customers of the commercial bank of Ethiopian Addis Ababa were satisfied by six service quality dimensions (responsiveness, assurance, accessibility, reliability, security and ease of use). Table 4.3 indicates that these six variables Therefore, it may be E-banking -have Impact on Customer Satisfaction in commercial bank of Ethiopia Addis Ababa .However, customers are less satisfied with efficiency at a mean of 2.69 and The customer satisfaction has a mean score 3.35which indicates that overall customers are satisfied with the service quality of the CBE .

## 4.4. Inference Findings

### 4.4.1. Chi-Square Test

Table 4.4 indicated that the relationship between demographic characteristics and customer satisfaction on e-banking service quality had been tested using Chi-Square test. The test statistics was chosen because the variable under study was categorical.

Table 4.4.1 Chi-Square Test for Independence Result

<b>Demographic character</b>	<b>value</b>	<b>Df</b>	<b>Sig.(2sided)</b>
<b>Gender</b>	8.93	9	0.44
<b>Age</b>	19.8	27	0.83
<b>Educational level</b>	48.89	54	0.67
<b>Marital level</b>	16.27	9	0,06
<b>occupation</b>	57.6	45	0,09
<b>Monthly income</b>	34.8	36	0.52

Source: SPSS analysis result

Chi-square result indicated that all demographic variables are more than p-value (0.05).this means that the alternative hypothesis of this study should be rejected because all demographic characteristics do not influence satisfaction level of customers in e-banking.

### 4.4.2. Regression Analysis

In this section regression analysis for dimensions of customer satisfaction on e-banking have been undertaken to understand the relationship between customer satisfaction on e-banking and explanatory variables.

#### 4.4.2.1. Diagnosis Tests

Before applying regression analysis, some tests were conducted in order to ensure the appropriateness of data to assumptions regression analysis as follows:

## Linearity Test

Linearity refers to the degree to which the change in the dependent variable is related to the change in the independent variables. To determine whether the relationship between the dependent variable CSEB and the independent variables X1(reliability), X2 (responsiveness), X3 (assurance) X4(accessibility), X5(ease of use), X6 (security) and X7(efficiency) is linear; plots of the regression residuals through SPSS software had been used. If your residuals are normally distributed and homoscedastic don't have to worry about linearity.

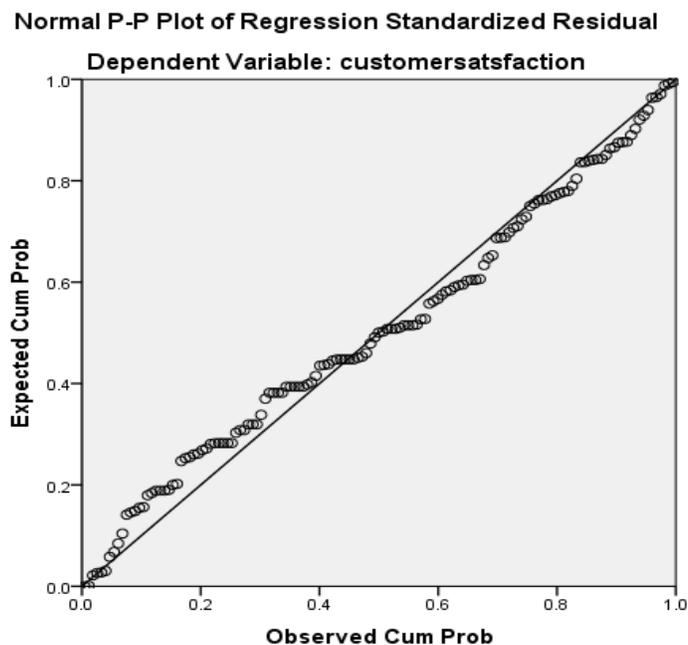


Figure 4.4.2: Normal Point Plot of Standardized Residual

Source: SPSS output The scatter plot of residuals shows no large difference in the spread of the residuals as you look from left to right on figure 4.4.2. This result suggests the relationship we are trying to predict is linear

## Normality Test

As per the Classical Linear Regression Models assumptions, the error term should be normally distributed or expected value of the errors terms should be zero ( $E(u_t) = 0$ ). Figure 4.4.3: Frequency Distribution of Standardized Residual

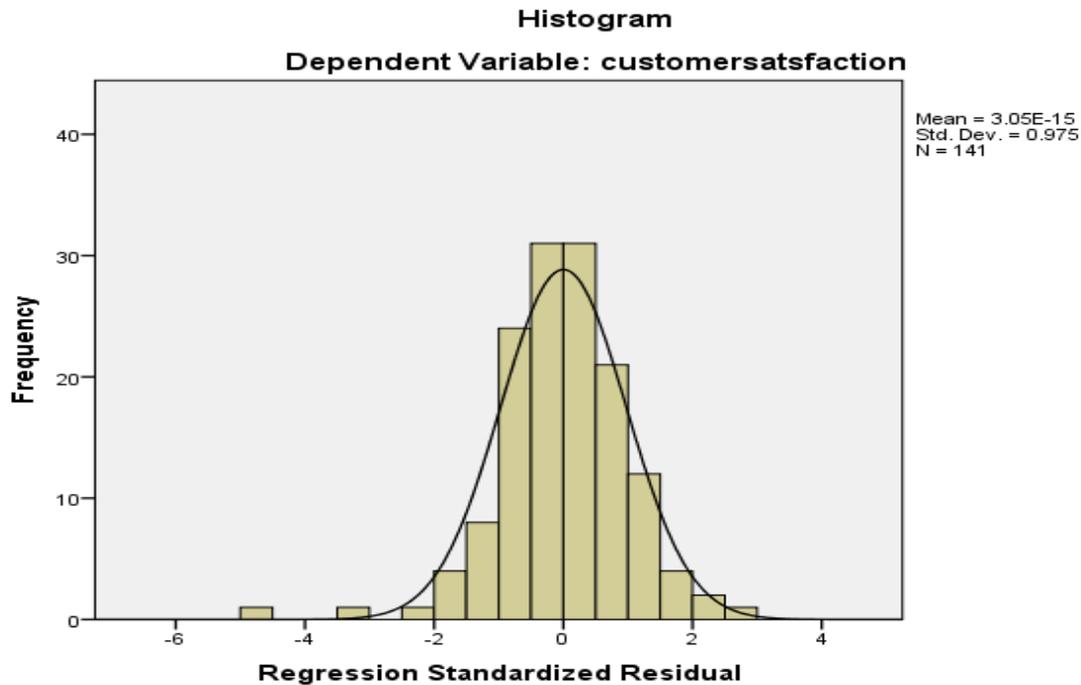


Figure 4.4.3. Normality test

Source: SPSS output

Figure 4.4.3 shows the frequency distribution of the standardized residuals compared to a normal distribution. As you can see, although there are some residuals (e.g., those occurring around 0) that are relatively far away from the curve, many of the residuals are fairly close. Moreover the histogram is bell shaped which lead to infer that the residual (disturbance or errors) are normally distributed. Thus, no violations of the assumption normally distributed error term. Thus, from an examination of the information presented in all the three tests I conclude that there are no significant data problems that would lead to say the assumptions of multiple regressions have been seriously violated

### **Multicollinearity Test between Study Variables**

In this section the correlation between customer satisfaction in e-banking and explanatory variables; reliability, responsiveness, assurance, accessibility, security, ease of use and efficiency, have been presented and analyzed. A correlation matrix is used to ensure the correlation between explanatory variables

### 4.4.3. Correlation Analysis

Table 4.4.3: Correlation matrix:

#### Correlations

		Customer satisfaction	responsiveness	assurance	accessibility	reliability	security	ease fuse	efficiency
Customer satisfaction	Pearson Correlation	1							
	Sig. (2-tailed)								
	N	141							
responsiveness	Pearson Correlation	.939**	1						
	Sig. (2-tailed)	.000							
	N	141	141						
assurance	Pearson Correlation	.941**	.808**	1					
	Sig. (2-tailed)	.000	.000						
	N	141	141	141					
accessibility	Pearson Correlation	.875**	.824**	.843**	1				
	Sig. (2-tailed)	.000	.000	.000					
	N	141	141	141	141				
reliability	Pearson Correlation	.850**	.800**	.798**	.761**	1			
	Sig. (2-tailed)	.000	.000	.000	.000				
	N	141	141	141	141	141			
Security	Pearson Correlation	.924**	.884**	.892**	.802**	.792**	1		
	Sig. (2-tailed)	.000	.000	.000	.000	.000			
	N	141	141	141	141	141	141		
ease fuse	Pearson Correlation	.853**	.810**	.806**	.776**	.747**	.784**	1	
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		
	N	141	141	141	141	141	141	141	
efficiency	Pearson Correlation	.823**	.791**	.787**	.740**	.816**	.759**	.723**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	
	N	141	141	141	141	141	141	141	141

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

\*Correlation is significant at the 0.05 level

Hair et al. (2006) argued that correlation coefficient below 0.9 may not cause serious Multicollinearity problem. So according to Hair et.al (2006) there is no multicollinearity problems between independent variables. As it shown within the matrix table, every variable is absolutely correlated to itself then  $r=1$  on the diagonal of the table. The results indicate that, there is positive

and significant relationship between responsiveness and customer satisfaction ( $r = 0.939$ ,  $p < 0.01$ ), assurance and customer satisfaction ( $r = 0.941$ ,  $P < 0.01$ ), reliability and customer satisfaction ( $r = 0.850$ ,  $P < 0.01$ ), accessibility and customer satisfaction ( $r = 0.875$ ,  $P < 0.01$ ), security and customer satisfaction ( $r = 0.924$ ,  $P < 0.01$ ), ease of use and customer satisfaction ( $r = 0.853$ ,  $P < 0.01$ ) and efficiency and customer satisfaction ( $r = 0.840$ ,  $P < 0.01$ ). The finding on table 4.5 higher than more indicated that the best relationship is found between assurance and customer satisfaction ( $r = 0.941$ ,  $p < 0.01$ ). All service quality dimensions (responsiveness, reliability, assurance, accessibility, security, ease of use and efficiency) have a positive relationship with customer satisfaction.

#### 4.5 Multiple Regression Results

In this study; multiple regression analysis was dispensed out to induce the predictive values of the constructs considered. Since the model is developed in such the simplest that every construct is being full of other constructs, it's necessary to hold out a separate regression analysis against each variable which are considered to be full of other variables. This was mainly created to determine the linear combination of the constructs. Tables 4.6, 4.7 and 4.8 present the results from the multiple regressions carried out using the seven service quality dimensions (reliability, responsiveness, assurance, accessibility, security, ease of use, and efficiency) as the independent variables and customer satisfaction as the dependent variable.

##### 4.5.1. Regression Analysis between Customer Satisfaction on E-Banking and Explanatory Variables.

Overall regression model and its ANOVA are summarized as follows:

Table 4.5.1: Model Summary: Table indicating R and R square value

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.978 <sup>a</sup>	.957	.955	.41864

a. Predictors: (Constant), efficiency, ease of use, reliability, accessibility, security, responsiveness, assurance

Customer Satisfaction is dependent variable and reliability, Responsiveness, Assurance, accessibility, Security, ease of use and efficiency are Independent variables. The Above table shows that coefficient determination is .957; therefore about 95.7% of the variation in satisfaction is explained by independent variables. The regression equation appears to be very useful for making predictions since the value of  $r^2$  is .957

From the above table  $R=.978$ ,  $R^2= .957$  and adjusted R square =.955 with standard error .41864 implies that seven independent service quality dimensions explained 95.7% variance over the dependent variable i.e. customer satisfaction. It leads to verify regression fit as mentioned below

From (Table 4.5.1), it can be observed that the coefficient of adjusted ( $R^2$ ) was 0.955, Representing that 95.5% of customer satisfaction can be predicted by the above seven Service quality dimensions. The remaining 4.5% change in customer satisfaction is Because of other factors that are not included in the model. Thus, service quality Dimensions (reliability, responsiveness, assurance, accessibility, security, ease of use, and efficiency) combined significantly influences customer’s satisfaction. The sig. (p-value) shows that all explanatory variables reliability, responsiveness, assurance, accessibility, security, eases of use and efficiency are statistically significant at five percent significance level. The researcher found that established regression function as follows: As it can be observed from table 4.4, the regression showed positive and statistically significant relationship between service quality dimensions and customer satisfaction.

Table 4.5.2: ANOVA Showing F-value and Sig value of the impact of Service quality dimensions

**ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	523.301	7	74.757	426.562	.000 <sup>b</sup>
	Residual	23.309	133	.175		
	Total	546.610	140			

a. Dependent Variable: customer satisfaction

b. Predictors: (Constant), efficiency, ease of use, reliability, accessibility, security, responsiveness, assurance

ANOVA test table shows that the value of F-stat is 426.562 and  $p = 0.000$  is significant at the level of significance 5% ( $p < 0.05$ ). This shows that the general model was a reasonable fit and there was a statistically significant relationship between service quality dimensions and customer satisfaction at 5% level of significance. This means the explanatory variables (security, responsiveness, and efficiency, ease of use, accessibility, reliability, and assurance) have contribution to improve E-banking customer satisfaction level among CBE, but it does not mean that equally affect customer satisfaction or equally significant correlation with customer satisfaction level.

The results of multiple linear regression analysis shows that there is variation in the impact of E-banking service quality dimensions on customer satisfaction besides the f statistics (426.562) that is employed to measure the general test of significance of the model. That the alternative hypothesis is accepted since the p value is 0.000 which is significantly low the model is fitted at 5% level of significance. It shows that the regression fit is pretty good & the dimensions used are able to predict customer satisfaction.

#### **4.6 Model Summary:**

In this research seven important service quality dimensions impacting the service quality of E-Banking services. It is assumed that these seven factors are equally important for the customers. By using independent T- test it was found that these factors hold huge importance but the priority of the factors change from customer to customer. Thereafter Multiple Linear regression is used to predict the impact of E- banking service quality on customer satisfaction. This model is used to assess the impact of service quality dimension extracted by factor analysis. It is found that the value of  $R = .978$ ,  $R^2 = .957$  and adjusted R square = .955 with standard error.41864 implies that seven independent service quality dimensions explained 95.7% variance over the dependent variable i.e. customer satisfaction.

From the ANOVA table it is identified that the value of F- stat is 426.562 and  $p = 0.000$  is significant at the level of significance 5% ( $p < 0.05$ ). This indicates that the overall model was a reasonable fit and there was a statistically significant association between service quality

dimensions and customer satisfaction. Hence it is concluded that service quality dimensions have a significant impact on customer satisfaction. Regression fit is able to predict the customer satisfaction to a good extent. It proves that these dimensions have has a significant effect on customer satisfaction, therefore. The customer tends to use the service again and again if he/she is satisfied with the use of existing services. Hence from the results of the study it has been concluded that reliability, assurance, responsiveness, accessibility, security, ease of use and efficiency impacts customer satisfaction towards E-Banking services.

Table 4.6: indicating value for Unstandardized and standardized Coefficients Regression Coefficient Analysis of the Model

**Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error			
1	(Constant)	.022	.274		.080	.936
	responsiveness	.227	.047	.238	4.810	.000
	assurance	.209	.048	.225	4.359	.000
	accessibility	.116	.036	.117	3.219	.002
	reliability	.071	.026	.094	2.769	.006
	security	.222	.047	.209	4.726	.000
	ease of use	.095	.031	.103	3.075	.003
	efficiency	.058	.028	.069	2.063	.041

a. Dependent Variable: customer satisfaction

From the above table 4.6 finding we can develop the following regression model

Customer Satisfaction = 0.022(constant) + .227(responsiveness) + .209 (assurance) + .116(accessibility) +.071(reliability) +.222 (security) + .095(ease of use) + .058(efficiency) the above table shows that since sig value for all dimensions less than 0.05 at 5% confidence level .this shows that these dimensions have a significant impact on customer satisfaction. Hence null hypothesis is rejected. We accept alternate hypothesis because service quality dimensions have a significant impact on customer satisfaction. On the basis of the regression equation following inference is drawn.

- In the above table, the regression coefficient for responsiveness(B1) =.227, which implies that one percent change responsiveness will lead to approximately 22.7% increase in customer satisfaction on average if other variables are kept constant. The significance value for responsiveness is  $p=0.000$  which is significant at significance 5% level ( $p=.05$ ).
- The regression coefficient for assurance (B2)=.209 which implies that one percent change in assurance will lead to approximately 20.9% increase in customer satisfaction on average if other variables are kept constant. The sig value  $p= 0.000$  which is significant at a 5 % significance level. It implies that assurance has significant impact on satisfaction.
- The regression coefficient for accessibility (B3)=.116 which implies that one percent change in accessibility will lead to approximately 11.6% increase in customer satisfaction on average if other variables are kept constant. The sig value is  $p= 0.002$  which is significant because of less than 0.05. It implies that accessibility has significant impact on satisfaction
- The regression coefficient for reliability (B4)=.071 which implies that one percent change in reliability will lead to approximately 7.1% increase in customer satisfaction on average if other variables are kept constant. The sig value  $p= 0.006$  which is significant at a 5 % significance level. It implies that reliability has significant impact on satisfaction
- The regression coefficient for security (B5) =.222 which implies that one percent change will lead to approximately 22.2% increase in customer satisfaction on average if other variables are kept constant. The sig value  $p=0.000$  which is significant at the 5%

significance level since the value of  $p$  is less than 0.05. It implies that security has significant impact on satisfaction.

- For ease of use (B6) the regression coefficient is .095 which implies that one percent change in ease of use will lead to approximately 9.5% increase in customer satisfaction on average if other variables are kept constant. The sig value is 0.003 which is significant because the significance level is less than 0.05. It implies that ease of use has significant impact on satisfaction
- The regression coefficient for efficiency (B7)=.058 which implies that one percent change in efficiency will lead to approximately 5.8% increase in customer satisfaction on average if other variables are kept constant. The sig value is  $p=0.041$  which is significant because of  $p.05$ .

The study confirmed that responsiveness was especially significant in fostering satisfaction for the customers of Commercial bank of Addis Ababa Ethiopia. Thus, a 1% increase in responsiveness of bank's service would result a 22.7% percent increase on customer satisfaction. Security dimension is the second determinant variable and the second strong indicator followed by assurance, accessibility, and ease of use, reliability and efficiency in explaining customer satisfaction.

#### **4.7 Measuring Relative Strength Of Service Quality Dimensions On Customer Satisfaction**

Service quality is an assessment of the delivered service to the customers. It measures how well the services meet the customer expectations. The service quality is the level of discrepancy between customer expectation from the service and the actual performance of the services a customer uses a service. The experience of customer results in broader evaluations of services since the service industry is driven by customers. The customer's of mouth is the biggest marketing of services so the service providers pay huge attention to the dimensions satisfying the customers. With the context of a developing country, customers are moving towards the electronic means of services. It can be banking, shopping, and travel bookings, online food ordering etc. so it is extremely important for the service providers to concentrate on customers changing taste and habits and create their services as per their needs.

- The main use of the regression model is to find out that how much the dependent variable will change with respect to a unit change in an independent variable
- Secondly, it helps to predict trends and forecast the effect of the change,
- Thirdly it measures the strength of the effect of independent variables on the dependent variable, in other words.

In multiple Linear Regression analysis, the standardized coefficients are expressed in form of Beta,  $\beta$ . All the variables in standardized coefficients are converted in to a single metric i.e. standard deviation unit. Then it represents each variable in form of  $\beta$ . The beta magnitude of each variable can be compared easily. The variables which have the highest value are considered to have a strong relationship with the dependent variable. Standardized coefficients from the multiple linear regression models provide an estimate of the variables. It tells us which of the independent variables have the highest association with the dependent variable. Standardized coefficients are also termed as standardized regression coefficients it has been concluded that responsiveness has a strong relationship with customer satisfaction. Since, it has the highest Beta value 0.238.

The second dimension is assurance with beta value  $\beta = .225$ . There exists a positive relationship of assurance dimension with customer satisfaction. The Beta value for security dimension is .209. It is the third most correlated dimension with customer satisfaction. Next is accessibility with beta value .117. Ease of use has the beta value of .103 which makes it fifth most associated dimension with satisfaction. B value for reliability dimension is .094 which represents the association between reliability and customer satisfaction is 9.4%. Similarly, efficiency has beta value.069, which ranks Reliability and efficiency as sixth and seventh dimensions respectively.

#### **4.8. Assigning Ranks to Service Quality Dimension**

Standardized coefficients are useful while comparing effects across different measures. In the context of present study service quality dimensions are the measuring variables which are trying to assess the effect on customer satisfaction. Since the relative strength of each service quality dimension has been measured. It becomes easy to identify the most important dimensions on the basis of the Beta value. The standardized regression coefficient having the highest magnitude

value is ranked as the top most important variable among other variables under the study. The standardized coefficients are used as rank predictors.

It depicts the relative strength of the independent factors. It provides the absolute ranking to the factors as per their magnitude. The important variable with have maximum absolute value. A standardized coefficient compares the strength of the effect of each independent variable taken up for study. Highest the magnitude value of the beta, strongest is the relationship of the variable with the dependent variable. Standardized coefficient uses standard deviation as their unit. The standardized coefficient may be referred to as Beta, Beta Coefficients, Beta weights or standardized regression coefficients.

According to Table: 4.4.3. There is a significant relationship between the seven dimensions of service quality and customer satisfaction since their coefficients are significant at 5% significant level and the hypotheses were tested as shown below

**H1:** There is statistically significant and positive relationship between **Electronic banking service quality** and Customer Satisfaction. Research hypothesis one predicts a statistically significant and positive relationship between **Electronic banking service quality** and customer satisfaction. Similar to the hypothesis, the regression output showed positive and is statistically significant relationship between **Electronic banking service quality** and Customer satisfaction. This confirms that there is a positive and significant relationship between **Electronic banking service quality** and customer satisfaction. This could able the researcher not to reject hypothesis H1.

**H2:** the study indicates that there is statistically significant and positive relationship between **Reliability** and customer satisfaction. Research hypothesis two predicts a statistically significant and positive relationship between **Reliability** and customer satisfactions. Similar to the hypothesis, the regression output showed Positive and statistically significant relationship between **Reliability** and customer Satisfaction. This would enable the researcher not to reject the hypothesis H2.

**H3:** There is statistically significant and positive relationship between **Responsiveness** and Customer Satisfaction. Research hypothesis three predicts a statistically significant and positive relationship between **Responsiveness** and Customer Satisfaction. Similar to the hypothesis, the

regression output showed positive and statistically significant relationship between **Responsiveness** and Customer Satisfaction. This shows that significant relationship between **Responsiveness** and customer satisfactions. This could able that the researcher not to reject the hypothesis H3.

**H4:** There is statistically significant and positive relationship between **assurance** and Customer Satisfaction. Research hypothesis four predicts a statistically significant and positive relationship between **assurance** and customer satisfactions. Similar to the hypothesis, the regression output showed that positive and statistically significant relationship between **assurance** and customer satisfactions. This shows a significant relationship between **assurance** and customer satisfaction. This could able that the researcher not to reject the hypothesis H4.

**H5:** There is statistically significant and positive relationship between **Ease of use** and Customer Satisfaction. Research hypothesis five predicts a statistically significant and positive relationship between **Ease of use** and customer satisfaction. Similar to the hypothesis, the regression output showed that positive and statistically significant relationship between **Ease of use** and Customer Satisfaction. This could able that the researcher not to reject the hypothesis H5.

**H6:** There is statistically significant and positive relationship between **Security** and Customer Satisfaction. Research hypothesis six predicts a statistically significant and positive relationship between **Security** and customer satisfactions. Similar to the hypothesis, the regression output showed positive and is statistically significant relationship between **Security** and Customer satisfactions. This confirms that there is a positive and significant relationship between **Security** and customer satisfactions. This would enable the researcher not to reject the hypothesis H6.

**H7:** There is statistically significant and positive relationship between **Accessibility** and Customer Satisfaction. Research hypothesis seven predicts a statistically significant and positive relationship between **Accessibility** and customer satisfactions. Similar to the hypothesis, the regression output showed positive and is statistically significant relationship between **Accessibility** and Customer satisfactions. This confirms that there is a positive and significant relationship between **Accessibility** and customer satisfactions. This would enable the researcher not to reject the hypothesis H7.

**H8:** There is statistically significant and positive relationship between **efficiency** and Customer Satisfaction. Research hypothesis eight predicts a statistically significant and positive relationship between **efficiency** and customer satisfactions. Similar to the hypothesis, the regression output showed positive and is statistically significant relationship between **efficiency** and Customer satisfactions. This confirms that there is a positive and significant relationship between **efficiency** and customer satisfactions. This would enable the researcher not to reject the hypothesis H8.

**H9:** There is no statistically significant and positive relationship between **demographic** characteristics and Customer Satisfaction. Research hypothesis nine predicts a statistically significant and positive relationship between **demographic** characteristics and customer satisfaction. Similar to the hypothesis, the regression output showed that there is no positive and statistically significant relationship between **demographic** characteristics and Customer satisfaction. This would enable the researcher to reject the hypothesis H9.

#### **4.9. Interview Responses**

Interview was forwarded for selected branches Customer Service managers, marketing team and sales managers concerning age, gender, occupation, marital status of customers and others are presented here to triangulate with customers responses. Currently CBE offers Automated Teller Machine (ATM), Mobile Banking, Point of Sales (POS) terminals, and internet banking but Business managers and sales managers of selected CBE branches told me that most of the users of E- banking are E- card users. With respect to age, gender, marital status, occupation and educational status of the customer's they responds, it is difficult to put in figure but from observation one can conclude that the youngsters salaried and literate people are majority of e-banking users.

The bank provides e- banking service for both saving and cheque accounts but loan accounts have no such services till now. Customers will expect their banks to be responsive to their needs over e- banking therefore we are providing to address these needs and increase their level of satisfaction. However, despite the bank's effort to improve access for its customers by delivering such services, it is well aware of some problems are encountered by customers which makes them dissatisfied such as network failure, due to service breakdown from the country's

telecommunications service provider, Ethio- telecom, and internal network problems, are the challenges that faced by the CBE attributed to the dissatisfaction of customers.

While the majority of the complaints are laid at the feet of Ethio- telecom, lack of knowledge from customers and have problem of break down in ATM service. Inappropriate use of ATMs and cards such as inserting card upside down into the ATM's card slot, forgetting password which leads to the machine to capture card, transferring cards to third party are among the problems by customers. In relation to age, gender, occupational marital status and others the bank has no official statistics however it is estimated that younger ranging from 18 to 35 are majority of e- banking users and the bank guessed that 90% of e- banking customers are graduates. In occupational category since most government organizations, channeling salaries of their employees through the banks salaried takes the lion share of e-banking customers. Most of the problems reported from our customers; frequent service interruption is the main which makes them to lose their trust on the service.

The bank work around the challenge to minimize this problem by providing phone support to customers who experience service interruption, so users can get direct assistance. In addition, there is a standby team equipped with a care that can be dispatched to any location where a customer faces an inconvenience we strongly believe that the technology has given more satisfaction and reduced the visit of branch now and then as customer gets it 24 hours per day and 7 days a week, standardized service, and quicker. But due to various reasons, mostly ethio-telecom's network failure, customers have faced tragedy because we couldn't deliver the service as exactly as we promise.

## **CHAPTER FIVE**

### **5. SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

The purpose of this study was to investigate the impact of e-banking on customer satisfactions in commercial bank of Ethiopia Addis Ababa. The case study was kotebe branch from east district, saris branch from south district, Genettdige from north district and Habtegiorgis branch from west branch all branches are third grade. The specific objectives were to investigate the impact of e-banking services on customer satisfaction, to find out the benefits associated with electronic banking usage and to find out the challenges associated with electronic banking usage. It is organized into five major sections such as introduction to the chapter, summary of study findings including the objectives and overall conclusion to the study and recommendations.

#### **5.2 Summary of Findings**

It is very important for service providers to identify the relevant dimension affecting the service quality. The banks or service providers can identify the flaws in the offered services. They can plan and devise the strategy for improving the service quality to satisfy their customers. With the dawn of technological innovations, the banking industry has taken up various smart moves to conduct banking practices. Also, the usage of E-Banking services is increasing day to day and it becomes uses to identify most excellent service quality dimensions offered by any bank or E-Banking service providers. Also, the focus is to identify the weak areas of business operation where the service providers can work upon to make the service better. In this research the level of satisfaction of customers with different quality dimensions pertaining to the theoretical model was evaluated accordingly, the major findings are presented as follows

The findings of this study had 141 respondents of which 58.9% were males and 41.1% were females. It was observed that the highest levels were observed to be those with diploma in any training which carried 31.2% of the respondents followed by those with degree. The lowest number was those with masters which took 0.7% of the respondents followed by those with primary education that took 3.5% of the total respondents. These findings indicate that Customers differ in education level. However, the highest age were observed to be of those with

31-40 years which covered 43.3% of the respondents followed by those aged 40 and above years which covered 30.5% of the respondents and the lowest customers are 18-25 years. Furthermore, these findings showed that the highest ages were between 31- 40 years that are the ages of most students. The highest numbers of Respondents were observed with experience between 3-7 years of experience that covered 44% followed by those between above 7 years that covered 24.8%. However, the lowest numbers of respondents were observed below 1year of experience. These results indicated that Customers have enough experiences with e-banking services and products.

The demographic analysis shows that more males use E-banking services than their female counterparts. Additionally, when it comes to age group, the modal age of users of E-banking users of the banks in Ethiopia Addis Ababa was 30-40 year or in their youthful age. The marital status of users of E-banking in Ethiopia were married whilst educationally, majority hold diploma from various fields of studies. In addition to the above, the most earned income of users of E-banking activities was between birr 1000 to birr 4500. Most users of E-banking have been using the services for between 3-7 years and majority use the services thrice in a month.

The regression model is applied to find the degree of impact of dimensions i.e. service quality variables on the dependent variable i.e. customer satisfaction.

- The results of multiple linear regression models concluded that responsiveness has the highest absolute beta value 0.238. So it is ranked number 1<sup>st</sup>.
- The second rank is assigned to assurance.
- A third rank is assigned to security.
- The fourth rank goes to accessibility.
- A 5th rank is assigned to ease of use.
- A 6th rank is given to reliability and
- Efficiency holds 7th rank.

### 5.3 Conclusion

Banks are still putting massive investments into electronic banking infrastructure and as such customer satisfaction is turning into one of the most crucial factor for the success of electronic banking service meaning is that providing positive customer value on the electronic banking requires the establishment and maintenance of long – standing customer relationships. One of the basic ways of achieving high customer satisfaction is providing high quality service. Banks should work much in increasing the number of users from all aspects that is from age, educational status, occupationally and should do great job in making –business men/women to be the users of e-banking to this end it is seen why the study critically assessed the impact of electronic banking on customers satisfaction in Ethiopia with particular reference to customers of commercial bank of Ethiopia. Based on the empirical findings the study has indicates that there is a significant relationship between customer satisfaction and electronic banking service quality dimensions.

It is found that the value of  $R=.978^a$ ,  $R^2= .957$  and adjusted R square  $=.955$  with standard error 0.42 implies that seven independent service quality dimensions explained 95.7% variance over the dependent variable i.e. customer satisfaction. Also the significance value from ANOVA table indicates that there exists significant association between service quality dimension and customer satisfaction in the study. Out of the seven dimension predicting customer satisfaction significance value for **responsiveness** is ( $p=0.000$ ), **reliability** ( $p=0.006$ ), **assurance** ( $p=0.000$ ), **accessibility** ( $p=0.002$ ), **security** ( $p=0.000$ ), **ease of use** ( $p=0.003$ ), and **efficiency** ( $0.041$ ) is less than 0.05 at 5% confidence level. It shows that these dimensions have has a significant impact on customer satisfaction. In nutshell, this study highlighted the significance of service quality on customer satisfaction. The customer tends to use the service again and again if he is contented with the use of existing services.

The study concludes that there was a strong positive relationship between service quality dimensions (responsiveness, reliability, accessibility, assurance, security, ease of use, and efficiency) customer satisfaction. Customers support greatly the use of e-banking services such as mobile banking, ATM, POS and internet banking. They derive certain benefits from the use of these services mostly saves time, easy to access, secured hence minimal transaction risks and convenient. Despite the benefits of E-banking, it is associated with some challenges. The study

shows that network failure from internet connection, higher transaction charges and limited withdraw amount are the major challenges facing customers using E-banking services and products.

#### **5.4 Recommendations**

After completing my study in CBE I have a realization that CBE is well-organized and tries to provide its best ATM, mobile, POS and internet banking services to the customers. Nevertheless, there are still some problems on which CBE should put an eye to solve them. Otherwise, these may cause huge loss or create a barrier for the future prospect .Based on the findings and conclusion of the study the following recommendations were made. I hope that these recommendations would be helpful for CBE:

- ✚ To attract more customers CBE should create a new marketing strategy which will increase the total E-banking customers
- ✚ CBE should increase the number of ATM and POS especially in public place and that place has a lot of people to reach as soon as possible.
- ✚ Banks are advised to improve on their e-banking relentlessly, upgrade their channels (such as ATM, and POS) and enhance their software application (such as online application e-mobile application).
- ✚ The management of the CBE should consider and work to increase the efficiency of their employee and use new program and system to develop banks daily work this will help with quality and timely service delivery also send employees to training inside or outside in country to develop their skills and experience and follow newest features of modern technology financial performance of commercial bank Ethiopia
- ✚ As responsiveness, assurance, accessibility, reliability, security, efficiency and ease of use are highly significant impacts on the level of satisfaction Commercial bank of Ethiopia better to focus on these dimensions to bring higher level of satisfaction to their customers.
- ✚ Commercial banks work with Ethio –telecom and Ethiopian electric power to resolve service interruptions and minimize the brunt of the consequences of unreliable service. Such technology demands well developed ICT infrastructure therefore the respected government bodies should work to develop and expand ICT infrastructures.

- ✚ CBE should improve on the ATM card securities to completely block unauthorized users in case it get lost or stolen.
- ✚ CBE should re-engineer a system to integrate a voice self-direction manual than read only manual
- ✚ Banks need to increase the confidence of their customers as well as develop their skills and knowledge in using e-banking services. They could also employ the use of video presentations at bank branches and on television to showcase the user friendliness of such service this will help customers to be more familiar with the e-banking services.

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## APPENDIX

### Appendix I: Research Questionnaire

#### Introduction

My name is Dereje Eritiro, I am conducting a study titled The impact of Electronic Banking service quality on Customer Satisfaction in commercial bank of Ethiopia Addis Ababa branches. I am kindly asking you to take part in this study, because the success of this study depends on your cooperation. The findings of this study will be treated anonymously and will be used for academic purpose only. This survey covers four main parts. Respondent's demographic information, Questionnaire about E-banking service, Questionnaire about Customer Satisfaction and, Interview questions for randomly selected E-banking responsible employees. You are required to put right mark (√) on the number that you feel most appropriate, using the likert scale from 1 to 5 (Where 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree=neutral, 4 = agree and 5 = strongly agree).

#### General Instruction

Do not write your name in any part of the questionnaire .your frank response is vital for the success of the study Please put right mark (√) on your choices.

#### Section 1: Demographic information

1. Gender: I) Female  ii). Male
2. Education Level: No formal education  Primary  Secondary  Certificates  TVE T  Diploma  Bachelor degree  Masters Degree  PhD and above
3. Marital status: I) Single  ii) Married  iii) Divorced
4. Age category: I) 18-25years  ii) 26-30years  iii) 31-40 years  IV) above 40 years
5. What is your Occupation? Government Employee  Private Employee  Business man/woman  Self-Employee  pensioner  Student  Unemployed  others
6. What is your monthly income? I) less than 1000  ii) 1000-4500  iii) 4500-10000  IV) 10000-50000  more than 50000
7. Length of E-Banking usage: 1. Less than a year 2. Between 1and 3 years 3. 3-7 years 4. More than 7 years

8. Frequency of E-Banking services usage in a month: 1. Never 2. Once per month 3. Twice per month 4. Three and More than 3 times per month

Section 2 .banking (mobile banking, internet banking, ATM and POS): The following questions are related to your feelings about E-banking service.

No	Dimensions	1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<b>1.Reliability</b>						
1.1	I have high confidence in the reliability of E-banking (Mobile banking, internet banking, ATM and POS) services.					
1.2	E-banking (Mobile banking, internet banking, ATM and POS) helps in keeping records correctly.					
1.3	E-banking (Mobile banking, internet banking, ATM and POS) Delivers the service exactly as promised.					
<b>2.Responsiveness</b>						
2.1	Bank deals respectfully with customer complaints about electronic service.					
2.2	E-Banking (Mobile banking, internet banking, ATM and POS) services are available 24/7.					
2.3	Availability of service is faster in e-banking as compare to manual banking.					
<b>3.Assurance</b>						
3.1	My E-Banking site does not share my personal information with other sites					
3.2	I feel secure while making transactions through E-banking (Mobile banking, internet banking, ATM and POS).					
<b>4.Accessibility</b>						
4.1	Able to access E-banking (Mobile banking, internet banking, ATM and POS) services anywhere at any time.					
4.2	Location of ATM and POS terminal is convenient for customers.					
4.3	There is an access to get E-banking (Mobile banking, internet banking, ATM and POS) services in all branches of the bank.					
<b>5.Service security</b>						
5.1	E-Banking services do not allow others to access my accounts.					
5.2	The security devices of the E-Banking					

	services protect the data that are sent by me.					
5.3	E-Banking service is secure and safe from any fraud or hacking.					
6.Ease of use						
6.1	E-banking (Mobile banking, internet banking, ATM and POS) is easy to use.					
6.2	The service delivered through E-Banking services is quick.					
6.3	The language in E-banking (Mobile banking, internet banking, ATM and POS) displays is easy to understand					
7. Efficiency						
7.1	The use of E-Banking (Mobile banking, internet banking, ATM and POS) services are time saving.					
7.2	I found that E-Banking (Mobile banking, internet banking, ATM and POS) services is easy to use.					
7.3	E-Banking (Mobile banking, internet banking, ATM and POS) services are provided in various languages.					
7.4	E-Banking (Mobile banking, internet banking, ATM and POS) services are available 24/7 at anywhere.					

### Section3. CUSTOMER SATISFACTION

Customer Satisfaction Questionnaire Instructions: After read the statements carefully, please put right mark (√) on the number that you feel most appropriate, using the scale from 1 to 5 (Where 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree=neutral, 4 = agree and 5 = strongly agree).

No	Questions	1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I made correct decision to use E-Banking (Mobile banking, internet banking, ATM and POS) services.					
2	My satisfaction with the E-Banking (Mobile banking, internet banking, ATM and POS) service quality is high.					
3	I prefer using E-Banking (Mobile banking, internet banking, ATM and POS) services instead of visiting the branch for doing my transactions.					
4	Overall E-Banking (Mobile banking, internet banking, ATM and POS) services are better than my expectations.					

\*E-Banking refers to variety of platforms such as Mobile banking, internet banking, ATM and POS where by customers access banking services like fund transfer ,performing balance checking ,pay bills view record of transaction, check interest in account, etc.

#### Section 4. Interview questions for E-banking responsible employers

Q1.when you see the current users of E-banking what can you say about age, gender, marital status, occupation and educational status of the customers?

Q2.For which types of account holders the bank is providing E-banking service?

Q3.what is the major challenge in e-banking activities to satisfy your customers?

Q4.what is the measures to be taken to increase the level of customer satisfaction?