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**ADDIS ABABA UNIVERSITY**

**COLLEGE OF BUSINESS AND ECONOMICS**

**Assessing the Effect of E-Banking Service Quality on Customer Satisfaction in  
Ethiopian Commercial Banks**

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**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS**

**FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION (MBA)**

**February 2026**

**Addis Ababa, Ethiopia**

## **DECLARATION**

I hereby declare that this thesis entitled “**Assessing the Effect of E-Banking Service Quality on Customer Satisfaction in Ethiopian Commercial Banks**” has been carried out by me under the guidance and supervision of Tewodros Wuhib (Assistance Professor). This thesis is my original work and has not been submitted, in whole or in part, to any university or institution for the award of any degree or diploma.

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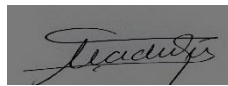
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## **ACKNOWLEDGMENT**

First and foremost, I want to thank my supervisor, Assistance Professor Tewodros Wuhib, for his invaluable guidance, constructive feedback, and motivational support which made the research work successful. His knowledge and dedication to academia were key factors that I highly benefited from and he inspired me through his continuous guidance and support.

Moreover, I thank the management, employees, and customers of the commercial banks that were considered in this research study for their willingness to participate and for providing the data that we needed. Their collaboration and support facilitated the accomplishment of this research work.

I am thankful to my family and friends for always being there for me in providing moral support, being patient with me, and encouraging me during my academic journey. Their support was the main source of inspiration to me.

At last, I thank whoever directly or indirectly helped me to accomplish this research work.

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## **ABBREVIATION AND ACRONYMS**

ATM	Automated Teller Machine
CBET	National Bank of Ethiopia (Central Bank of Ethiopia)
E-banking	Electronic Banking
ICT	Information and Communication Technology
ISO	International Organization for Standardization
SPSS	Statistical Package for the Social Sciences
VIF	Variance Inflation Factor

## ABSTRACT

*The purpose of this study is to investigate the effects of the different dimensions of the electronic banking service quality on the customers' satisfaction of commercial banks in Addis Ababa. Using a quantitative method, the study gathered information from 304 customers of e-banking who filled out a designed questionnaire. The customers' perceptions were rank ordered on a 5 point Likert scale in relation to the different levels of service quality from such easily measurable service quality components as system interface to the more subtle issues of trust, privacy, and understanding the needs of the customers as a bank. The researcher employed descriptive statistics, correlation and multiple regression analysis to identify the factors that significantly influence the satisfaction of the respondents. The results are fairly straightforward. The strongest, and therefore most significant, of the study dimensions was reliability and overall effectiveness as one is able to acknowledge the growing frustration from one such reliability issues as crashing banking. The next most significant study variables were assurance and credibility. Bank users satisfaction in relation to the other study variables such as responsiveness, privacy and security, clarity User satisfaction and communication measures of a system are characterized by varied levels of satisfaction. Some people seem more forgiving of minor delays if they are convinced their information is safe. Others care more about timely feedback from the bank than anything else. Overall, the findings posit that enhancing system stability, improving data safety and providing communication that is more tailored are likely to make positive changes to the experience of digital banking. The analysis urges commercial banks to spend on improved technology, upgraded security systems and more purposeful interaction with consumers in light of the fact that Ethiopia's digital financial industry continues to expand and diversify its user base.*

**Keywords:** *customer satisfaction, security, responsiveness, reliability, electronic banking service quality.*

# CHAPTER ONE

## INTRODUCTION

### 1.1. Background of the study

Over the last two decades, many people are learning how to manage their money with the help of electronic banking. Many of us can forget how recently transferring money required waiting in line and filling out a paper transfer slip. Once banks found ways to make their services easier with the help of technology, banking services were able to be offered that were quicker and easier than previous methods. Customers are in demand for services that are easier to use, faster, and offer more accessibility. e-banking offers users a wealth of services. Most online banking, mobile apps, and automatic teller machines and money transfer services help users perform most of the services offered to them by a bank without having to step into a bank. This technology benefits people with limited mobility, and people with busy lives (Gikandi & Bloor, 2010). Banks have greatly profited. They can do them more quickly and economically, and consumers enjoy the convenience of 24/7 account access (Jain and Gupta, 2004). The rapid proliferation of the internet, and inexpensive mobile computing, has enabled much of the transformed access to internet banking. As more and more people move to online access, the transforming access to previously un banking customers becomes even more grounded. Digital tools opened e banking to the previously un banked (World Bank 2018). As service consumers e banking eliminates waiting time, service documentation and services can even be customized. Numerous studies indicate that these conveniences result in greater customer satisfaction and customer loyalty (Gibson and Cui, 2012).

Ethiopia is one of the countries that have been part of the global transformation, but it has been inconsistent. In the banking sector, modernization has been rapid in the absence of the state and in contravention to certain regulatory restrictions, which have facilitated the migration of the banking sector to digital services. An example is the Central Bank of Ethiopia, which has been advocating for the promotion of digital financial services as part of a strategy to broaden the economic base and diversify Ethiopia's economy (CBET, 2020). In Addis Ababa, a number of commercial banks have adopted mobile banking, internet banking, and card-based banking. However, usage is not uniform across the banks. Many clients still utilize the traditional banking methodology. Customers are still standing in long lines and using in-person manual services (Fekadu, 2009). This disparity raises the question of who

actually uses e-banking, and who suffers the consequences of the lack of services. Customer satisfaction becomes the most important consideration.

A customer who is able to easily navigate the services and, trusts the services will likely return and utilize other services the bank has to offer. This relationship will likely remain and be the subject of further research (Oliver, 1999; Yen, 2012). For this reason, banks must carefully consider the factors that design the experiences that customers are using. Security, reliability, clarity of design, and quick responses to problems are often mentioned as essential components of service quality (Zeithaml, Berry, and Parasuraman, 1996).

Researchers such as Parasuraman, Zeithaml, and Malhotra (2005) describe e-banking service quality as something that depends on several intertwined factors. The system must work consistently, protect users' information, function smoothly, and be easy enough for people to figure out without frustration. These factors determine the manner in which customers evaluate the overall experience (Liébana-Cabanillas, Muñoz-Leiva, and Rejón-Guardia, 2013). Trust is a very sensitive thing that gets easily broken in situations where digital fraud or data misuse are realities. Khan (2017) argues that worries about privacy may cause people in developing countries to be reluctant to use online banking.

Several issues that hinder the adoption of digitized banking on a large scale in Ethiopia are the internet that is not always reliable, the electricity that goes off frequently, and the fact that a great number of potential users of digital technologies lack the necessary skills and thus have low levels of confidence in the use of such technologies (Alemu, 2019). Furthermore, the socio-economic dimension complicates the problem. People's income, level of education, and the urban-rural divide influence the way different communities adopt (or do not adopt) technologies (Tiruneh, 2017). For instance, even in Addis Ababa, one of the relatively internet-enabled cities in the country, many people remain skeptical about the convenience and security of e-banking services. A considerable number of individuals are not even aware of the functionalities of these banking services.

Even though there is e-banking literature related to developing countries, literature focusing on Ethiopia continues to be sparse. Many studies on developing countries group them into one category, thus complicating understanding patterns that may be unique to Ethiopia. The country exhibits unique differences in regard to its infrastructure, socio-cultural attitudes

toward banks, and technological advancement, which could be relevant in assessing customers' satisfaction and thus should be considered, (Kumar, Kee and Manshor, 2009).

The current study seeks to understand how the quality of services offered by electronic banking correlates to the level of satisfaction by the customers, focusing on commercial banks within the confines of Addis Ababa. Addis Ababa is a major urban settlement and Ethiopia's fastest growing financial hub, meaning electronic banking services have a great potential to contribute to the country's economy. However, the study also seeks to understand the growing challenges associated with the provision of electronic banking. The results of the study will be of importance to the ongoing discourse within the academia but also banks and policymakers who are trying to enhance the digital services on offer and strengthen customer satisfaction to attain financial inclusion.

## **1.2. Statement of the problem**

E-banking has become so commonplace in the world that people do not think twice about paying their bills on their phones or checking their bank accounts while waiting in line to order their favorite drink. E-banking has been touted as an attractive alternative to traditional banking because of its convenience and efficiency (Parasuraman et al., 1988; Wu et al., 2010). However, this uniformity is not the case in all locations. In countries such as Ethiopia, where customers have become accustomed to the shortcomings of E-banking due to the erratic internet connectivity and frequent power outages (Garedachew, 2010; Gebremedhin & Ahmed, 2018) designed to improve E-banking are frequently disappointing.

A big portion of the difficulty seems related to the quality of the service. Services are affected by things that may look insignificant to an average person such as the quickness of the app to open or whether the ATM screens are easy to use. Indirectly, these are some of the aspects of the service system that are judged to be more or less socially responsible, dependable, trustworthy, and communicative besides being responsive, and the overall system looking good (Gerrard & Cunningham, 2006; Sintayehu & Chauhan, 2020). And the worry about security is still there. Some customers, especially those who hear about a person losing funds by clicking an incorrect link, are cautious or when they are completely unaware of whether their data is protected (Kamel, 2005; Miyazaki & Krishnamurthy, 2002).

The matter of infrastructure banks on another side. An app for banking may be well thought of but still remain completely worthless when there is no connection or a power cut during a transaction. Theaters usually remember the unresponsiveness of the system, network issues, or long transaction periods when they say that they keep doing the same action more times than necessary. Unsurprisingly, moments like these affect how customers appraise reliability and responsiveness (Olanipekun et al., 2013).

There is also the experience that is more on the human side of things. Some users move through the available menus on the online platforms seamlessly, while others search for the right menu and get anxious over possible errors they might make. Younger customers tend to expect the online experience to be smooth and effortless, while older customers, and those that have had less exposure to digital devices, may get overwhelmed, which usually lessens the experience satisfaction (Johnson & Fornell, 1991).

All these factors and more, have been the focus of the research on e-banking in Ethiopia being mainly on the basic technology adoption rather than the more detailed service quality elements and their correlation to satisfaction (Teka, 2017; Alemu, 2019). This has resulted in commercial banks having little idea on the order of priority in which they should improve their service in order to give customers their basic satisfaction.

This is the problem the current study is trying to address; attempting to establish the correlation between the different service quality dimensions of e-banking in Ethiopian commercial banks (carried out in these banks). These include, security, reliability, empathy, access, and communication and satisfaction. This knowledge could help banks to cut down on the overly provided services and focus on the most utilized services in order to enhance the electronic banking experience.

### **1.3. Research Questions**

1. To what extent do the tangible characteristics of e-banking services, including system interface design, visual appearance, and ease of navigation, influence customer satisfaction?
2. How do reliability factors, such as transaction accuracy and system availability, together with service efficiency, affect customer satisfaction with e-banking services?
3. How does the responsiveness of bank personnel and electronic customer support systems influence customer satisfaction with e-banking services?

4. To what extent do assurance factors, including the competence, trustworthiness, and technical knowledge of bank personnel, enhance customers' confidence in e-banking services?
5. How do empathy and courtesy demonstrated by bank employees influence customers' perceptions of e-banking service quality?
6. How do security and privacy protection measures influence customer satisfaction with e-banking services?
7. How do service accessibility, communication effectiveness, and the bank's understanding of customer needs relate to overall customer satisfaction with e-banking services? How do the tangible features of e-banking services shape customer satisfaction?

## **1.4. Objectives of the Study**

### **1.4.1. General Objective**

The primary aim of this study is to find out the influence of different aspects Assessing the Effect of E-Banking Service Quality on Customer Satisfaction in Ethiopian Commercial Banks.

### **1.4.2. Specific Objectives**

1. Examine the extent to which the tangible aspects of e-banking services influence customer satisfaction.
2. Examine the effect of service reliability and operational efficiency on customer satisfaction with e-banking services.
3. Examine how the responsiveness of banking personnel and electronic support systems influences customer satisfaction.
4. Examine the influence of assurance and professional competence, including the trustworthiness and technical knowledge of bank staff, on customer satisfaction with e-banking services.
5. Examine the impact of empathy and courtesy demonstrated by bank employees on customer satisfaction levels.
6. Examine the effect of security and privacy protection measures on customer satisfaction with e-banking services.
7. Examine the relationship between service accessibility, effectiveness of communication, understanding of customer needs, and overall customer satisfaction

with e-banking services To examine the extent to which the tangible aspects of e-banking influence customer satisfaction.

### **1.5 Significance of the Study**

Raising the public awareness of how the residents of Addis Ababa feel about their e-banking experience can help banks discover the value of customer experience. Financial Institutions underestimate the importance of customer experience on the success of e-banking systems. Benjamin's study on the commercial banks service quality and customers experience satisfaction will enable banks to focus and improve the quality of their services. The result of the study will help banks understand those easily implementable actions that will result in significant improvements. For instance, providing better system down-time notifications and simplifying the structure of mobile apps would help.

The study will add to the growing number of studies on e-banking in developing countries, especially those with limited Internet access, familiarity with technology, and poor demographic diversity. Hopefully, in the more distant future, the ordinary end-user will see the greatest benefit such as more reliable, user-friendly e-banking systems.

The results of the study will help policymakers improve their digital-finance system to be more customer-centered which will help foster more inclusive financial systems to benefit the residents of Addis Ababa.

### **1.6 Scope of the Study**

This study is limited to the examination of the performance of Assessing the Effect of E-Banking Service Quality on Customer Satisfaction in Ethiopian Commercial Banks. The decision to focus the research on the urban area made it possible to look into how customers e-banking within a digitally advanced and well-established banking infrastructure banking context experience. Obviously, the results, therefore, cannot be generalized to the areas that are less equipped technologically and have different socio-economic conditions.

In terms of methodology, the research heavily depends on quantitative survey data. The choice of this methodology made it possible to get information from a large number of respondents, which is important for statistical analysis. Qualitative methods such as interviews were excluded in this study. However, the interview could have helped the

researcher to get more insight into the emotional and personal sides, which numbers cannot fully express.

The study relies on the concept that customer perceptions of e-banking are influenced by the multiple facets of service quality that interact with each other. The facets are the tangible features of the product, reliability, responsiveness, competence, empathy, credibility, security, ease of navigation, communication, and the bank's understanding of its customers.

### **1.7 Limitation of the Study**

The study, which is fairly comprehensive in its approach, still faces certain limitations. The concentration of commercial banks in Addis Ababa for the study means that the results mostly show the experiences of customers in a city environment. People living in different towns or villages may have completely different experiences especially in those places where the internet and electricity are not always available.

The research also depends on self-reported data from questionnaires. Although questionnaires are convenient and time-saving, they rely on the honesty of respondents and on their understanding of the questions. The answers given by some respondents may underestimate the problems in order to be polite, while others may exaggerate their frustrations.

These limitations do not weaken the importance of the results but they indicate that care should be taken when generalizing the results.

### **1.8 Organization of the Thesis**

The thesis is divided into five chapters. The first chapter gives an introduction to the topic and presents the problem, research questions, and objectives. The next chapter reviews the literature and locates the study among the academic debates on e-banking and service quality. The third chapter discusses the research design and provides a description of the data collection and analysis process. The fourth chapter contains the study results and their interpretation. The final chapter draws the conclusions and proposes recommendations for practice and research.

### **1.9 Definition of Terms**

**Electronic Banking (E-banking):** A bank might be completed through various digital channels such as mobile applications, websites, or ATMs without the need for a physical visit to a bank branch (Laukkanen, 2016).

**Customer Satisfaction:** A customer's overall feeling or evaluation of a bank's products and services, which is influenced by the degree of experience that meets their expectation (Oliver, 1999).

**Service Quality:** The degree to which the features of an e-banking service are in harmony with or even surpass what customers are looking for, generally, the elements like reliability, safety, convenience, and responsiveness are considered for the evaluation (Parasuraman et al., 2005).

**Internet Penetration:** The level of internet provision and use in a certain geographical area, which is a determining factor of the customer's ease of access to digital banking services (CBET, 2020).

**Infrastructural Challenges:** Obstacles that are associated with either the physical or technological aspects of the system and, for example, the unstable electricity or poor internet connection, which reduce the delivery and utilization of e-banking services (Gebremedhin & Ahmed, 2018).

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

#### **2.1. Theoretical related literature review**

##### **2.1.1. Technology Acceptance Model (TAM)**

Among the several models, which explain the acceptance of a new technology by a person, the Technology Acceptance Model (TAM) developed by Davis (1989) is the one, which is basically focused on this issue. The model try, to summarize the way users make a decision of acceptance or rejection of a new information system utilization, like e-banking services. Based on the model of TAM, perceived usefulness and perceived ease of use are the most important factors which influence the users' behavioral intention to use a technology. Perceived usefulness is the degree to which a person sees that using a system can enhance his/her job performance, whereas perceived ease of use is the extent to which the person believes that the system is free of effort. These perceptions affect directly the users' attitude toward usage and indirectly through behavioral intention via the users' attitude toward usage and actual system utilization (Davis, 1989).

For example, the consumers of e-banking will be more willing to perform their transactions via the internet if they deem these services to be convenient, time-saving, money-saving, and that they have the advantage of managing their finances easily; while for the case of an easy-to-use interface, they will be more excited to use it if they find it user-friendly. The TAM model has broadly been used in many researchers conducted in the banking industry and in some instances, it has been proved that perceived usefulness and ease of use are the factors that influence the behavior of the new customers department (Venkatesh, et al., 2003; Al-Somali et al., 2009). As an illustration, inherent in this idea, if e-banking customers perceive the online banking system as secure, reliable, and user-friendly, then they start to show positive behavior towards e-banking and become more motivated to use the service.

Nevertheless, TAM who is the pioneer in this field was also attacked for not being able to take into account nonconceptual factors that could seriously impact a consumer's decision to undertake e-banking, for instance, security risk, social influence, or infrastructure (Kim et al., 2009). To solve this problem, modifications like TAM2 and UTSA (Unified Theory of Acceptance and Use of Technology) have combined more components such as social influence, facilitating conditions, and trust that are very important in the sector of financial

services (Venkatesh & Davis, 2000). In less-developed countries like Ethiopia, where in addition to security issues, there are also problems with the infrastructure, these expansions can best portray the customers' behavior to e-banking by the way they elucidate the factors.

### **2.1.2. Diffusion of Innovations (DOI)**

Diffusion of Innovations (DOI), the theory that was first described by Rogers (2003), offers a detailed explanatory model of how the newest technological solutions, the means of e-banking included, eventually find their way into the social system of a community. DOI mainly supports the idea that acceptance is a step-by-step event which is affected not only by the communication channels and social networks, but also by the original features of the innovation, such as relative advantage, compatibility, complexity, trial ability, and observability. The extent and speed of adoption among different groups of the community depend on these features.

While linking DOI with e-banking, one can say that the relative advantage of the internet banking to the clients can be the fast execution of the transaction, cheap and convenient method of banking, and saving of time without going to the bank. Then compatibility with the existing values and practices besides ease of understanding and trial ability of the services will help more in the adoption process (Rogers, 2003). For instance, if customers see their friends successfully using e-banking, and they also think that it is compatible with their daily routines, then they will definitely use the services too. This influence of a friend is, in particular, Ethiopian culture which is a collectivist society, where social proof plays a very important role.

The point made by the theoretical model is that the first group of consumers who usually have a higher level of education and are technologically skilled, through the social network and communication channel will, get the influence from the following group (Cheng & Tam, 1997). The process of diffusion might be slow due to infrastructural problems that exist in remote places, but with the help of a well-planned promotional campaign and the motivation by the benefits of the product, people will soon realize that buying the product won't be complex, which will lead to a faster enrollment in the innovation and improvement of the latter (Garedachew, 2010). A bank cannot afford to underestimate the importance of knowing the diffusion process if it wants to win a wider customer base as biometrics, coupled with artificial intelligence, evolve as new features of e-banking.

Moreover, DOI conservatively speculates that the speed of the innovation acceptance could be influenced accentually external factors such as governmental decisions, the realization of modern technologies, and impersonal congruence with digital devices (Rogers, 2003). By tackling these issues with strategic schooling and laying down infrastructures can sponsor the occurrence of diffusion wholeheartedly, particularly in the regions that are neglected like the realm of Ethiopia. Hence, this substantiation turns banks into resources that back up the use of marketing and service delivery ways by cognizance of their customers' class comparison: from innovators and early adopters down to laggards to communicate proper responses to them.

To conclude, DOI theory points out the requirements for the wide dissemination of e-banking that rest not only on the technological features but also on the social dynamics, communication tactics, and understanding of attributes by the innovating side. Equipped with these clues, modern-day financial institutions may devise precisely targeted interventions, which can simultaneously promote the espousal of the innovating customers and the enhancement of their satisfaction levels.

### **2.1.3. Expectation-Confirmation Theory (ECT)**

Expectation-Confirmation Theory (ECT) is a post-consumption idea first introduced by Oliver (1980) and later modified to consumer behavior by Bhattacharjee (2001). According to this model, ECT depicts the post-adoption evaluation process through which customer satisfaction and intention to continue using a service are figured out. ECT assumes that customers draw up expectations of a service even before they use it. After the usage, they check their perception with their anticipation. In case of perceived performance surpassing expectations, confirmation takes place resulting in contentment; if perception goes less than expected, disconfirmation brings about dissatisfaction.

In the case of e-banking, the question of whether customers are satisfied or not ultimately hinges upon how well service experiences such as transaction speed, security, ease of navigation, and responsiveness meet or go beyond their initial expectations (Bhattacharjee, 2001). A situation of a customer expecting excellent security while at the same time regularly encountering system downtimes is an example of disconfirmation resulting in the decrease of both satisfaction and continued usage chances. On the other hand, a customer who consistently meets his/her expectations will be more likely to remain loyal to the bank.

The ECT formulation brings out the idea that satisfaction is a variable that depends on quality of service and perception of customers over time. Managing customer expectations through giving them clear information about service provision and limitations is also highlighted in the theory. Banks that proactively prepare the ground for realistic expectations and offer e-banking services that are of high quality and reliable can create situations of positive disconfirmation, which lead to customer satisfaction and further engagement (Oliver, 1997).

Next to that, ECT goes nicely with the behavioral intentions models, implying that the confirmation-related satisfaction affects the future behavioral intentions one might have of making a recommendation or further use (Kim & Malhotra, 2005). Talking about developing markets such as Ethiopia, with infrastructural and security issues that might lead to service disruptions, we could say that expectation management is a must if customer satisfaction and loyalty are to be preserved.

Basically, ECT sheds light on the mechanisms through which customer satisfaction is post-adoption formed and is influenced by real service performance as compared to expectations. It is very instrumental in pointing out the necessary steps of providing reliable, secure, and user-friendly electronic financial services to customers in order to facilitate positive disconfirmation and deepen customer loyalty that is of longer duration.

#### **2.1.4. SERVQUAL Model**

The SERVQUAL model by Parasuraman, Zeithaml, and Berry (1988) is a service quality measurement framework, which is a base for different service industries, for instance, banking. It outlines the areas of concern in service, which are mainly tangible, reliability, responsiveness, assurance, and empathy, and they sum up customer views of product or service quality. The fundamental assumption of the model is that service quality is measured as a gap between performance and expectations.

The first of these five, tangibles, gauge the physical characteristics of the company, the hardware used, and the clothes of the personnel. What is more, an e-bank service must have a website, whose design and style are relative to the concept. The customers want interfaces, which can be characterized as up-to-date, attractive and user-friendly because they enhance their experience (Gronroos, 1984). As to the second dimension, reliability, it is associated with the ability of performance of services accurately and going as far as making the

activities of the bank include the real-time updating of the accounts and authentic transaction histories.

Responsiveness is all about providing the customers with fast and easy solutions, such as fixing the problem in no time and using a communication channel that is both convenient for the customer and the company. The concern with assurance lies in the knowledge and good manners of the staff and their ability to earn customers' trust that may be directly connected with the well-stated security features and the privacy agreements in the Internet-based banking industry (Zeithaml, Parasuraman, & Malhotra, 2000). Empathy indicates the focus on an individual approach and the understanding of the customer's need, which, through the provision of excellent communication and customer engagement, can be convincingly demonstrated within digital channels.

The SERVQUAL model can also be recognized as an instrument, which points to the need for minimizing the gap between customer expectations and perceptions. For instance, this gap in e-banking could have been caused by technology failure, security breach, and communication problems, resulting therefore in customer dissatisfaction (Carman, 1990). Carrying out the SERVQUAL instrument, banks have to take customer surveys to figure out their expectations and then make up their mind about customer perceptions if asked after service delivery to find which areas of service need further development (Parasuraman, Zeithaml, & Berry, 1988).

The introduction of the new SERVQUAL model, which includes the implications of service quality for electronic marketing, is another step forward, where the dimensions incorporate security, ease of use, and availability of the system (Zeithaml, Parasuraman, & Malhotra, 2000). A close and warm relationship with these aspects would not only improve the quality of service but also make banks happy with the e-banking customers as they will feel the urge to remain loyal to the bank in the face of tough competition from other service providers.

## **2.1.2. Service Quality in Banking**

### **2.1.2.1. Service**

Service in banking is the provision of intangible activities, benefits, and satisfactions to customers by the banks, which are over and above the physical products like cash or deposits. The scope of banking services is wide and includes such things as account management, fund transfers, loan processing, ATM transactions, online banking, customer support, and financial

advisory services (Gerrard & Cunningham, 2006). Unlike tangible products, services are intangible, inseparable from the provider, variable in quality, and perishable, which makes their management more complex (Zeithaml, Parasuraman, & Malhotra, 2000).

The core of banking service quality is to deliver the service that is necessary to or beyond the buyer's expectations, characterized by the service being trustworthy, accessible, and prompt. The value of the provision of e-banking services cannot be less than what it actually is in the electronic era, where customers are increasingly taking into consideration the quality of service offered through the electronic channels while judging their banking experiences (Khan et al., 2020). Excellent services can lead to customer satisfaction, loyalty, and a relationship with the client over time, which are very important for a bank to keep its place in the market.

Furthermore, service quality in the banking area is a question of not only performing the core transactional activities efficiently, but also taking care of the customer service, complaint handling, and providing easy access to information for consumers. As bank services become more digitized, the perception of service quality is more and more influenced by factors such as system reliability, security, ease of use, and customer service (Gerrard & Cunningham, 2006).

#### **2.1.2.2. Characteristics of Service**

Services have certain traits that set them apart from tangible products. Knowing these traits is a must for any bank that wants to improve service quality and make the customers happy:

- **Intangibility:** Banking services are mainly intangible; they are not visible, touchable, or storable. This characteristic substantially hinders both customers' ability to assess service quality prior to acquisition and provision (Zeithaml, Parasuraman, & Malhotra, 2000). Consequently, banks try to reflect a certain level of quality through the behavior of their staff, amenities, and through digital channels.
- **Inseparability:** The characteristics of service production and consumption being at the same time imply that the perception of quality is greatly co-dependent on the interaction of the service provider and the customer (Liao & Cheung, 2003). For instance, the positive attitude and skills of customer service representatives or online platform responsiveness are extremely helpful in this sense.

- **Variability:** The quality of a service varies with the provider, the client, time, and place. This variability may be a cause of inconsistency in customer experiences, hence, banks are faced with the challenge of ensuring that the standards of quality that they have set for the customer are maintained uniformly across all the contact points (Zeithaml, Parasuraman, & Malhotra, 2000).
- **Perishability:** Services are not storable and hence cannot be saved for future use; they are perishable. A lost opportunity for availing a banking service such as a canceled appointment with a financial advisor is something that cannot be retrieved. Therefore, banks are also required to efficiently handle their capacity and demand situations so as to be able to provide uninterrupted services (Gerrard & Cunningham, 2006).
- **Heterogeneity:** As services are delivered in a manner that is subjective, the perception of quality by the customers can vary greatly, these being affected by individual expectations, cultural backgrounds, and previous experiences (Zeithaml et al., 2000). Personalization and tailored communication are two methods that banks use to overcome heterogeneity.

Such features indicate that banks need to have in place strong quality management systems, employee training, use of modern technology, and customer engagement activities to be able to deliver services that are consistent, reliable, and satisfactory (Oliver, 1999). Electronic banking services, for instance, should pay attention to aspects of system reliability, security, user-friendliness, and quick response if they are to meet customer expectations which are influenced by the nature of the service.

### **2.1.3. Definition of Independent Variables**

#### **2.1.3.1. Tangibles**

Tangibles are the elements of e-banking services that are visually and physically presented including the look and feel of the bank's digital interfaces; gadgets and also the physical pieces of evidence which customers can touch, feel and even smell during their banking experience. In the case of electronic banking, the aspects of the world wide web will be the designs, the layouts, the graphics of the digital bank, and even the ATM stations supported on the internet for the user mobile device (Zeithaml, Parasuraman, & Malhotra, 2000). How nice and how easy are digital platforms to use is a major factor that affects customer feelings of being served professionally, their trust in the banking service, and the overall service quality.

The main points of the research show that the customer interface features greatly contribute to the perceived tangibility if the interfaces have a clear navigation, attractive visuals, and user-friendly interactive features which also increase customer satisfaction. By way of example, a clean, organized, and modern online banking site is able to provide an image of stability and professionalism thus, motivating users to make more use of the digital services and to do so in a safe and confident manner. In an opposite situation, users of a service may interpret the incompetence of a bank if the interface they meet is old, or cluttered, resulting in trust being decreased which further leads to a drop in satisfaction levels.

In addition, the look and the condition of the ATM machines, mobiles, and websites are some of the physical things through which customers can perceive the service provided by the bank (Bitner, 1994). The factors that greatly affect customer perception of quality and professionalism include among others the neatness of information given, the easiness of transactions, and of course, the attractiveness of the services presented to the customers (Zeithaml et al., 2000). Accordingly, those financial institutions that are more than willing to commit themselves to good-looking and efficient digital interfaces will have a better chance of achieving positive customer perception and thus higher satisfaction.

As an initially less developed nation like Ethiopia, the middle of the day the tangible factor can be the physical aspect of the e-banking infrastructure and the quality of the hardware and software required for banking and other related activities like the availability of ATMs and internet-access-enabled devices (Kumar et al., 2009). Meeting or rather exceeding customer expectations in these aspects is very crucial if the bank wants to improve the perceived quality of the service offered and ultimately customer satisfaction.

#### **2.1.3.2. Reliability / Efficiency**

Reliability and efficiency in electronic banking are the attributes that measure how well a digital banking system is able to provide its services in a correct, safe, and timely manner. They represent the most important aspects of the quality of customer service as they influence directly the customer's trust and satisfaction (Parasuraman, Zeithaml, & Malhotra, 2005). Reliability is associated with service performance on a regular basis without any mistakes, e.g. accurate transactions, correct account updates, and reliable system uptime.

Efficiency is why and the how fast e-banking operations are carried out. It also covers speedy login procedures, trading the execution of services, and lesser system downtime. Customers

expect their banking activities to be done without any inconvenient delays or problems with the technology which in turn has a great influence on their total satisfaction (Dabholkar, Thorpe, & Rentz, 1996). By way of example, a system full of crashes and lag might cause the bank customer's trust in the bank to drop and thus, dissatisfaction to appear.

Besides that, reliability entails the provision of truthful data through e-banking means, which also explains accurate account balances, correct transaction histories, and timely-sent alerts. Error or discrepancy situations can result in customers' negative emotional reactions, and a sense of disrespect being directed towards the quality of the service (Zeithaml et al., 2000). Besides that, system availability ensuring online banking services can be accessed 24/7 is very crucial to reliability, especially at a time when customers are demanding uninterrupted access to financial services.

Efficiency is also the system being able to perform a large number of transactions without a decline in performance. As the number of e-banking users grows, systems should maintain their responsiveness and stability (Gan & Clemes, 2006). The delays in actions and the breakdown of systems are the things that can make customers extremely frustrated and dissatisfied. That's why it is very important to provide robust infrastructures and ensure technological resilience to be able to solve these problems.

Moreover, back-end operations like data security, transaction validation, and error handling greatly influence customer perceptions of reliability and efficiency (Khan et al., 2020). When customers receive services that are reliable, accurate, and timely, their general satisfaction and loyalty tend to go up. On the other hand, system crashes, errors, or delays may result in dissatisfaction, loss of trust, and decreased usage.

### **2.1.3.3. Responsiveness**

Responsiveness in e-banking refers to how quickly the digital systems of the bank and the bank employees are able to locate the needs, queries, and issues of the customers and also to provide solutions. It represents the resolution of assistance to the customers in due time and solving their problems in an efficient way, which is the main reason leading to customer satisfaction (Carman, 1990). Customers in this regard demand the quickest possible reply, and this may come through different channels (live chat, email, or phone support), and also they seek the swift rectification of their transactional or technical problems.

Moreover, responsiveness means the promptness of system updates, transaction processing, and error correction. For instance, the delay in transaction processing or the failure to update an account in real-time can frustrate the customer and have a negative effect on his/her perception of service quality (Cheng, Lam, & Yeung, 2006). In addition, quick reaction to customer questions that involve fraud or system outages, for example, is a major factor of creating trust and confidence in the bank's digital services.

On top of that, being responsive also mean the provision of services such as 24/7 customer help lines and online assistance which help customers carry out banking transactions at any time and any place (Howcroft, Hamilton, & Hewer, 2002). Customer satisfaction and loyalty are greatly influenced by the fact that customers get fast and efficient support when they need it.

Responsiveness is, in fact, one of the bank's activities in which the employees keep contacts with the consumers by, for instance, system notifying customers of downtimes, sending security alerts, or pointing out transactional issues before they become problematic. Honest as well as speedy communication shows the bank's devotion to customer care and can lead to the reduction of dissatisfaction even in the case of unavoidably disruptive periods (Gerrard & Cunningham, 2006). Moreover, the swift conduction of complaints and feedback together with the promptness in responses adds to the quality of services offered.

The increasing role of the facilities that maintain the technological infrastructure needed to support responsiveness such as automatic response systems and AI-powered chatbots cannot be ignored when immediate support is mentioned (Nguyen et al., 2020). These systems are designed to take care of routine inquiries rapidly and without interruption so that human agents are free to deal with complex issues and hence the total responsiveness is improved. So, responsiveness in e-banking is necessary for confidence-building, customer satisfaction, and cultivating long-term relationships.

#### **2.1.3.4. Assurance / Competence**

Competence is a key component of the Assurance dimension in the SERVQUAL model and refers to the knowledge, skills, and technical abilities of bank personnel required to deliver accurate and reliable e-banking services (Parasuraman, Zeithaml, & Malhotra, 2005). Competence ensures that customers have confidence in the bank's ability to execute digital transactions correctly and efficiently.

In the context of e-banking, competence is demonstrated when employees are well-informed, courteous, and capable of addressing customer inquiries and resolving problems effectively. Customers perceive higher satisfaction when bank personnel exhibit professional expertise and can guide users through digital services seamlessly (Jamal & Nasser, 2003).

Competence also extends to the technical performance of the e-banking system. A stable and accurate platform, incorporating features such as biometric authentication, secure transaction processing, and AI-driven services, reflects the bank's technological proficiency. This technological competence reinforces customer trust and contributes to loyalty, as users are assured that the bank is capable of providing safe and reliable digital solutions (Nguyen et al., 2020).

Therefore, within the SERVQUAL framework, competence encompasses both the human and technological capabilities of the bank. Ensuring high levels of competence is essential for enhancing customer satisfaction, trust, and confidence in e-banking services.

#### **2.1.3.5. Empathy / Courtesy**

Empathy in online banking is the personalized attention and understanding, which the bank facilitates for the customer through digital means. It depicts offering help, concern, and individual service that aims at satisfying the customer's requirements and serving their preferences (Parasuraman, Zeithaml, & Malhotra, 2005). This means, even if it is a digital environment, customers still bank on the idea that banks will acknowledge their unique situations and thus behave accordingly.

Banking through digital channels without the human factor requires that devices and software used be able to convey the human side of the bank - in other words empathy. It includes delivering that care by giving thoughtful, timely, and suitable aid such as giving proper financial tips or issuing alert messages tailored to each user. It is often seen that when people feel their worries are understood and the bank truly cares about their financial stability then their happiness and loyalty increase (Jamal & Nasser, 2003). Some of the implementations like personalized dashboards or transaction notifications help to build up this idea.

Moreover, being courteous means how the bank through digital means treats the customer. The tone which is used by chatbot, mail, or phone support to the customer is very important. Good manners, patience, and respectful communication pave the way for the customer to perceive the bank's service as good and of high quality (Gerrard & Cunningham, 2006). The

main thing customers expect is that their problems are solved quickly and that the solution providers show them respect, which can alleviate the stress behind the system errors or mishaps.

On the other hand, empathy is also about recognizing what customers will need ahead of time and delivering that information or help without customers even having to ask. An excellent example is when a bank informs clients about the vulnerable areas for hackers or gives them the necessary steps to perform a difficult transaction (Zeithaml et al., 2000). This kind of pre-emptive engagement leads to more trust and also customer satisfaction.

Besides that, e-banking empathy can be reflected through bank interfaces that support customers with different digital skills and so do not let any customer get frustrated but instead see the quality of the service rise (Khera, Ng, Ogawa, & Sahay, 2022). One of the most powerful ways of making people feel that they are receiving special attention is through individualized messages and aiding, and as a result, customer satisfaction can be influenced to a great extent.

At last, in order to promote empathy, the bank needs to know what its customers think by collecting and analyzing the feedback they provide. Putting in practice the lessons learned from this insight in improving the provision of electronic services not only makes them feel more connected emotionally but also promotes long-lasting satisfaction and loyalty (Olson & Johnson, 2003).

#### **2.1.3.6. Credibility**

Credibility in electronic banking is the extent to which a bank is reliable, truthful, and has a good image in the eyes of customers. It also includes the elements of transparency, the provision of correct information, and the bank's commitment to the moral code (Gerrard & Cunningham, 2006). Credibility is a determining factor for the success of any online platform where standard physical references are not present and customers are compelled to base their trust solely on the information given.

One trustworthy e-banking platform demonstrates through its very words that it is safe and secure. This includes security measures, privacy policies, and transaction procedures. When customers are sure that their personal and financial information is safe, they become more active and satisfied with the service (Zeithaml, Parasuraman, & Malhotra, 2000).

Transparency about charges, even if the service is temporarily interrupted, or in case of data misuse helps trust-building.

The image of the bank is also a factor that can affect the level of trust greatly. Financial institutions with a good reputation for a long time and which are visibly following the rules and regulations tend to be trusted more in their digital offerings (Kamel, 2005). On the contrary, those with security breaches histories and poor services may find themselves in losing customers' trust, hence dissatisfaction will arise.

Credibility is strengthened through the involvement of impartial third parties enabling relief of concern for those looking for evidence of the consistency, security, and dependability of the e-banking system in the form of certification seals, secure socket layer (SSL) certificates, and conformance to international standards like ISO/IEC 27001. These are giving the customer confidence in the system's correctness and security by providing external signals (Kimery & McCord, 2002). These kinds of assurances could be a lifeline especially for a country with low digitization where the customers tend to be skeptical.

Besides that, the provision of services that are of high quality, secure, and dependable over a long period eventually results in the building of trust and credibility. The bank's credibility to customers depends on their overall accumulated experiences which in turn affect their satisfaction and loyalty positively (Olsen & Johnson, 2003). The reduction of the perception of risk and thus the increasing of customer loyalty through the continued use of services is a result that can be achieved by a credible e-banking system.

Moreover, trust also contains the aspect of the financial institution being able to manage the situation properly and disclose it accurately and ethically when incidents occur such as data breaches or transaction errors. Along with quick actions on solving the issue at hand, the prompt and honest communication of problems strengthens trust and keeps customer satisfaction high (Gerrard & Cunningham, 2006).

#### **2.1.3.7. Ease of Navigation**

Ease of navigation equally signify e-banking service quality, portraying the straightforwardness with which clients can obtain and utilize digi-banking platforms through the digital/web/online channels. Access at least means that the services are available through different gadgets and channels, whereas getting along with the navigation means to use a simple and intuitive interface (Cheng, Lam, & amp; Yeung, 2006). Customers want to use

platforms where they can quickly locate services, do transactions easily, and get the necessary info without any confusion or delay.

The conduct of clients is positively influenced by user-friendly interfaces with well-defined menus, logical sequence, and little or no clutter, (Zeithaml et al., 2000). If the customers find the bank with a platform that is easy to navigate, they will feel less disappointed and will be more likely to use e-banking services constantly, which in turn, will increase their level of satisfaction. On the other hand, complicated and confusing types of navigation can be a reason why users turn away and their perception of service quality decreases.

In addition, access also means the availability of various access points such as mobile apps, internet banking websites, and ATMs. Multiple means provide comfort as well as meet the different preferences of customers, hence, resulting in the increase of accessibility (Kumar et al., 2009). Integrating and synchronizing such channels, however, leads to an improvement in the customer experience and satisfaction level.

The significance of accessibility, for instance, can be clearly observed in Ethiopia which is a place where harsh conditions for infrastructures such as internet coverage and digital literacy exist and challenge the usage of e-banking platforms (Garedachew, 2010). Banks have to make sure that they establish the platforms in a way that is efficient even for low bandwidth internet users and at the same time, provide support for multiple languages or well-designed interface for easy access.

Ease of navigation is, on top of that, engaging with transactional processes such as logging in, fund transferring, or bill paying in a quick and simple way. Components such as single sign-on, autofill options, and efficient workflows are facilitators of a more convenient experience (Liao & Cheung, 2003). When customers feel that they are given an opportunity to finish their tasks in a short time and in an easy way, their overall satisfaction is definitely boosted.

Besides that, a bit like continuous readiness and development of platform functionalities based on user feedback is a method of retaining and improving user access and simple navigation, the regular usability testing and interface updates also give a guarantee that the digital platforms will correspond to the changing consumer expectations and technological standards (Tiwari & Buse, 2007). The main focus of quality e-banking services delivery would still be accessibility and usability that have been improved.

### **2.1.3.8. Security**

In relation to the security issues, electronic banking accumulates attractive malicious intents who are hackers. These are people who hope to get private customer information or to make fraudulent transactions. Hence, security in electronic banking not only leads to customer trust the most, but also it is the main factor influencing customer's perceived risk and satisfaction that makes e-bank security very important (Khan et al., 2020). Clients want to be confident that their financial data will only be accessible to authorized parties, and that is why apart from encryption, secure login procedures and multi-factor authentication are a must.

Moreover, research shows that security issues worry the most e-banking customers and in case the problems are not solved, the numbers may fall to zero for e-banking adoption in developing countries, where digital literacy and cybersecurity knowledge are at a low level (Yohannes, 2010). Customers will be reluctant to carry out transactions online if they view the system as vulnerable to fraud or hacking attacks, and this will lead to lack of trust and dissatisfaction (Haque, 2009). Thus, banks need to rescue their customers' fears by effective security measures not only implementation but also communication of the same.

Besides that, different measures such as biometric authentication (fingerprint or facial recognition), token-based systems, and blockchain technology have been implemented to address the problem of security in e-banking (Nguyen et al., 2020). The primary purpose of these security methods is to avert security breaches, and they also facilitate easy verification thereby creating a safer and user-friendly environment for the transaction process. Customer confidence and satisfaction are the outcomes of the perception of a secure system.

Being open and honest about security procedures as well as frequently updating them adds to the feeling of trustworthiness. Customers want to be reassured and this can be done by explaining in detail how their data is safeguarded, what security measures are already taken, and how security threats are handled (Zeithaml, Parasuraman, & Malhotra, 2000). When users feel that their financial assets are secure, their satisfaction with e-banking services raises.

Besides that, the extent to which security measures are put in place affects customer loyalty and repeated usage as well. The loss or failure of an account can result in distrust, displeasure, and even the law taking action against banks (Khan et al., 2020). As a result, upholding strict

security standards and quickly mending any loopholes plays a significant role in customer satisfaction in e-banking.

Ultimately, the persistent cyber-attacks in the virtual environment call for constant revisions and expenditures on security structures. In order to secure their online banking services, banks are obliged to continually perform security checks, provide training for employees, and, at the same time, be the first ones to implement the new security technologies that come to the market (Miyazaki & Krishnamurthy, 2002).

#### **2.1.3.9. Communication**

In-depth communications in e-Banking is the ability to provide your banking customers with true, recent and right information through online channels for transparency, support, and relationship-building. It also contains the giving of information and transaction notification, security information, and customer support contacts (Zeithaml et al., 2000). These straightforward communication routes offer transparency, less doubt, and an enhanced overall customer experience.

Research have show that the effect of the early and transparent notification is to lower customer anxieties, particularly in system outages or security-related events situations (Gerrard & Cunningham, 2006). For instance, letting users know well in advance of a scheduled maintenance or security issues can prove a level of empathy and openness that will eventually bring forth trust and satisfaction. Conversely, a deficiency in communication may lead to aggravation and a perception of service performance degradation.

In the context of E-banking, communication also means providing users with easily comprehensible directions for utilizing it as a service delivery channel. Approachable instructions, FAQs, and tutorials help close the digital literacy gap and improve usability (Liao & Cheung, 2003). Customers who are well informed feel safe and secure when using digital services, which eventually leads to their satisfaction.

Customer support facilities such as live chat, email, or helplines are of great importance in the quick answering of questions and resolving of problems. The amount of communication channels that customers may use and the speed with which they can use them are very important factors in the quality of the service as perceived by the customer (Cheng et al., 2006). Support services that are run efficiently can help solve problems fast, thus lowering the level of dissatisfaction and increasing customer loyalty.

Also, correct communication does not even stop after the transactional messages, but goes further to the personalized engagement, e.g., targeted offers, financial advice, or alerts made for customer profiles. Personalization raises the perceived value and creates the emotional connection, thus leading to higher customer satisfaction (Olson & Johnson, 2003). Banks using communication strategies effectively have a better chance of keeping their customers and forming long-term relationships with them.

#### **2.1.3.10. Understanding the Customer**

Knowing the customer means the bank being capable of precisely recognizing, examining, and reacting to the customer's needs, likes, and behaviors through the bank's e-banking systems. It highlights the use of customer-centric strategies that adjust services, communication, and help to raise the customer's satisfaction and loyalty (Gerrard & Cunningham, 2006). Such knowledge serves as the foundation for providing outstanding, customized digital banking experiences.

Understanding the customers can be achieved through data analytics, customer feedback, and behavioral tracking. By having insight into transaction trends, preferences, and feedback, banks are empowered to personalize their products, improve the user interface, and resolve customer problems in the most effective manner (Olson & Johnson, 2003). In fact, targeted product recommendations based on the transaction history can be an efficient way of creating relevance and satisfaction.

Besides that, understanding and satisfying customer demand means recognizing demographic features such as age, income level, education, and digital literacy. Customers can be segmented based on their preferences and the features of the system can be designed to meet the needs of each customer group thereby making it easier to facilitate accessibility and usability especially in heterogeneous environments like Ethiopia (Khera, Ng, Ogawa & Sahay, 2022). For instance, if navigation is made simple for inept users, it will positively affect their attitudes and satisfaction.

Moreover, customer insight necessitates the support of a proactive communication stance, i.e. the provision of tailored financial advice or actions, reminders, or educational content that is pertinent to an individual's needs. The accuracy of this approach shows not only that the company understands the customer but also that it has the expertise which is the main reason for the development of deep relationships and trust (Jamal & Nasser, 2003). When a customer

feels that the business is able to entirely understand and solve the problem they are facing, they become more satisfied and loyal to the business.

In the end, technology such as Customer Relationship Management (CRM) systems can be used by banks to maintain detailed customer records, personalize marketing activities, and improve customer service efficiency (Bedi, 2010). This holistic approach equips banks to respond to service gaps, upgrade the level of service of their customer base, and maintain their relationships with the banks active.

#### **2.1.4. Customer Satisfaction**

Customer satisfaction has to do with elements tied to understanding electronic banking services and how effective and successful they may be. Customer satisfaction illustrates how banking clients think and assess the quality, reliability, and convenience offered to the value of services they used in the electronic banking channel (Oliver, 1997). Satisfaction is not only the essence of all of the services offered by the bank and how well the services offered are aligned to the expectations of the customer, customer satisfaction is also used to assess loyalty, retention, and positive referrals, which are all essential in getting an edge of competition in the banking field (Bowen, 1986); Customer satisfaction in electronic banking services stems from a set of service quality dimensions such as security, ease of use, and trust, and these factors work together and influence the intention of the customers to take positive action (Gerrard and Cunningham, 2006).

Most studies conclude that satisfaction of customers in e-banking is as a result of the quality offered in services such as security, responsiveness, and service reliability. As explained in the SERVQUAL model, satisfaction can be gained by offering a combination of services that provide quality service in the areas of reliability, trust, and emotional concern (Parasuraman, Zeithaml, and Berry, 1988). The sense that the disparity is not as a result of a lack of responsiveness by the customer support, but rather the system is reliable and the support offered is responsive, is the essence of customer satisfaction (Geriach, 2000).

Dissatisfaction can stem from system downtimes, security issues, or lack of customer service support, causing a erosion of trust, and lack of use of e-banking services (Haque, 2009). Hence, there is a need to ensure and maintain service quality to satisfy customers. Research regarding customer satisfaction and customer loyalty in the banking industry is very well documented. More satisfied customers are more likely to stay loyal to the company and

create a positive word of mouth and is more likely to repurchase (Oliver, 1980; Johnston, 1997).

In the context of digital usage, satisfaction is often described as the perceived ease and or usefulness of e-banking services as described in The Technology Acceptance Model (Davis, 1989). If a customer finds e-banking services user friendly, their satisfaction will increase and will lead to continued engagement and a reduction in the desire to switch services (Kimery & McCord, 2002). Hence, banks that focus on service improvements to satisfy customers will reap the benefits of customer retention and will stay ahead of its competitors.

To conclude, customer satisfaction as it relates to e-banking is ever-changing considering the growing expectations of the customers as well as the technology available. Technological advancements such as customer-tailored services, biometric security systems, and mobile banking technology have increased the expectations customers have toward digital banking services (Nguyen et al., 2020). Research shows that satisfaction levels increase when customers feel that the banking institution has made an effort to improve service delivery, particularly in the areas of security and ease of service access (Garedachew, 2010; Tiwari & Buse, 2007). Therefore, high levels of customer satisfaction are the result of continued development in technology, customer relationship management, and banking systems that are in alignment with the customers and technology of the time.

### **2.1.5. Customer Satisfaction in Banking**

Customer satisfaction is the fulfillment of banking services to the customer's expectations, or the degree up to which they are met, resulting in a positive attitude toward the bank and increased loyalty (Oliver, 1997). In banking, satisfaction has a great bearing on customer retention since satisfied customers are highly likely to continue using a service and recommend it to others (Bowen, 1986). The banking sector moved from mere transactional services to enhancing good experiences with added service quality, reliability in services, and personalized attention that create satisfaction (Jamal & Nasser, 2003). Several studies revealed direct effects of customer satisfaction on the bank's performance, profitability, and place of competition in the market (Gerrard & Cunningham, 2006).

Service quality has traditionally been seen as the main precursor of customer satisfaction in banking. The most popular framework used to assess service quality and its determinants of satisfaction is based on tangibles, reliability, responsiveness, assurance, and empathy — that

is, the SERVQUAL model (Parasuraman, Zeithaml & Berry 1988). In fact, accurate and timely services add value to the perception of customers towards a bank which leads them to be satisfied (Carman 1990); meanwhile inadequate service such as late transactions plus other security problems including unprofessional behaviors will drastically reduce satisfaction level not only destroying trust towards the particular bank but also toward the industry itself (Bitner & Hubbert 1994). Thus improving all aspects related to dimensions of service quality would result in better overall consumer contentment.

Digital technological factors necessarily comprise online banking and mobile banking as part of the delivery towards customer satisfaction. Findings from this study established that perceived ease of use, security, and accessibility are the major determinants of customer satisfaction on electronic banking services (Kimery & McCord, 2002). Customers' perception of system reliability and ease of use on digital channels would articulate their satisfaction to a great extent (Garedachew, 2010). Responsiveness to customer complaints and support offered in time through all the channels they have will also surface their satisfaction together with loyalty towards a particular bank. Hence, being able to fulfill customers' needs through technology investment will result in better satisfaction outcomes.

Customer satisfaction leads to customer loyalty and positive behavioral intentions. Loyal customers will continue to buy the services, and service quality will translate into loyalty, those satisfied with the bank usually recommend it as a word-of-mouth brand ambassador, satisfied customers tend to repurchase services be loyal and act as a brand ambassador (Oliver, 1999). This loyalty in banks means an increased opportunity for cross-selling as well as reduced churn of customers (Caruana, 2002). Indeed, satisfaction is found to be a mediator between service quality and retention of customers which makes it of imperative interest to banking strategies (Olsen & Johnson, 2003). Such banks are in a position to obtain a competitive advantage in markets that increasingly saturate due to an improved focus on understanding and controlling customer satisfaction.

#### **2.1.6. Relationship between Customer Expectations and Customer Perceptions**

Customer satisfaction regarding banking services has long been defined through the gap between perceptions and expectations. Expectations are those beliefs or standards regarding quality and service attributes of a banking operation that customers hold before the actual experience (Oliver, 1980), i.e., something formed by previous experiences, word-of-mouth,

advertising, and even general reputations of the bank (Oliver, 1999). If perception matches or exceeds expectations formed after a service encounter result in satisfaction; if falling short, dissatisfaction hence the imperative of managing expectations appropriately (Churchill & Surprenant, 1982).

The theory of expectancy-disconfirmation states that satisfaction is a function of the comparison between expectation and perceived performance (Oliver, 1980). If perception does better than the expectation, positive disconfirmation occurs with high satisfaction; if perception falls short of the expectation, negative disconfirmation occurs resulting in dissatisfaction (Bitner & Hubbert, 1994). This dynamic interplay suggests that both perception and expectation are important in the determination of the level of satisfaction. Thus, banks have to ensure as well as manage and even frame the expectations of customers properly (Carman, 1990).

Customer expectations are influenced by the quality of service they rendered in their previous encounters. This is the experience that sets a benchmark for future interactions (Zeithaml, Parasuraman, & Malhotra, 2000). When banks deliver quality services at all times then most customers will have perceptions that meet or even exceed their expectations. This breeds loyalty as well as good word-of-mouth to other potential customers (Gerrard & Cunningham, 2006). Service delivery does not always match with what the customer expects from the bank. Delays and security breaches as well as unresponsiveness will make perceptions be negatively disconfirmed leading to dissatisfaction (Jamal & Nasser, 2003).

There are however external elements that affect the difference between what is expected and perceived like technology innovation, competitive offers and social-economics. For example, with the increasing number of technology-oriented customers, expectations regarding online and mobile banking services are expanding (Kumar et al., 2009). Therefore, it is critical that banks innovate in the way they deliver service in order to bridge this gap and manage expectations through effective communication, transparency about where the customer's money is being used and innovation around how the bank can help serve customers better. If perceptions do not meet expectations, trust deteriorates and satisfaction decreases (Garedachew, 2010).

Studies show that the degree of pattern of expectations and perceptions strongly contributes to total satisfaction (Oliver, 1999). If expectations are met or exceeded, customers will be

receptive to the service experience being a positive one and this augments loyalty and advocacy (Cheng & Tam, 1997). Unrealized expectations, however, are conducive to dissatisfaction, bad evaluations and defection towards competitors (Jamal and Nasser 2003). Consequently, it is crucial for banks which want to improve customer satisfaction and retention to comprehend and manage this relationship.

Effective management of the expectancies-perceptions hole includes setting sensible expectancies via transparent verbal exchange and handing over regular carrier best. Banks that proactively inform customers about provider limitations or delays can reduce the probability of disconfirmation and dissatisfaction (Zeithaml et al., 2000). Moreover, the nonstop feedback request enables banks to change their service offerings to fit the changing customer expectations of the users, thus improving the perceptions of the price and satisfaction (Yohannes, 2010). Thus, the alignment of customer perceptions with expectations is a tactical necessity for the continuation of a competitive advantage in the banking sector.

#### **2.1.7. Challenges and Opportunities in E-Banking Adoption**

E-banking has revolutionized the financial sector in a way that the services have become more convenient, less time consuming, and more accessible. However, the adoption process, especially in developing countries, is riddled with challenges that are likely to hinder the e-banking potential from being fully realized. One of the factors that obstruct e-banking adoption is inadequate technology infrastructure in developing countries. Internet connection that is too slow, power outages, lack of sound digital infrastructure contribute to a very big challenge of making e-banking processes be done without a hitch (Kumar et al., 2009). The infrastructural gaps of this kind not only limit access but also lower the trust of users in digital financial services; the final outcome of this is slowing of the adoption rate.

What is more, the problem of low digital literacy level of the population in the developing world is one of the biggest challenges facing the area of e-banking adoption. Just imagine the people who can potentially be users of these services but they are not empowered or simply do not possess the basic skills that are needed for them to make the right decisions online, which raises the issues of usability and trust. (Teka, 2017) Without the help of certain educational programs, the people might be less willing to use e-banking services if they are warned that they may make mistakes or fall victim to cyber crimes. The trouble with the security concerns made for adoption more challenging too. Potential issues of data breaches,

identity theft, and cyberattacks are among the most common causes that prevent consumers from using electronic banking services. In order to ensure strong cybersecurity, banks, and other financial institutions, should take up the challenge of making a series of continuous small or big investments in the creation of safe systems that not only protect customer data but also give them confidence that their data is safe (Fekadu, 2009).

Aside from the technical and security problems, the infrastructural limitations such as the stability of internet connection may also come in the way of service delivery, especially in rural and remote areas. Such types of breakdowns can cause inconvenience to customers and also demoralize the image of digital banking service providers who in a way, discourage the usage of these services further. Moreover, the change skeptics who are customers that have been used to the traditional banking way of life won't be a behavioral hurdle as only a few individuals might be willing to be in a face-to-face interaction and possibly might not trust digital options (Tiruneh, 2017). To mitigate such resistance, running awareness programs consistently, customer education, and trust creation works. E-banking can do so much to expand financial inclusion if only the challenges and issues could be sorted out.

Digital financial services have the potential of providing banking to rural unbanked or underserved population of rural communities, which bank branches are otherwise hardly accessible. As mobile phone technology has been adopted and operating costs have been reduced banks are able to reach people who were previously economically excluded (Nguyen et al., 2020). Namely, mobile banking has been identified as a very powerful tool in extending financial access across developing countries in areas of transactions, savings, and credit for the poor (Khera et al., 2022). A range of electronic innovations makes the future of e-banking even more bright. For instance, biometric-based security, AI (Artificial Intelligence)-based customer service, and blockchain technology all are advancing solutions in relation to e-banking security, transparency, and customer service personalization (Venkatesh et al., 2003). Implementation of such technologies can eliminate security risks, increase customer satisfaction, and thus trust, which results in speeding up the adoption process. In addition, it is vital for the elaboration and implementation of regulations to create a good environment for D-banking. Not only through formulating appropriate regulatory frameworks and thus facilitating the adoption of the digital mode can they support further adoption drift but also by facilitating digital literacy programs and by setting cybersecurity standards which, at the same time, protect consumers and give them confidence in the safety

of their operations (Khan et al., 2020). As part of the push towards broad-based financial inclusion, reform-oriented policy interventions are being put in place to deal with physical and regulatory challenges that hamper the scaling up of digital financial services in Ethiopia (Teka, 2017).

In short, the trend of e-banking has not been completely overshadowed by the developing world and despite difficulties in infrastructure, security issues, and even somewhat resistance based on traditional ways of thinking, the numerous potentials for financial inclusion and economic growth are still very obvious. Overcoming such challenges through the coordinated efforts of the banking industry, regulators, and policymakers would provide the possibility of harnessing the full benefits of digital banking and thus leading to the creation of a more inclusive and resilient financial system.

## **2.2. Theoretical Gap**

Although there have been many foreign and domestic studies investigating electronic banking (e-banking) and customer satisfaction, the understanding regarding the interaction of various determinants on service quality dimensions such as tangibles, reliability, responsiveness, assurance, empathy, credibility, access/ease of navigation, security, communication and understanding of customers' needs as individual constructs and as a consolidated group of constructs influencing customer satisfaction in the banking industry is limited in case of Ethiopia. Majority of the earlier investigations, including Gerrard and Cunningham (2006) and Martin and Kwaku (2016), are on the whole concerned with technology acceptance or service quality in general as a whole without considering the different effects of these factors.

In addition, infrastructural limitations and technological literacy - which are critical in Ethiopia context - have not been adequately addressed under these service quality dimensions, thus hindering the generalization of such models as the SERVQUAL (Parasuraman, Zeithaml, & Berry, 1988) paradigm in system under study.

Besides, most of the literature reviews related to e-banking focus on customers' perception and intention to use in the developed countries (e.g. Malaysia (Ahasanul, Ahmad & Abu, 2009) and New Zealand (Gan & Clemes, 2006)) with little consideration on the impact of the socio-economic and infrastructural barriers of the developing countries such as Ethiopia. For example, security and access issues are intensified in Ethiopia with infrastructural limitations

(Garedachew, 2010; Abraham, 2012), which affect views about service reliability and security—the two key factors of customer satisfaction. Theoretical frameworks such as the TAM (Davis, 1986; Davis, Bagozzi, & Warshaw 1989) have been used to analyse adoption behaviors but they do not consider service quality dimensions that directly affects satisfaction result in a context of infrastructural constraint.

Finally, although previous studies have confirmed that service quality and trust are essential in enhancing customer satisfaction and loyalty(Adamson, Chan, & Handford, 2003; Carman, 1990), there is lack of research on the interaction of these two dimensions within the context of Ethiopian banking industry. Particularly, the security, ease of access to services, communication, and customer awareness has not been well explored as drivers of customer satisfaction in areas of infrastructural and technological limitations. This challenge implies the need for a customized conceptual model that integrates these particular service quality dimensions and situational factors, thus not only contributing to a significant gap in the literature but also the potential to reinvent banking practices in Ethiopian context.

### **2.3. Empirical Literature Review**

Several empirical studies emphasize the significance of service quality as a main factor leading customer satisfaction in electronic banking. As technology continues to advance, the expectations of consumers for safe, efficient and convenient online banking services have changed. Gikandi and Bloor (2010) highlight that with the development of digital technology, the need for efficient, trusted and convenient e-banking services increases as consumers want to perform financial transactions on the move. Their results indicate that higher perceived service quality leads to greater customer loyalty and satisfaction with this effect being even more substantial in emerging economies where the banking sector is experiencing unprecedented growth (Kumar et al., 2009). Studies reveal that quality of service in e-banking is multi-dimensional, having several factors namely reliability, responsiveness, assurance, empathy and tangibles which have some degree of effect on the perception of users. Adaptations to the electronic environment: d) Parasuraman et al (1988) developed the SERVQUAL measurement tool which they have adapted for the electronic environment, adding two new factors design and security that include system reliability and security as important factors influencing perceptions of quality in online banking. To illustrate, Saini and Chahal (2014) carried out a research in Indiawhich established that reliability and responsiveness were the key determinants of customer satisfaction, indicating that banks

should work on reducing system downtime and delivering prompt response to issues to retain customers.

In the same context; Aladwani (2006) studied users of e-banking services in Kuwait and concluded that user's trust and satisfaction is positively related to system availability and accuracy of the transaction. The impact of these on reducing transactional errors and customer frustration leads to sentiments of doing business relationship and stability platform that reduces frustration and customer complaints, and increases customer loyalty (Eze et al., 2018) accentuates the need for a reliable online platform and robust hardware, such as high-quality servers and secure networks, to handle e-banking business.

Responsiveness, which measures service speed and quality, is also a key aspect of service quality. Ahmad and Wara (2011) found out that E-banking customers particularly in Malaysia are highly satisfied with prompt responses to their technical problems and inquiries. Responsiveness reduces the customer cumber, and increases their trust on digital solutions; something that is of crucial importance in low digit literacy areas, where customers will likely be more guided (Udo & Nwankwo, 2011). In addition, a good service response was found to be related with the perception of being cared for and professionalism that positively affects overall satisfaction and trust.

Assurance, relating to the ability, friendliness, and reliability of online service personnel, also has the greatest effect on customers' perceived security and trust of the web site. Assurance exerted significant positive effects on trust and satisfaction among online customers of in Lin and Luarn (2005) applied the quality construct to the Taiwanese online banking and they found that staffs' knowledgeable and polite support positively contributed to perceived security and competence. Also, empathy, which is a personalized service that reflects an understanding of customer needs, was positively related to satisfaction and loyalty. Herington and Weaven (2009) state that individualized interaction and communication can strengthen customer relationships within online banking.

The physical aspects of e-banking including the website design, interface, and level of ease when used on a mobile device also influence on the quality perception of the services [15]. Kuo et al. (2009) have proven that an attractive and friendly interface has a positive effect on the service quality perception and the intention of continued use. Gebremichael and Chala (2020) articulate that in the Ethiopian context where digital literacy is a spectrum, well

designed and easy to use application can minimize frustration for the users, which allows a greater number of adopters and increases the satisfaction of users.

Evidence from developing country contexts suggest that perceptions of service quality are significantly shaped by infrastructural constraints. Amoako-Tuffour et al. (2018) reviewed the literature on barriers to customer satisfaction in Ghana banking industry under the topic of what obstructs our customers and were able to find that the main barriers included security concerns and reliability of systems. Also, Tessema and Gebremedhin (2021) in Ethiopia argued that infrastructure deficiencies like poor internet connectivity, power interruptions negatively affected the perceived service quality which result in the decline of users satisfaction and users adoption rates. These results suggest that investing in technological infrastructure is required to improve service delivery and customer experience in the context of developing countries.

#### 2.4. Conceptual framework

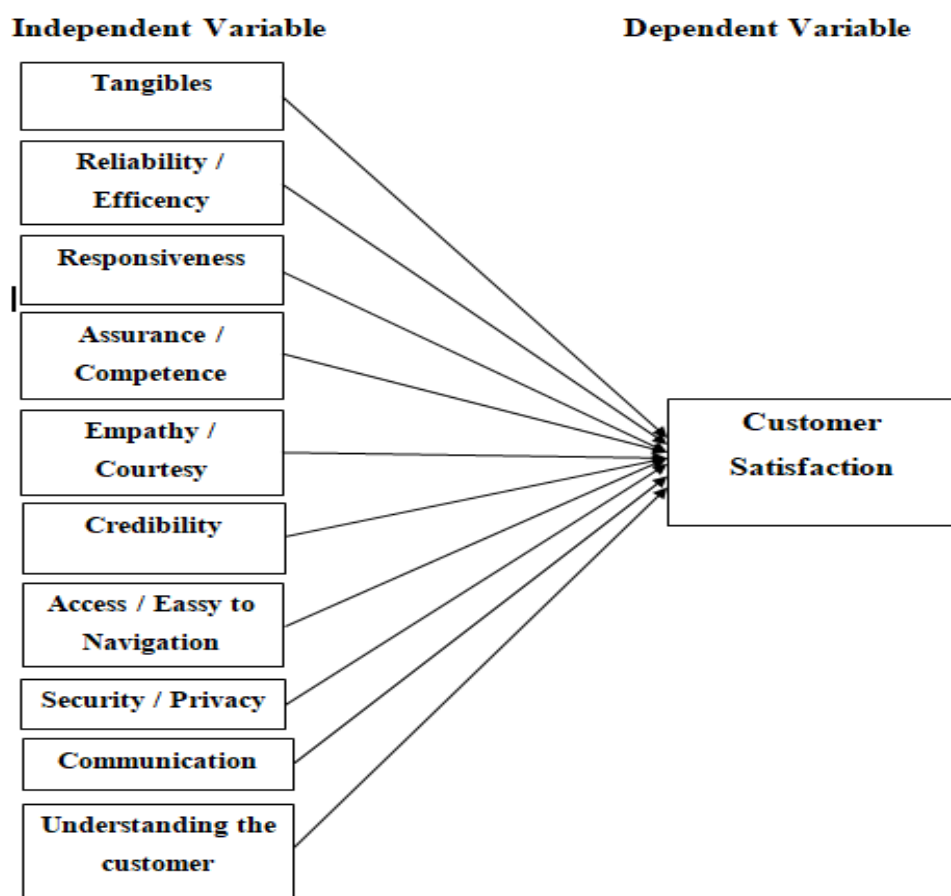


Figure 1: Conceptual framework

## **CHAPTER THREE**

### **3. RESEARCH METHODOLOGY**

This chapter presented the methodological framework that was applied to address the research problem and answer the research questions. It described the research approach, design, population, sampling techniques, sources of data, data collection instruments, reliability and validity measures, data collection procedures, methods of analysis, and ethical considerations.

#### **3.1. Research Approach**

This study is a survey based on quantitative research to explore the electronic-banking service quality on the customers' satisfaction. Quantitative research is focused on the collection of numerical data using quantifiable approaches, such as the structured questionnaires, which make it possible for a researcher to quantify the perceptions, attitudes and experiences of e-banking users. This makes it possible to compute statistical connections between service quality dimensions, namely reliability, responsiveness, assurance, empathy and tangibles, and customer satisfaction. The investigation seeks to test hypotheses derived from models such as SERVQUAL and e-SERVQUAL by applying deductive reasoning for theoretically based predictions and to contribute empirical findings on the key factors that govern perceptions of customers with reference to the financial sector in Addis Ababa.

This quantitative approach lends itself to the objective assessment and generalization of results to the study population and also allows for the results to be replicated. It also allows to apply statistical techniques (eg, regression analysis, correlation, reliability tests) to test the strength and significance of the relationships between the variables. This methodology was embraced by the researchers in order to gather a large data sample that would make it representative and precise in terms of analyzing factors that contribute to customer satisfaction with e-banking. Thus, in conclusion, a quantitative methodology in research design has the potential to offer findings that are of long-lasting significance and of valuable magnitude to attract banking institutions and policy makers who are interested in upgrading service delivery.

#### **3.2. Research Design**

This study is based on descriptive research design, which enables to describe the current situation of quality of electronic banking services and customer satisfaction in Addis Ababa.

Descriptive research design is suitable to collect information detailing perceptions, attitudes and experiences of e-banking customers on different dimensions of service quality which significantly affect customer satisfaction. The study under quantitative approach through structured questionnaires collects data in a quantitative form on satisfaction level regarding service, service features, and demographic profiles of the respondents which helps the researcher to examine story within population.

In addition, the research uses explanatory design to examine the causal relations among quality of service factors and customer satisfaction. Employing inferential statistics, mainly multivariate regression analysis, the study investigates the significant influences on customer satisfaction. The purpose of this design is to examine how changes in dimensions such as reliability, assurance, and responsiveness affect directly customer's perceptions and loyalty. The synergy of descriptive and explanatory research enables the investigation to map the current landscape of e-banking services and infer relationships among constructs, which can help the business to refer to effective measures to improve service quality and customer experience.

### **3.3. Population of the Study**

The study population of this study was all electronic banking users in Addis Ababa, who were accessing services from the selected commercial banks for more than six months. It was to allow participants to have adequate experience to make an informed opinion about e-banking services. Based on the information from the banks and the industry reports, the total customer population was around 6,000.

The sample was drawn from diverse demographic segments i.e. age groups, education levels, occupation and income so as to be representative. Because the study was based on active users, the results accurately reflect service quality and satisfaction levels for insights banking and policy makers who may wish to use them to improve services of electronic banking in that country.

### **3.4. Sample Techniques and Sample Size**

#### **3.4.1. Sampling Techniques**

A stratified random sampling method was used to ensure that different demographic groups (e.g., age, education level, occupation) were well represented in the sample. To ensure that the subject's views were adequately represented in the whole sample, the population was

first stratified into strata based on these attributes, after that a random sample was taken from each stratum proportionally. This contributed to better representativeness and reliability.

In addition, simple random sampling was used to select individual respondents from each stratum. The procedure eradicated bias and the findings are able to be generalized to the entire population of e-banking users in Addis Ababa.

### **3.4.2. Sample Size**

Sample size, as described by Kothari (2004), is defined as “the number of objects gathered from the population for constituting a sample.” A sample size should neither be too large nor too small; rather, it should be optimum. A good sample should be efficient, representative, reliable, and flexible. These characteristics should be taken into consideration while determining a sample size.

To find out the sample size for the target population in this research, the researcher used a formula derived by Yamane (1967) for determining sample size when working with a finite population, where the size of the population (N) has been determined. This formula takes into account both the population size and the desired level of precision, which is shown as “e” in the formula, and it stands for the maximum allowed error. The formula provides a means to find sample sizes with a 95% confidence level with  $P = 0.05$  in the formula:

$$n = \frac{N}{(1 + Ne^2)} = \frac{6000}{(1+6000(0.05)^2)} = \underline{\underline{375}}$$

Where:-

- n is sample size,
- N is total population number,
- e is margin of error set at 5% (0.05).

### **3.5. Sources and Types of Data**

This study used both primary and secondary sources of data. The primary data involved fresh information that was gathered from respondents for this study using structured questionnaires administered among e-banking users in Addis Ababa. These questionnaires gathered quantitative data with regards to the dimensions of service quality perceptions and overall satisfaction.

The secondary data consisted of published data, such as reports, publications, and statistical data from institutions such as the Central Bank of Ethiopia, and other studies. These data were important in providing insights for validating findings from primary data.

### **3.6. Instruments for Data Collection**

The data was collected using structured questionnaires that were mostly designed to capture certain key elements of service quality, including reliability, responsiveness, assurance, empathy, and tangibles. These questionnaires used a set of items that were taken from a validated instrument used in a previous study, measured using a Likert scales, enabling respondents to rate their agreement with a series of statements.

### **3.7. Method of Data Analysis**

Model specification begins with determining the independent and dependent variables from a conceptual framework. This study has customer satisfaction as a dependent variable, with reliability, responsiveness, assurance, empathy, and tangibles as independent variables. The dominant aim of this study seeks to investigate how the independent variables affect customer satisfaction.

Multiple regression analysis was used to ascertain the relationship between these variables. Before doing regression analysis, the data were tested for multicollinearity. This ensured that there were no highly correlated independent variables. The calculation of variance inflation factors was done. A value above 10 showed that there was multicollinearity.

The regression equation was defined as follows:

$$\text{Customer Satisfaction} = \beta_0 + \beta_1 \text{ tangibles} + \beta_2 \text{ Reliability/Efficiency} + \beta_3 \text{ responsiveness} + \beta_4 \text{ Assurance/Competence} + \beta_5 \text{ Empathy/Courtesy} + \beta_6 \text{ credibility} + \beta_7 \text{ security/privacy} + \beta_8 \text{ Access/Easy to Navigation} + \beta_9 \text{ communication} + \beta_{10} \text{ understanding customer} + \varepsilon$$

Where:  $\beta_0$  = intercept

- $\beta_1$  to  $\beta_{10}$  are the coefficients that measure the effects of dimensions of service quality,
- $\varepsilon$  represents error, which describes remaining variability.

The relevance of the coefficients was determined with a significance level of 95% confidence. Model fit was determined using R-square, and other tests like residual analysis

were done to test for conditions of linearity, homoscedasticity, and normality. Should there be any violations, transformations and robust regression would be employed.

### **3.8. Reliability and Validity of the Instruments**

#### **3.8.1. Reliability**

To make it reliable, Cronbach's alpha for every construct was computed. A result of 0.70 and above was deemed acceptable, which indicated internal consistency of the data. A small sample of respondents was used in a pilot test to check for uncertainties in the study, which were eliminated.

**Reliability Statistics**

Cronbach's Alpha	N of Items
.964	60

#### **3.8.2. Validity**

Content validity was checked with the assistance of bank officials and regular faculty members of a university, who further checked the readability of questions. The construct validity of the instrument was established using factor analysis to check if items were loaded on various factors. Another validity test that of face validity was also done. This test involved piloting a small group of respondents in order to check for understandability concerning questions and answers. The above three techniques enhanced the reliability and validity of the whole instrument.

### **3.9. Ethical Considerations**

This study was guided by ethical considerations. Before embarking on data gathering, ethical clearance was sought from the relevant institution. The aim of this study, voluntary participation, and freedom to withdraw from participation without any consequence were among issues that respondents were informed of. This informed consent was obtained from all respondents.

The confidentiality and anonymity were ensured in this study. There was no analysis of personal identifiers, and all data was stored in a secure manner that would not lead to breaching of confidentiality. There was honesty and transparency in this study since all findings were reported in a true and unaltered manner.

## CHAPTER 4

### 4. DATA ANALYSIS, RESULTS AND PRESENTATION

#### 4.1. Introduction

This chapter is supposed to evaluate the impact of the quality of the electronic banking service on customer satisfaction for the selected commercial banks in Addis Ababa. This chapter highlights the techniques employed in data processing and analysis of the results. Both descriptive and inferential statistics are employed to analyze the data collected using questionnaires with the aid of SPSS software version 27.

The first part provides an insight into the demographics of the respondents and their background. The second part provides descriptive statistics that describe the data, while the third part of the study uses inferential analysis such as correlation and regression to analyze data among the variables. The findings are presented in a table and also in figures for better explanation and interpretation of the findings.

#### 4.2. The Response Rate of Questionnaires

The response rate of questionnaires is another point that should be considered when designing a research questionnaire. It refers to the percentage of questionnaires that are completed and returned by respondents. A higher response rate is desirable because it ensures that the researcher gets the necessary information from respondents. However, if the response rate is low, it may be attributed to factors such as the reluctance of respondents to provide information or a lack of interest in the research questionnaire.

Response rate is one of the factors to be considered in survey research to ensure that the findings of the research study become valid and reliable. The primary data was gathered from 375 respondents, who all use electronic banking services in Addis Ababa. A total of 304 completed responses were received to the distributed questionnaires, making the response rate 81.06%.

This large response rate indicates the enthusiasm of the participants to participate in the study and is a good indicator for analysis. A response rate of 50% is considered sufficient to allow meaningful analysis, 60% is preferable and more than 70% is considered ideal as it allows the sample to represent the target population in a more accurate manner (Mugenda, 1999). Hence, the obtained response rate is above 70% and that implies the data acquired are

considered sufficient and capable of providing reliable information for the intent of this study.

### 4.3 General Information about Respondents

In this section, an overview of the general demographics of the participants is provided (age, gender, educational level, employment, and monthly income). The information is expressed as the number and percentage of the samples, and the frequency and percentage of each attribute are shown in the table below.

<b>Background Variables</b>	<b>Category</b>	<b>Frequency (N=304)</b>	<b>Percentage (%)</b>
<b>Age</b>	18 – 25 Years	58	19.1
	26 – 35 Years	116	38.2
	36 – 45 Years	78	25.7
	46 – 55 Years	38	12.5
	56 Years and above	14	4.6
	Total	304	100
<b>Educational Background</b>	No formal education	12	3.9
	High school diploma	47	15.5
	Bachelor’s Degree	153	50.3
	Master’s Degree	78	25.7
	PhD	14	4.6
	Total	304	100
<b>Gender</b>	Male	186	61.2
	Female	118	38.8
	Total	304	100
<b>Employment Status</b>	Employed (private/public)	157	51.6
	Self-employed	89	29.3
	Unemployed	58	19.1
	Total	304	100
<b>Monthly Income Level</b>	Less than 5,000 ETB	41	13.5
	5,000 – 10,000 ETB	98	32.2
	10,001 – 20,000 ETB	92	30.3
	20,001 – 30,000 ETB	45	14.8
	Above 30,000 ETB	28	9.2
	Total	304	100

Source: own Survey, 2025

Most of the respondents were in the **age group** 26–35 years (38.2%) as indicated in the table, followed by 36–45 years (25.7%) and 18–25 years (19.1%). Only 12.5% were aged 46

to 55 and 4.6% were aged more than 56. This result means this age group has the highest number of users in E-banking in Addis Ababa. Hence, the age distribution of the population reveals that electronic banking in Addis Ababa is dominated by working class.

With regard to **educational level**, 50.3% of the respondents had a bachelor's degree, 25.7% had a master's degree and 15.5% had high school education. Only 4.6% of the respondents were PhD holders and 3.9% had no formal education. This result suggests that the majority of users of electronic bank are well-educated, which confirms the belief that education increases the consciousness to use digital financial services.

Concerning **sex**, 61.2% of the participants were males and 38.8% were females, which reveals a male dominance in the use of electronic banking services in Addis Ababa. In terms of occupation, 29.3% of the respondents were self-employed, 19.1% were unemployed and 51.6% were either public or private sector employees. This justifies the fact that the bulk of e-users are working people who carry out their e-banking transactions either for business or salary.

Regarding income, the most respondent (32.2%) were with the income between 5,000 and 10,000 ETB, the second largest group earn 10,001–20,000 ETB (30.3%). A lower percentage earned less than 5,000 ETB (13.5%), 20,001–30,000 ETB (14.8%) and above 30,000 ETB (9.2%). This indicates that the core segment of e-banking customers in Addis Ababa is middle-income earners.

#### **4.4 Descriptive analysis**

To investigate the effect of quality of service of e-banking on customer satisfaction, this study focuses on some selected commercial banks in Addis Ababa. Based on an extensive literature review and initial findings, respondents assessed the extent to which they were overall satisfied with e-banking services on each of the 50 factors grouped under 10 areas.

As in Chapter 3, for respondents to indicate their agreements and disagreements on the following statements a 5-point Likert scale was used (1 = Strongly Disagree, 2 = Disagree, 3 = Moderate, 4 = Agree, and 5 = Strongly Agree). The score allowed us to quantify perceptions and experiences in relation to different elements of quality in the service provided by E-banking.

#### 4.4.1. Tangibles of Electronic Banking Services related factors

**Table 1: Tangibles of Electronic Banking Services related factors**

Tangibles of Electronic Banking Services related factors		Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree	Total	Mean	Standard Deviation
The electronic banking platform has an attractive and professional appearance.	Freq.	4	66	134	90	10	304	3.12	0.828
	%	1.3	21.7	44.1	29.6	3.3	100		
The design and layout of the online banking interface are modern and appealing.	Freq.	4	46	123	114	17	304	3.31	0.842
	%	1.3	15.1	40.5	37.5	5.6	100		
The bank's digital	Freq.	1	44	142	107	10	304	3.27	0.757
	%	0.3	14.5	46.7	35.2	3.3	100		

infrastruct ure appears reliable and well- maintaine d.									
The visual layout of the platform makes it easy for me to find what I need.	Fre q.	3	18	146	115	22	304	3.44	0.756
	%	1.0	5.9	48.0	37. 8	7.2	100		
The physical facilities (ATMs, branches) support the electronic banking services effectively .	Fre q.	2	24	132	123	23	304	3.46	0.774
	%	0.7	7.9	43.4	40. 5	7.6	100		

Source: own Survey, 2025

The first aspect to be tested was the professional and clean looking of the electronic banking system. The mean rating was 3.12, suggesting that respondents had a general moderate view. Although some customers agreed that the platform was professional and well-served, another

large group was neutral or disagreed, indicating that there were still deficiencies. It supports previous findings of Chen and Hu (2020) that stated that visual attractive is a small factor but has importance to influence online customer satisfaction in technology driven service. The lukewarm rating indicates that the banks can further improve the visual design to better satisfy the customers.

Then came the design of the online menu, with an average rating of 3.31. More than 40% of participants agreed or strongly agreed that the design was a decent one (acceptable), 37.5% of them disagreed. This demonstrates that the interfaces are found to be at least minimally pleasing by many opinions. It follows that such a positive impact derived from a user-friendly and visually pleasing online interface led to higher trust and satisfaction in financial online services (Jun & Cai, 2001). The different responses mean that some banks in that respect are better than others. Related to the stability/maintenance of the digital infrastructure, the respondents gave the average rating of 3.27. This is reflective of a just about adequate level of satisfaction rather than an excellent level and was supported by the findings by Alam et al. (2020) who stressed the significance of system stability in customer satisfaction. Unreliability perceptions, such as system crashes or technical problems, might undermine trust if they are not solved in a timely manner.

Ease of navigation and ease of visual layout scored higher with a mean of 3.44. Nearly 45% of respondents agreed or strongly agreed that the platform was intuitive and easy to use. This finding corroborates the study by Jiang et al. (2019), which asserts that simplicity and ease of navigation are determinants of satisfaction among users.

The component of support from physical infrastructure, for example, ATMs and bank branches, scored the highest in this module with an average score of 3.46. The respondents recognized that even though this support was important to digital services, of course, it can't be denied that physical infrastructure still plays a role. This is in line with the argument of Ngoc et al. (2020) when they cited that physical infrastructure is important, especially in places where there is less access to the internet or people have limited digital literacy.

## Conclusion

Thus, the conclusion can be made that the customers of Addis ababa have an average level of satisfaction on the tangibility in e-banking service. But there are certain gaps, among others, in user interface design, visual attractiveness, and system reliability. If these tangibles will be

improved, there will be a better customer experience and increased satisfaction, which confirms that physical and visual tangibles are very important for the overall quality of e-banking services. In the future, strategies should be aimed at improving interfaces, infrastructure development, and unifying physical and virtual services to encourage even stronger customer loyalty.

#### 4.4.2. Reliability / Efficiency of Electronic Banking Services related factors

**Table 2: Reliability / Efficiency of Electronic Banking Services related factors**

<b>Reliability / Efficiency of Electronic Banking Services related factors</b>		Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree	Total	Mean	Standard Deviation
The electronic banking system is available whenever I need it.	Freq.	2	49	79	146	31	304	3.51	0.905
	%	0.7	16.1	25.0	48.0	10.2	100		
Transactions through the electronic banking platform are completed without errors.	Freq.	3	48	65	107	81	304	3.71	1.058
	%	1.0	15.8	21.4	35.2	26.6	100		

The bank provides consistent and dependable electronic banking services.	Fre q.	3	31	75	162	33	304	3.63	0.846
	%	1.0	10.2	24.7	53.3	10.9	100		
The system performs transactions accurately and reliably.	Fre q.	2	46	110	119	27	304	3.40	0.874
	%	0.7	15.1	36.2	39.1	8.9	100		
Technical issues with electronic banking are resolved promptly.	Fre q.	-	18	86	168	32	304	3.70	0.734
	%	-	5.9	28.3	55.3	10.5	100		

Source: own Survey, 2025

The first consideration was the presence of electronic banking facilities when required. The mean value for this attribute= 3.51 indicated that most users agree that the platforms can be used at most of the time. More specifically, 48% of respondents were in agreement, and 10.2% were in strong agreement, while 16.1% were not in agreement. This means that although the availability of the system is basically sufficient, there are still a few users who

have sporadically encountered access problems. System availability is also a key determinant of reliability (Jiang et al., 2019), and even short outages may reduce customer satisfaction and loyalty in digital banking services.

Then, transactional accuracy and error-free processing were agent-rated factors, with the highest average score of 3.71. Even though this optimistic view makes sense, the high standard deviation (1.058) indicates that not all users had the same experience. A total of 61.8% of customers (72.6% of all respondents) strongly agreed or agreed that transactions are accurately processed indicating overwhelming confidence in accuracy of system among customers. Nonetheless, there are still some users who have encountered errors. The importance of a high level of transactional reliability for ensuring customer trust and retention is argued by Jun and Cai (2001), which implies that banks should strive to reduce the number of technical hitches by enhancing their back-end systems.

The third factor, consistency and dependability of the service, had an average score of 3.63. Over half of the respondents' agreed (53%) and 10.9% strongly agreed, indicating that most customers receive stable and predictable service. This is consistent with the results of Alam et al. (2020), who suggest that having an ongoing level of service has a greater impact on satisfaction than either sporadic promotion or unique functionality. In Addis Ababa, such a positive response would appear to indicate that a majority of banks have a system in place to offer a reasonably consistent experience, although there was a small proportion of respondents who disagreed or remained neutral (10.2%).

The lowest mean score was obtained for the fourth indicator: system performance accuracy and reliability, which had a mean score of 3.40. Although 39.1% of the respondents agreed that the system performed well, a substantial number, 36.2%, were undecided, and 15.1% disagreed. This indicated that the users are to some extent ambivalent or displeased with regard to system reliability. Occasionally failed or delayed transactions could be a reason for such feelings. According to Ngoc et al. (2020), even a single problem with system reliability can induce distrust in customers who are risk-averse and need urgent transaction processing.

Lastly, the timely resolution of technical issues was given a high average score of 3.70. More than half the respondents (55.3%) agreed that their concerns are addressed in a timely manner, while a small percentage (5.9%) disagreed. This shows that banks are offering efficient technical assistance. According to Zeithaml et al. (2002), speedy and efficient

service recovery is critical to retaining consumer satisfaction as the expectations of online consumers are quite high in terms of convenience and speed.

In conclusion, the results of the analysis point to a moderate to high satisfaction level of most customers with the dependability and efficiency of electronic banking services offered in Addis Ababa. The factors that contribute to this satisfaction include the availability of the system, accuracy of transactions, and technical support offered by the system, while the factors requiring improvement are increasing consistency of the system and reducing transaction uncertainties.

#### 4.4.3. Responsiveness of Electronic Banking Services related factors

**Table 3: Responsiveness of Electronic Banking Services related factors**

<b>Responsiveness of Electronic Banking Services related factors</b>		Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree	Total	Mean	Standard Deviation
Support responds quickly when I have questions or problems with electronic banking.	Fre q.	-	43	110	134	17	304	3.41	0.799
	%	-	14.1	36.2	44.1	5.6	100		
The bank's support	Fre q.	2	37	92	164	9	304	3.46	0.770
	%	0.7	12.2	30.3	53.	3.0	100		

team provides helpful solutions promptly .					9				
I can easily reach customer support when I need assistance.	Fre q.	-	32	117	121	34	304	3.52	0.828
	%	-	10	38.5	39.8	11.2	100		
The bank responds quickly to system outages or transaction errors.	Fre q.	2	41	113	118	30	304	3.44	0.869
	%	0.7	13.5	37.2	38.8	9.9	100		
Issues related to electronic banking are	Fre q.	14	53	106	117	14	304	3.21	0.941
	%	4.6	17.4	34.9	38.5	4.6	100		

resolved in a timely manner.									
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Source: own Survey, 2025

The first statement related to whether support staff are responsive when customers have concerns. This was answered on average by 3.41, with 44.1% agreeing and 5.6% strongly agreeing. However, 14.1% disagreed. This indicates that customers find the responsiveness of the support staff acceptable but with a significant number being neutral, reflecting inconsistent responsiveness. This supports the view that responsiveness is a central construct of service quality and is particularly important in addressing service failures, as claimed by Zeithaml et al. (2002).

The second statement assessed the level of the support team in providing quick and effective solutions. This item received a slightly higher rating of 3.46, with more than half (53%) agreeing, but only 3% strongly agreeing, while 12.2% disagreed. This reflects a moderate level of confidence in the effectiveness of support; although solutions are offered, they do not necessarily live up to customer expectations. Alam et al. (2020) study supports that both speed and quality of support are critical for perceived responsiveness in digital financial services.

The ease of accessing customer support scored the highest among the items with a mean of 3.52. More than half of the respondents (51%) agreed or strongly agreed that support access channels such as call centers, chatbots, and in-app support options are easily accessible. However, 38.5% of the respondents were neutral, indicating that accessibility might depend on the time of day or communication channel utilized. The above results support the view of Jiang et al. (2019) that easy accessibility to support services improves reliability and responsiveness perceptions in online banking.

Regarding the response of the bank to system failures and/or errors in transactions, the average score was 3.44. Approximately 38.8% agreed and 9.9% strongly agreed that the bank responds quickly. Nevertheless, a large number (37.2%) of respondents were neutral, and 13.5% disagreed, showing a degree of ambivalence or discontent regarding this point.

According to Ngoc et al. (2020), the timely and efficient resolution of service failures is essential in sustaining customer trust and satisfaction.

The lowest-rated aspect was whether issues are resolved promptly, with a mean score of 3.21. While 38.5% agreed, 17.4% disagreed, and 4.6% strongly disagreed. This suggests that although customers acknowledge issues, delays in resolution are common. The lower rating underscores a challenge for banks: ensuring that once issues are identified, they are addressed swiftly and effectively. Zeithaml et al. (2002) emphasizes that responsiveness involves the entire process from acknowledging problems to resolving them efficiently.

In conclusion, the findings suggest that although a majority of the customers perceive E-banking support as easily accessible and responsive, there are inconsistent response time and issue resolution speed. Better follow up routines, shorter resolution times and better communication while solving the problem, may increase customer satisfaction considerably. As established literature supported, responsiveness continues to be a significant predictor of customer loyalty and trust for digital banking service were found particularly so in developing country like Addis Ababa.

#### 4.4.4. Assurance / Competence of Electronic Banking Services related factors

**Table 4: Assurance / Competence of Electronic Banking Services related factors**

Assurance / Competence of Electronic Banking Services related factors		Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree	Total	Mean	Standard Deviation
I trust that the bank's staff is knowledgeable and capable in handling electronic banking	Freq.	2	28	88	157	29	304	3.60	0.810
	%	0.7	9.2	28.9	51.6	9.5	100		

services.									
I feel confident that my personal and financial information is handled professionally by the bank.	Fre	1	41	111	12	25	304	3.44	0.838
	q.				6				
	%	0.3	13.5	36.5	41.4	8.2	100		
I trust the bank to handle my online transactions accurately and without error.	Fre	-	72	93	12	18	304	3.28	0.892
	q.				1				
	%	-	23.7	30.6	39.8	5.9	100		
The bank's staff explains electronic banking services clearly, instilling confidence in me.	Fre	-	34	105	15	8	304	3.46	0.725
	q.				7				
	%	-	11.2	34.5	51.6	2.6	100		
I believe the bank is	Fre	1	20	83	18	18	304	3.64	0.707
	q.				2				

reliable and competent in managing electronic banking services.	%	0.3	6.6	27.3	59.9	5.9	100		
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Source: own Survey, 2025

“I believe the bank is reliable and competent in managing electronic banking services” was the top-rated point with an average score of 3.64. Nearly two out of three respondents confirmed their agreement with this assertion showing a solid perception of the tech-savviness side of things. The percentage of disagreement was only 6.6%, and that of strong agreement was 5.9%. These results are consistent with research done by Alam et al. (2020), stating that perceived competence has a major impact on customer satisfaction in digital banking.

The second main point to be considered was “Bank staff are knowledgeable and capable,” which also achieved a high mean of 3.60. More than 50% of the respondents (51%) agreed, and 9.5% strongly agreed with this statement. In a nutshell, customers perceive generally bank staff as well-trained which is in line with the model of Parasuraman et al. (1985), who considered assurance as an essential component of service quality especially in situations where customers have to depend heavily on staff expertise for the digital services they want to use. However, the presence of 28.9% neutral responses suggests that some customers might not have had sufficient interactions with staff or may feel uncertain about their competency.

The statement concerning the bank’s protection of personal and financial information elicited a mean response of 3.44. A little over 40% of the respondents agreed, and 8.2% strongly agreed with the statement; however, 13.5% disagreed. This suggests that while some customers are willing to entrust their banks with sensitive information, there is still a considerable number of them who are not comfortable with it, thus, the reason why they might be talking about security issues. These viewpoints give banks the necessity to make

data security more transparent and also to let their clients know that their privacy is being handled very well, a conclusion that is in line with the findings of Yousafzai et al. (2003).

Regarding transaction accuracy, this is the indicator that has the lowest average score - 3.28. Out of the total customers, 39.8% confirmed the accurate handling of their transactions, 23.7% disagreed with the statement and 30.6% stayed neutral. The mixed responses can mean that some customers have experienced or have the perception that there are errors or delays, which hence, can lower their trust level. According to Pikkarainen et al. (2004), transaction accuracy is essential for maintaining user trust and increasing the use of online banking services.

Moreover, the bank staff providing the explanations was rated with an average of 3.46 by the respondents. A little more than half of respondents, i.e., 51.6% agreed that the explanations of electronic banking services are clear, but only 2.6% strongly agreed, and a significant number of people (34%) remained neutral. This means that although the communication is generally good, it still needs to be more personal and tailored to different customer needs. Clear, proactive communication as Kwon and Kim (2012) point out, makes the users, especially those who are less experienced or tech-savvy, more trustful.

Additionally, it can be said on the basis of survey results that customers generally trust their banks' competence and professionalism in delivering electronic banking services. However, worries about the security of the data and the accuracy of the transaction still remain. To ensure the customers' safety to the fullest, banks should concentrate on open communication, good system performance, and staff training. By addressing these issues, banks will be able to raise customers' confidence, enhance their satisfaction and retain them for the long-run in a digitally advancing banking environment.

#### 4.4.5. Empathy / Courtesy of Electronic Banking Services related factors

**Table 5: Empathy / Courtesy of Electronic Banking Services related factors**

Empathy / Courtesy of Electronic Banking Services related factors		Strong ly Disagr ee	Disagr ee	Moderate	Agree	Strong ly Agree	Total	Mean	Standard Deviation
The bank understan ds my specific needs when I use electronic banking.	Freq.	1	34	118	122	29	304	3.47	0.828
	%	0.3	11.2	38.8	40.1	9.5	100		
The online platform offers personaliz ed options that suit my preference s.	Freq.	1	24	110	149	20	304	3.54	0.748
	%	0.3	7.9	36.2	49.0	6.6	100		
The bank shows genuine concern for my	Freq.	1	24	129	134	16	304	3.46	0.730
	%	0.3	7.9	42.4	44.1	5.3	100		

satisfaction with electronic banking.									
I feel valued as a customer when I use electronic banking services.	Freq.	-	49	115	123	17	304	3.36	0.816
	%	-	16.1	37.8	40.5	5.6	100		
The bank offers tailored services or advice based on my banking behavior.	Freq.	7	39	102	128	28	304	3.43	0.909
	%	2.3	12.8	33.6	42.1	9.2	100		

Source: own Survey, 2025

The statement that received the highest rating was: "The online platform offers personalized options that suit my preferences." It got a mean score of 3.54. Almost half of the respondents (49%) agreed with this statement, and 6.6% strongly agreed, which indicates that many users acknowledge the banks' efforts in providing personalized digital services such as saving preferences, suggesting features, or customizing content. These results confirm the study Khara, Ng, Ogawa, & Sahay (2022) did where they concluded that personalization raises the perceived value of the service and creates an emotional bond between the customer and the service provider. However, a considerable number of respondents, 36.2%, chose to remain

neutral, which indicates that there are still users who do not fully benefit from the personalization process.

An equally essential point that was examined is "The bank understands my specific needs when I use electronic banking," which had an average score of 3.47. Roughly 40.1% of the respondents agreed, and 9.5% of them strongly agreed. However, 11.2% of them disagreed with the statement. This suggests that, on the one hand, some banks are putting in the effort to meet the individual needs of their customers, but on the other hand, this is not the case for all customers. This issue especially points to the problem of empathy reproduction in a fully digital environment where there is less personal communication. The study by Jamal & Nasser (2003), highlights that understanding customer needs is very important especially in situations where digital literacy is different among customers. If banks make better use of customer data, it could be a way for them to show more empathy.

The idea that banks are genuinely concerned with customer satisfaction also achieved a fairly high mean score of 3.46. Nearly 44.1% of the respondents agreed, and 5.3% of them strongly agreed. However, more than 42% of the respondents remained neutral. That points to a situation where many customers may not see that their banks are actively engaging with them or taking their feedback into account. With the help of such methods as follow-up calls, feedback surveys, or personalized advice, banks could upgrade this side of the coin to the customers. Parasuraman, Zeithaml, & Malhotra (2005) emphasize that showing concern through communication is very important, especially in online services where there is no direct contact between people.

As for the feeling of being valued, the point "I feel appreciated when using electronic banking services" had the lowest score in this dimension with a mean of 3.36. While 40.5% of people agreed, 16.1% were against the idea, and 37.8% were neutral. This shows that emotional connection and the feeling of being appreciated are not so common in digital banking experiences. Sureshchandar et al. (2002) stress that the introduction of human-centric features even in digital platforms is vital for retaining emotional engagement. Banks could do this by sending personalized messages, giving loyalty rewards, or recognizing the customers through features to create a tighter emotional bond with them.

In the end, the sentence "The bank offers tailored services or advice based on my banking behavior" garnered a mean score of 3.43. Close to 42.1% of the people agreed with the

statement, and 9.2% of them strongly agreed, which indicates that a lot of customers appreciate behavior-based recommendation. On the other hand, 12.8% of the people disagreed with the statement, and the comparatively high standard deviation (0.909) indicates that the users' experiences were quite different. This is consistent with the argument of Zhang and Prybutok (2005) who support the idea of using predictive analytics and data-driven personalization as a way to provide more relevant and proactive banking services. There is still a long way for banks to better use customer data to make the digital services more relevant and of higher quality.

#### 4.4.6. Credibility of Electronic Banking Services related factors

**Table 6: Credibility of Electronic Banking Services related factors**

Credibility of Electronic Banking Services related factors		Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree	Total	Mean	Standard Deviation
I believe the bank is trustworthy in handling my electronic banking transactions.	Freq.	3	39	129	120	13	304	3.33	0.791
	%	1.0	12.8	42.4	39.5	4.3	100		
The bank provides transparent and accurate information about its services.	Freq.	1	27	134	117	25	304	3.45	0.782
	%	0.3	8.9	44.1	38.5	8.2	100		
The bank's reputation	Freq.	-	26	115	137	26	304	3.54	0.770

increases my confidence in its electronic banking services.	%	-	8.6	37.8	45.1	8.6	100		
The bank's services consistently meet my expectations, making me feel secure in using them.	Freq.	-	50	120	116	18	304	3.34	0.820
	%	-	16.4	39.5	38.2	5.9	100		
The bank demonstrates integrity and honesty in all its electronic banking communications and transactions.	Freq.	2	32	104	146	20	304	3.49	0.796
	%	0.7	10.5	34.2	48.0	6.6	100		

Source: own Survey, 2025

The bank's professional image was the single most positive factor in the users' confidence towards the bank's innovation in electronic banking. This statement received a mean score of 3.54. About 45.1% of respondents agreed with this assertion, while 8.6% strongly agreed, and 37.8% chose neutral. These numbers indicate that a solid reputation of an institution is a major factor that impels the perception of trustworthiness. Digital banking customers will

place their trust in the banks that maintain a good image of themselves in the electronic space. These findings are consistent with the view of Gerrard & Cunningham (2006), who argued that brand reputation and corporate image are major determinants of user confidence in online financial transactions, particularly in less digitally literate regions.

Integrity and honesty were the second attributes the most bank users associated with the bank's electronic communication made with the average score of 3.49. Collectively, more than half of the respondents (54.6%) agreed or strongly agreed, thereby reflecting the general perception of honesty and trust in the ethical behavior of the bank. Such perceptions are the pillar for the establishment of long-term customer relationships and are supported by Zeithaml, Parasuraman, & Malhotra (2000), who found a positive correlation between perceived honesty and customer loyalty in online banking. That said, 10.5% of respondents were negative about this, which could be indicative of situations where they felt deceived or were given unclear information.

Customer perception of bank transparency was assessed with the statement: "The bank provides the most transparent and accurate information about its services." which garnered an average score of 3.45. The 44.1% of the people who chose to agree with this and 8.2% who strongly agreed signified that customers generally find the information provided online as clear and reliable. Being transparent about service fees, conducting transactions, and policies is fundamental in building trustworthiness. To quote Kamel (2005), transparency in the online provision of services reduces the perceived risks and enhances the customer's confidence. Nevertheless, 8.9% of the participants of this survey were of the opposite opinion, which highlights the continuous demand for banks to keep their customers informed of service changes and digital terms for the purpose of avoiding confusion and mistrust.

The lowest-rated statement was: "I believe the bank is trustworthy in handling my electronic banking transactions," which had a mean score of 3.33. 39.5% of people who responded to the survey agreed with the statement. On the other hand, a relatively large proportion of 42.4% chose to respond neutrally, and 13.8% disagreed. The fact that many users feel the need to put a question mark on the transaction process expresses that the latter is a source of concern for the people. The already existing issues of unsuccessful transactions, transaction delays, or lack of instant support from customer service may be the reasons behind this lack of trust. According to Kimery & McCord (2002), trust in the security and accuracy of digital

transactions is decisive for the development of electronic commerce and Internet banking. Therefore, the message of these results is that banks should invest more in guaranteeing transaction reliability to make their customers feel more confident.

"The bank's services are always in line with my expectations, which makes me feel safe using them" obtained a mean score of 3.34. Approximately 38.2% of the respondents agreed, 16.4% disagreed, and 39.5% remained neutral. The mixed responses here indicate that the respondents have different perceptions of the consistency of the service. As Olsen & Johnson (2003) have stated, consistent performance and reliable service are the main factors that lead to customer trust. The large proportion of neutral responses can be explained by the fact that customers are likely to experience good service one time and bad service the next, thus hindering trust from fully developing.

To sum up, the information drawn from the data points to the fact that customers overall view their banks' electronic services as trustworthy, especially in terms of reputation, honesty, and transparency. Nevertheless, there are security concerns related to transactions and service consistency, as indicated by the relatively high number of neutral and negative responses. Banks need to concentrate on error-free transaction implementation, more transparent communication, and providing service consistently if they want to digital trust become stronger. Trust in credibility serves as the foundation for not only customer satisfaction but also the sustained adoption of digital banking services in Ethiopia's growing financial sector.

#### 4.4.7. Security / Privacy of Electronic Banking Services related factors

**Table 7: Security / Privacy of Electronic Banking Services related factors**

Security / Privacy of Electronic Banking Services related factors		Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree	Total	Mean	Standard Deviation
I feel confident that my transaction	Freq.	-	70	66	111	57	304	3.51	1.044
	%	-	23.0	21.7	36.5	18.8	100		

ns are handled securely by the bank.									
I trust that my privacy is respected and maintained during online banking.	Fre q.	2	86	139	77	-	304	2.96	0.750
	%	0.7	28.3	45.7	25.3	-	100		
The bank's platform ensures that my personal data is safe, which enhances my confidence in using it.	Fre q.	3	63	73	147	18	304	3.38	0.911
	%	1.0	20.7	24.0	48.4	5.9	100		
I am satisfied with the bank's	Fre q.	7	133	88	74	2	304	2.77	0.866
	%	0.7	43.8	28.9	24.3	0.7	100		

overall approach to maintaining my financial security.									
I feel assured that the bank takes all necessary measures to protect my online banking transactions.	Frequency	10	56	83	149	6	304	3.28	0.900
	%	3.3	18.4	27.3	49.0	2.0	100		

Source: own Survey, 2025

The statement that was rated most positively by the users was: "I feel confident that my transactions are handled securely by the bank," which got an average rating of 3.51. Just over 36.5% of respondents indicated their agreement, while 18.8% of them claimed to strongly agree, thus revealing that most people consider the safety of their transactions as a given. On the contrary, only a small number of people (23%) expressed disagreement with the idea. It is evident from this that many users view bank technologies as being technically capable of securely handling their transactions. The studies presented in this paper are in line with the findings of Miyazaki & Krishnamurthy (2002), who pointed to perceived security as the main factor that influences the use of electronic banking. The variability in the standard deviation value of 1.044 may also indicate that there are differences in people's views of security in different banks or on different platforms.

As far as data security is concerned, the declaration "The bank's platform guarantees that my private data are secure" achieved an average rating of 3.38. About 48.4% of the respondents were in agreement with the statement, while 24% were neutral, and 21% were in disagreement. The range of these responses reveals that there is some uncertainty or inconsistency in the perception of data safety among customers. When writing their article on the subject, Zeithaml, Parasuraman, & Malhotra (2000) pointed out that trust in security measures like encryption and two-factor authentication is necessary to build more user confidence in online banking. There is a small group of users who are still skeptical about how securely banks are keeping their personal information.

The item with the lowest rating was: "I am satisfied with the bank's overall approach to maintaining my financial security," which had a mean score of 2.77. What's more, 43.8% of people who took part in the survey disagreed with this statement, whereas only 24.3% agreed and 28.9% remained neutral. This is indicative of the large number of people who are either worried or dissatisfied with the aspects of the management of financial security that go beyond transaction security. These problems could be caused by the security policies being poorly communicated, no customer education, or the adoption of security measures that are visible but not easily understandable. The research conducted by Haque (2009) is in line with this, as it suggests transparency and customer empowerment as two key factors that lead to digital security satisfaction.

A question, "I trust that my privacy is respected and maintained during online banking," which resulted in an average score of 2.96. A large percentage (45.7%) of the respondents chose the moderate answer, while 28.3% disagreed and only 25.3% agreed. This finding suggests that there are still privacy issues going on, particularly in relation to how personal data is being stored, shared, or monitored during online sessions. Khan et al. (2020) point out that privacy concerns are one of the major reasons why people are hesitant to use online services, especially in emerging markets where there might not be sufficient regulation.

The average response for the statement "I feel assured that the bank takes all necessary measures to protect my online transactions" was 3.28. Nearly half (49%) of the respondents agreed with the statement, while 18.4% disagreed. Many have acknowledged that security measures are in place, however, a significant number are not fully confident. These results emphasize the need for financial institutions not only to upgrade the secrecy and safety of

their solutions but also to inform customers about these measures. A study by Haque (2009) reveals that openness about security measures and communication being ahead of customer expectations can thus be the drivers of customer trust and confidence.

In general, Addis Ababa electronic banking users have diverse views concerning privacy and security of m-banking. Some customers believe that their transactions and data are secure while others doubt the banks' overall security strategies and privacy measures. The relatively low levels of contentment may be indicative of the necessity for banks to raise transparency, improve customer education, and employ visible security features. By resolving these issues, it will be possible to increase customer trust, satisfaction, and the use of digital banking services, which is very important for the growth of the financial sector in Ethiopia.

#### 4.4.8. Access / Easy Navigation of Electronic Banking Services related factors

**Table 8: Access / Easy Navigation of Electronic Banking Services related factors**

Access / Easy Navigation of Electronic Banking Services related factors		Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree	Total	Mean	Standard Deviation
The online banking platform is easy to access from different devices.	Freq.	-	38	80	153	33	304	3.60	0.843
	%	-	12.5	26.3	50.3	10.9	100		
Navigating through the digital banking platform is straightforward	Freq.	-	57	118	109	20	304	3.30	0.849
	%	-	18.8	38.8	35.9	6.6	100		

ard.									
I can perform banking transactions quickly and easily.	Fre	-	85	79	11	26	304	3.27	0.964
	q.				4				
	%	-	28.0	26.0	37.5	8.6	100		
The platform design helps me find what I need efficiently.	Fre	1	49	114	12	11	304	3.33	0.798
	q.				9				
	%	0.3	16.1	37.5	42.2	3.6	100		
The system is accessible even with low internet bandwidth.	Fre	2	29	61	18	24	304	3.67	0.782
	q.				8				
	%	0.7	9.5	20.1	61.8	7.9	100		

Source: own Survey, 2025

The statement that received the highest rating was: "The system is accessible even with low internet bandwidth," which got the average score of 3.67. It is interesting to note that almost 62% of respondents agreed, and around 8% strongly agreed with the statement, which means that the majority of people consider that banking services can be accessible even if the internet connection is weak. This is very important, especially, in Ethiopia where the internet infrastructure is quite unstable. The results of this study correspond to the ones by Cheng, Lam, & Yeung (2006) who argue that mobile-friendly and light wifi platforms are a must for better accessibility and financial inclusion in emerging markets.

Another well-rated aspect was: "The online banking platform is easy to access from different devices," with a mean score of 3.60. Majority of the respondents (50.3%) confirmed the statement by agreeing with it, and 10.9% strongly agreed, thus proving that most banks

provide their services on different devices. It is very important for users to be able to access their accounts whether it is via smartphones, tablets, or computers. These findings are in line with the argument put forward by Garedachew (2010), who stated that compatibility with the device greatly affects the user's perception of usefulness and overall satisfaction with electronic banking services.

On the other hand, the claim that the speaker could run fast and simple banking transactions had the lowest estimated average of 3.27. About 28% of people disagreed with it, while only 8.6% strongly agreed. The standard deviation value of 0.964 together with the not-so-high average indicates that there are different experiences among the users which could be caused by such factors as waiting times for system responses, old-fashioned user interface, or technical problems. This is consistent with Tiwari & Buse (2007), who stated that in order to make users willing to use mobile and online banking more frequently, transaction speed and system performance should be their top priority.

Along the same lines, the statement "Navigating through the digital banking platform is straightforward" received a mean of 3.30. 35.9% of respondents agreed with the statement, while 18.8% disagreed, and 38.8% were neutral. The number of neutral answers is quite high here, which implies that some of the users consider the interface to be less intuitive or more complex than others. The accountability of navigation confusion could be either design inconsistencies or complex navigation structures. In accordance with Cheng, Lam, & Yeung (2006), straightforward navigation and a user-friendly design help increase users' perception of ease and encourage them to use the platform.

The assertion "The platform design helps me find what I need efficiently" had a moderate mean score of 3.33. While 42.2% of the respondents showed their agreement, 37.5% were neutral, and only 3.6% strongly agreed. The considerable number of neutral respondents implies that there are quite a few people who think that the platform can be made more usable. Improvements in user interface design via user testing and interface refinement can not only help customers experience a smooth journey but also diminish navigation hurdles. Kumar et al. (2009) stressed that a well-organized layout and easy-to-use search features are the basics that lead to an improved user experience in internet banking.

#### **4.4.9. Communication of Electronic Banking Services related factors**

**Table 9: Communication of Electronic Banking Services related factors**

<b>Communication of Electronic Banking Services related factors</b>		Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree	Total	Mean	Standard Deviation
The bank provides timely updates about system outages or security alerts.	Freq.	2	75	91	117	19	304	3.25	0.921
	%	0.7	24.7	29.9	38.5	6.3	100		
Transaction confirmations and alerts are sent promptly.	Freq.	5	64	61	133	41	304	3.46	1.021
	%	1.6	21.1	20.1	43.8	13.5	100		
The bank communicates clearly about any changes or issues affecting service.	Freq.	15	64	70	124	31	304	3.30	1.066
	%	4.9	21.1	23.0	40.8	10.2	100		
Customer support is accessible and communication	Freq.	7	58	64	121	54	304	3.52	1.062
	%	2.3	19.1	21.1	39.8	17.8	100		

tes professiona lly.									
The bank provides helpful instructions and tutorials for using digital services.	Fre q.	6	67	68	14 6	17	304	3.33	0.946
	%	2.0	22.0	22.4	48. 0	5.6	100		

Source: own Survey, 2025

The most positively received statement was “Customer support is accessible and communicates professionally,” which received an average of 3.52. A significant number of respondents 39.8% agreed and 17.8% strongly agreed expressed satisfaction with the professionalism and accessibility of support services. This reflects well on banks’ customer service strategies. Previous research by Gerrard & Cunningham (2006) highlights that clear and courteous support communication plays a crucial role in fostering customer satisfaction and loyalty in electronic banking.

Similarly, “Transaction confirmations and alerts are sent promptly” scored a favorable mean of 3.46. Around 43.8% of respondents agreed, and 13.5% strongly agreed, indicating that many customers receive timely notifications. However, approximately 22.7% expressed dissatisfaction or felt that the communication was inconsistent. Timely alerts are critical for building trust and transparency, especially in digital banking, where customers are highly sensitive to potential fraud or unauthorized transactions. This aligns with findings by Liao & Cheung (2003), who emphasized the importance of real-time updates in enhancing customer confidence.

Conversely, the statement “The bank communicates clearly about any changes or issues affecting service” received a mean score of 3.30. Notably, 21.1% of respondents disagreed, and 23.0% remained neutral. This suggests that banks may not be effectively communicating

during service disruptions or updates. Proactive communication during outages, delays, or technical problems is essential to maintain trust. Cheng et al. (2006) support this, indicating that transparent communication during disruptions encourages customer loyalty despite temporary inconveniences.

“The bank offers me useful instructions on how to use the digital services” got a mean rating of 3.33. “Close to half (48%) of the respondents were in agreement, while 24% were in disagreement or strong disagreement indicating that users are lacking in onboarding and educational support.” More so in Ethiopia’s nascent digital infrastructure, clear and simple tutorials guides may empower novices to better find their way around platforms. Olson & Johnson (2003) highlights that the content of the education is a critical factor to the acceptance and continued usage of eservices in these environments.

The lowest scoring item was “The bank notifies users of system outages or security alerts in a timely manner” (M=3.25). A further 24% of the respondents disagreed, and there was a tiny trader passer of 6.3% who strongly agreed. This suggests a failure to communicate proactively on system or security problems. As concerns about cybersecurity increase, banks should consider investing in real-time alert systems to notify customers so that they can be advised quickly. Consistent, timely communication are particularly important for building trust in these platforms of electronic banking (Nguyen et al. 2020).

Therefore, in conclusion, the whole discussion could be summed up by saying that: although there are moderate strengths identified among that sample of banks in Addis Ababa in the provision of transactional alerts and the professional manner in which customers are supported, there are areas that require improvement related to the reactive nature of communication with customers during service interruptions, security alerts, and educating customers. Greater transparency and accountability will promote even more trust and the further development of electronic banking services. Multi-channel communication approaches such as SMS, mobile app notification and email alerts could result in better overall customer engagement.

**4.4.10. Understanding the Customer of Electronic Banking Services related factors**

**Table 10: Understanding the Customer of Electronic Banking Services related factors**

Understanding the	Strongl	Disagr	Moder	Agr	Stron	Tot	Mea	Standar
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<b>Customer of Electronic Banking Services related factors</b>		Disagree	Disagree	Neutral	Agree	Agree	Strongly Agree	Mean	Standard Deviation
The bank understands my specific needs and preferences in digital banking.	Fr eq.	-	32	104	133	35	304	3.56	0.830
	%	-	10.5	34.2	43.8	11.5	10.0		
The bank offers personalized recommendations based on my usage.	Fr eq.	-	37	109	144	14	304	3.44	0.764
	%	-	12.2	35.9	47.4	4.6	10.0		
The bank proactively provides relevant information or advice.	Fr eq.	2	32	128	132	10	304	3.38	0.744
	%	0.7	10.5	42.1	43.4	3.3	10.0		
The bank effectively responds to my feedback and complaints.	Fr eq.	1	50	124	122	7	304	3.28	0.772
	%	0.3	16.4	40.8	40.1	2.3	10.0		
The bank's digital services are tailored to suit my financial	Fr eq.	-	27	99	149	29	304	3.59	0.782
	%	-	8.9	32.6	49.0	9.5	10.0		

behavior.									
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Source: own Survey, 2025

“The digital services of the bank are designed to meet the needs of my financial behavior” was rated the top with the mean score of 3.59. Some 49.0% of respondents agreed and 9.5% strongly agreed, indicating that over 58.5% of users felt some customization in their digital banking experience. Personalization is important within the competitive digital terrain so as to increase value and relevance perceived. This finding corroborates the argument of Bedi (2010) who emphasized that customized banking offerings induce more customer engagement and happiness.

In the same way, the mean score for “The bank knows my needs and preferences in digital banking” was 3.56. Around 43.8% agreed, and 11.5% strongly agreed showing most of the customers agree for banks to recognize their individual requirements. Knowing customer preferences is key to relevant service delivery. Service personalisation, trust and intentions to revisit digital banking services: Evidence from an emerging market.

The mean score for ‘the bank provides me with customized recommendations in accordance with my usage’ was 3.44. While there were some neutral expressants (35.9%), only 4.6% strongly expressed their concurrence. This tells us that personalized recommendations exist but they are not that sophisticated and/or accurate. Khera, Ng, Ogawa and Sahay (2022) argue that: good exploitation of user data to produce focused recommendations is valuable and enriches the customer experience.

The item “The bank responds well to my comments and complaints” scored the lowest with an average of 3.28 on the bank’s responsiveness. A total of 2.3% strongly agreed, 40.8% neither agreed nor disagreed, and 16.4% disagreed. This suggests that consumers may feel that their feedback is not heard enough or they do not see resultant actions. For one, responsiveness is considered a crucial attribute of service quality in the context of digital banking (Olson & Johnson, 2003). “The bank actively sends me relevant information or advice” 3.38 In the case of “I receive relevant or useful information from the bank in an active manner,” the d value was 2.18. While 43.4% agreed, a significant 42.1% were neutral, indicating an unstable or contradictory communication of information or value-added service. Banks can do better by alerting customers in advance with timely advice or alerts.

Gerrard & Cunningham (2006) reveal that proactivity in approach significantly increases customer satisfaction and loyalty in online services.

Collectively, the results show that when it comes to meeting customers' digital banking needs, customers tend to believe that their bank is doing quite well. Whilst personalisation and targeted services are now accepted 'table stakes', there is a clear shortfall in responsiveness to feedback and proactive communications. These factors contribute to a positive enhancement of customer experience and satisfaction in e- banking.

#### **4.5. Results of Correlation Analysis**

The correlation of the variable is measured by Pearson correlation coefficient. The result of the Pearson correlation is presented in the following table and interpreted by the guide line suggested by Field (2006); he mentioned that the Pearson correlation coefficient shows the relationship and direction between the predictor and outcome variable. Accordingly, if the relationship is measured in the range of 0.1 to 0.29 it is a weak relationship, 0.30 to 0.49 is moderate, above 0.50 shows strong relationship; while the positive and negative sign tell us the direction of their relationship.

**Table 11: Pearson correlation information**

Correlations												
		Customer Satisfaction of Electronic Banking Services	Tangibles of Electronic Banking Services	Reliability Efficiency of Electronic Banking Service	Responsiveness of Electronic Banking Services	Assurance Competence of Electronic Banking Services	Empathy Courtesy of Electronic Banking Services	Credibility of Electronic Banking Services	Security Privacy of Electronic Banking Services	Access Easy Navigation of Electronic Banking Services	Communication of Electronic Banking Services	Understanding the Customer of Electronic Banking Services
Customer Satisfaction of Electronic Banking Services	Pearson Correlation	1	.644**	.865**	.794**	.851**	.845**	.838**	.700**	.695**	.808**	.841**
	Sig. (1-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	304	304	304	304	304	304	304	304	304	304	304
Tangibles of Electronic Banking Services	Pearson Correlation	.644**	1	.592**	.505**	.542**	.581**	.606**	.481**	.332**	.457**	.654**
	Sig. (1-tailed)	.000		.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	304	304	304	304	304	304	304	304	304	304	304
Reliability Efficiency of Electronic Banking Service	Pearson Correlation	.865**	.592**	1	.734**	.790**	.795**	.758**	.651**	.639**	.741**	.807**
	Sig. (1-tailed)	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000
	N	304	304	304	304	304	304	304	304	304	304	304
Responsiveness of Electronic Banking	Pearson Correlation	.794**	.505**	.734**	1	.721**	.725**	.728**	.607**	.631**	.740**	.718**

Services	Sig. (1-tailed)	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000
	N	304	304	304	304	304	304	304	304	304	304	304
Assurance Competence of Electronic Banking Services	Pearson Correlation	.851**	.542**	.790**	.721**	1	.788**	.823**	.534**	.771**	.715**	.770**
	Sig. (1-tailed)	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000
	N	304	304	304	304	304	304	304	304	304	304	304
Empathy Courtesy of Electronic Banking Services	Pearson Correlation	.845**	.581**	.795**	.725**	.788**	1	.775**	.636**	.676**	.756**	.836**
	Sig. (1-tailed)	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000
	N	304	304	304	304	304	304	304	304	304	304	304
Credibility of Electronic Banking Services	Pearson Correlation	.838**	.606**	.758**	.728**	.823**	.775**	1	.648**	.608**	.727**	.786**
	Sig. (1-tailed)	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000
	N	304	304	304	304	304	304	304	304	304	304	304
Security Privacy of Electronic Banking Services	Pearson Correlation	.700**	.481**	.651**	.607**	.534**	.636**	.648**	1	.340**	.625**	.647**
	Sig. (1-tailed)	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000
	N	304	304	304	304	304	304	304	304	304	304	304
Access Easy	Pearson Correlation	.695**	.332**	.639**	.631**	.771**	.676**	.608**	.340**	1	.662**	.626**

Navigation of Electronic Banking Services	Sig. (1-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	304	304	304	304	304	304	304	304	304	304	304
Communication of Electronic Banking Services	Pearson Correlation	.808**	.457**	.741**	.740**	.715**	.756**	.727**	.625**	.662**	1	.730**
	Sig. (1-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000		.000
	N	304	304	304	304	304	304	304	304	304	304	304
Understanding the Customer of Electronic Banking Services	Pearson Correlation	.841**	.654**	.807**	.718**	.770**	.836**	.786**	.647**	.626**	.730**	1
	Sig. (1-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	304	304	304	304	304	304	304	304	304	304	304

\*\* . Correlation is significant at the 0.01 level (1-tailed).

Source: own Survey, 2025

The results indicated that in electronic banking services reliability and efficiency had the most positive impact on customer satisfaction, with a correlation coefficient of 0.865 ( $p = 0.000$ ), which can be considered as being very strong impact. This suggests that when digital banking services are able to deliver their promised functions error free and on time are more customers satisfaction. This is consistent with SERVQUAL model (Khan et al. (2020)) in which reliability was considered as one of the core dimension of service quality. Reliability is a key issue in digital banking because errors or delays in transactions might shake the customers' trust. Similarly Gan and Clemes (2006) observed that an effective and reliable systems has a great positive impact on customer's confidence and satisfaction in online banking.

Also, the Two Dimensions of the assurance and competence were positively and highly related to customer satisfaction,  $r = 0.851$  at  $p = 0.000$ . It thereby indicates that customers appreciate the technical competence of the bank as well as the safety of their transactions. Following Laukkanen (2016), assurance related to the competence of the provider is important in enhancing customers' trust. In terms of digital banking it is associated with secure platforms, professional service delivery and perceived organizational capability – all of which contribute towards building customer loyalty.

The result of the study also indicated a strong relationship between empathy and courtesy and the satisfaction of the customers ( $r = 0.845$ ,  $p = 0.000$ ). While digital platforms are devoid of face-to-face interaction, attentive care and respectful delivery of information in digital channels still positively affects the experience of users. Even service interactions, Khara, Ng, Ogawa, & Sahay (2022) stress the continued importance of empathy and courteous service for positive customer experiences, including in virtual interactions.

Having a clear lens into what their customers want is also highly connected to satisfaction ( $r = 0.841$ ,  $p = 0.000$ ). Customers feel more valued when banks adapt their services based on individual preferences and behaviors. Personalization, e.g., providing individualized financial advice, enhances the usability of the service and helps in building customer relationship leading to business services edge, opines Jamal & Nasser (2003).

Transparency and trust, i.e. credibility, were also found to be strong predictors of satisfaction ( $r = 0.838$ ,  $p = 0.0$ ). Banking customers are clearly more satisfied when they believe their bank conducts its dealings honestly and with integrity. Gerrard & Cunningham (2006) Stress

the importance of trust as a key determinant of customer loyalty in internet banking, by enhancing credibility.

Communication is the other essential factor, evidenced by a high satisfaction correlation ( $r = 0.808$ ,  $p = 0.000$ ). Transparency timely information updates on transaction services changes or alerts will build trust and enhance user experience. Digital banking has the challenge of having no or very low fac-to-fac communication. Proactive, transparent communication can improve service clarity and reassure customers during disruption, as a result of incident such as service outage or security worries in Service System (SS) research (Nguyen et al., 2020).

Responsiveness was defined as the promptness of service delivery and support, and was highly positively correlated with satisfaction ( $r = 0.794$ ,  $p = 0.000$ ). Customers appreciate timely responses to questions, complaints, and problems with transactions. Other digital support attributes, including chatbots, quick page loads, and effective error handling, positively influence the perception of service quality. Nguyen et al. (2020) points out responsiveness as a key factor, indicating the anticipation of real-time answers.

Although we found security and privacy related factors to be a bit weaker, they still have a significant correlation with satisfaction ( $r = 0.700$   $p = 0.000$ ). Be sure lucky to protect customer information and make secure transactions is necessary words. However, in the absence of perceived security, user satisfaction declines since worries about risks to personal and financial data can prevent them from continuing their use. Nguyen et al. (2020) stress that privacy and security concerns constitute the main obstacles for use of electronic banking services and thus ensuring these is crucial for retaining customers.

To sum up, all the dimensions of service quality in e-banking under study have positive and significant relationships with customer satisfaction at 1% level of significance. The highest impactful items were reliability, assurance, empathy, knowing customer requirements and dependability.

#### **4.6. Diagnostic Tests**

In this study, the researcher employed inferential analysis to evaluate the validity of the data. Specifically, various significance tests were conducted to assess normality, autocorrelation, and multicollinearity. The data were organized by grouping questions according to the

relevant constructs under investigation. Subsequently, multiple regression analysis was performed. The results of these tests and analyses are presented below.

#### 4.6.1. Multicollinearity Assumption

Multicollinearity occurs when two or more predictor variables in a regression model are highly correlated, which can distort the estimation of regression coefficients (Saunders et al., 2007). It is important that predictors are not perfectly linearly related, as perfect multicollinearity prevents the unique estimation of coefficients and leads to unstable results (Ho, 2006). Although perfect multicollinearity is rare in real-world data, high degrees of correlation among predictors are common and problematic (Field, 2006).

When independent variables exhibit a high correlation, it poses a challenge known as the multicollinearity problem, which can affect the reliability and interpretability of the regression model (Kothari, 2004; Field, 2006). In this study, multicollinearity was assessed using Pearson’s correlation coefficients and multicollinearity diagnostics such as Tolerance and Variance Inflation Factor (VIF).

The test of multicollinearity was done by evaluating the output of SPSS specially the correlation matrix, Tolerance and VIF values. A Tolerance less than 0.02 and/or a VIF larger than 10 is indicative of serious multicollinearity. In this analysis, the minimum Tolerance value was 0.179, and the maximum VIF was 5.594, both values being within acceptable limits. This indicates that the predictor variables are not strongly correlated and multicollinearity is not a problem in this model.

**Table 12: Collinearity statistics value**

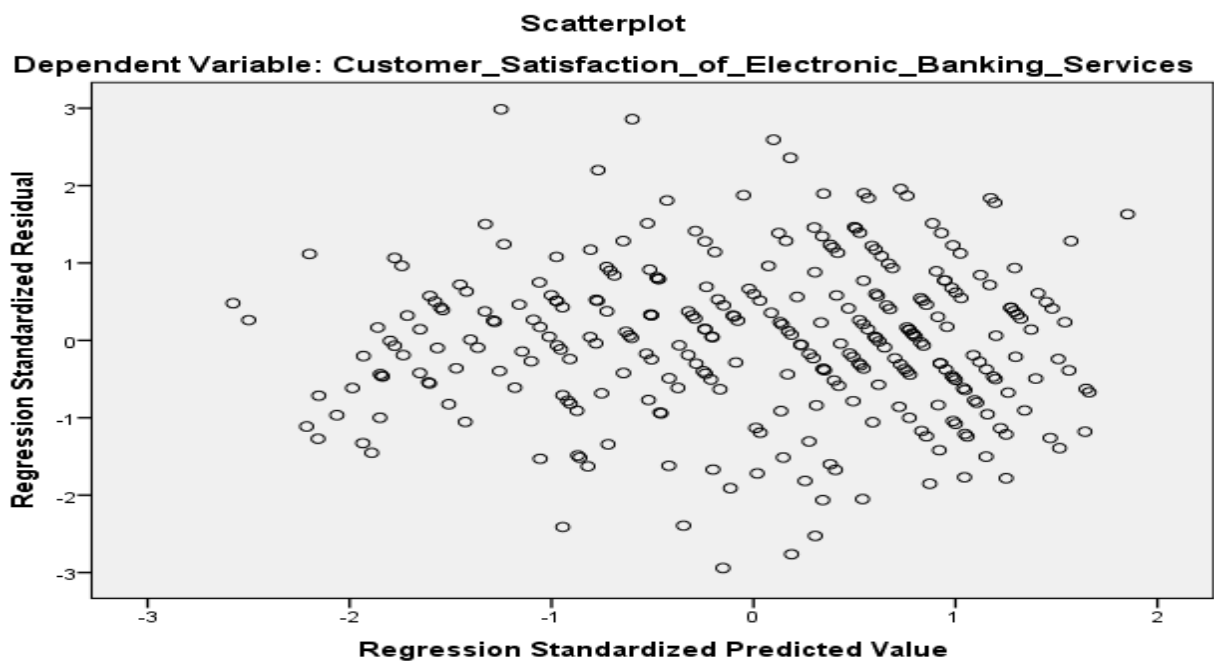
Coefficients			
Model		Co linearity Statistics	
		Tolerance	VIF
1	Tangibles of Electronic Banking Services	.513	1.951
	Reliability Efficiency of Electronic Banking Service	.235	4.263
	Responsiveness of Electronic Banking Services	.329	3.037
	Assurance Competence of Electronic Banking Services	.179	5.594

	Empathy Courtesy of Electronic Banking Services	.214	4.683
	Credibility of Electronic Banking Services	.222	4.505
	Security Privacy of Electronic Banking Services	.429	2.333
	Access Easy Navigation of Electronic Banking Services	.322	3.110
	Communication of Electronic Banking Services	.295	3.394
	Understanding the Customer of Electronic Banking Services	.205	4.879

Source: Own survey (2025)

#### 4.6.2. Homoscedasticity

Homoscedasticity is defined as the degree of which the data values for dependent and independent variables share the same variance (Saunders, et al., 2009). Residuals need to have a constant variance at different values of predictor variables: based on Field (2009), it is assumed that the variance of residual terms should be fixed at all levels of the predictor variables, i.e., residuals at different levels of predictors have the same variance. So for the goodness of regression model it is useful to test for this assumption. Homoscedasticity should be plotted as suggested by Field (2009), plotting the standard residuals or errors (ZRESID) in the Y-axis against the standardized predicted values of dependent variable according to the model (ZPRED) in the X-axis.



## Figure 2: Homoscedasticity test result

Source: Own survey result, 2025

### 4.6.3. Auto-correlation Assumption / Durbin-Watson Test

In a multiple linear regression model, one important assumption is that the residuals (errors between the observed and predicted values) are independent of each other. This means that residuals cannot be correlated between them. In this sense, we are going to test this assumption through the Durbin-Watson value by reviewing the regression results. This statistic indicates the extent of autocorrelation between residual values and lies within the boundaries of 0 and 4. Values near 2 imply uncorrelated residuals, which are ideal. Instead, a value less than 1 or greater than 3 is a warning sign of autocorrelation and may indicate model invalidation. In our analysis, the Durbin-Watson statistic is greater than 1, and according to this the residuals are independent to probable and in this term for assumption is the same (Field, 2009; Gujarati, 2004). A value of 2 indicates no autocorrelation, while values close to 0 indicate positive autocorrelation and values close to 4 indicate negative autocorrelation (Saunders et al., 2009, p.622).

**Table 13: Durbin-Watson Test**

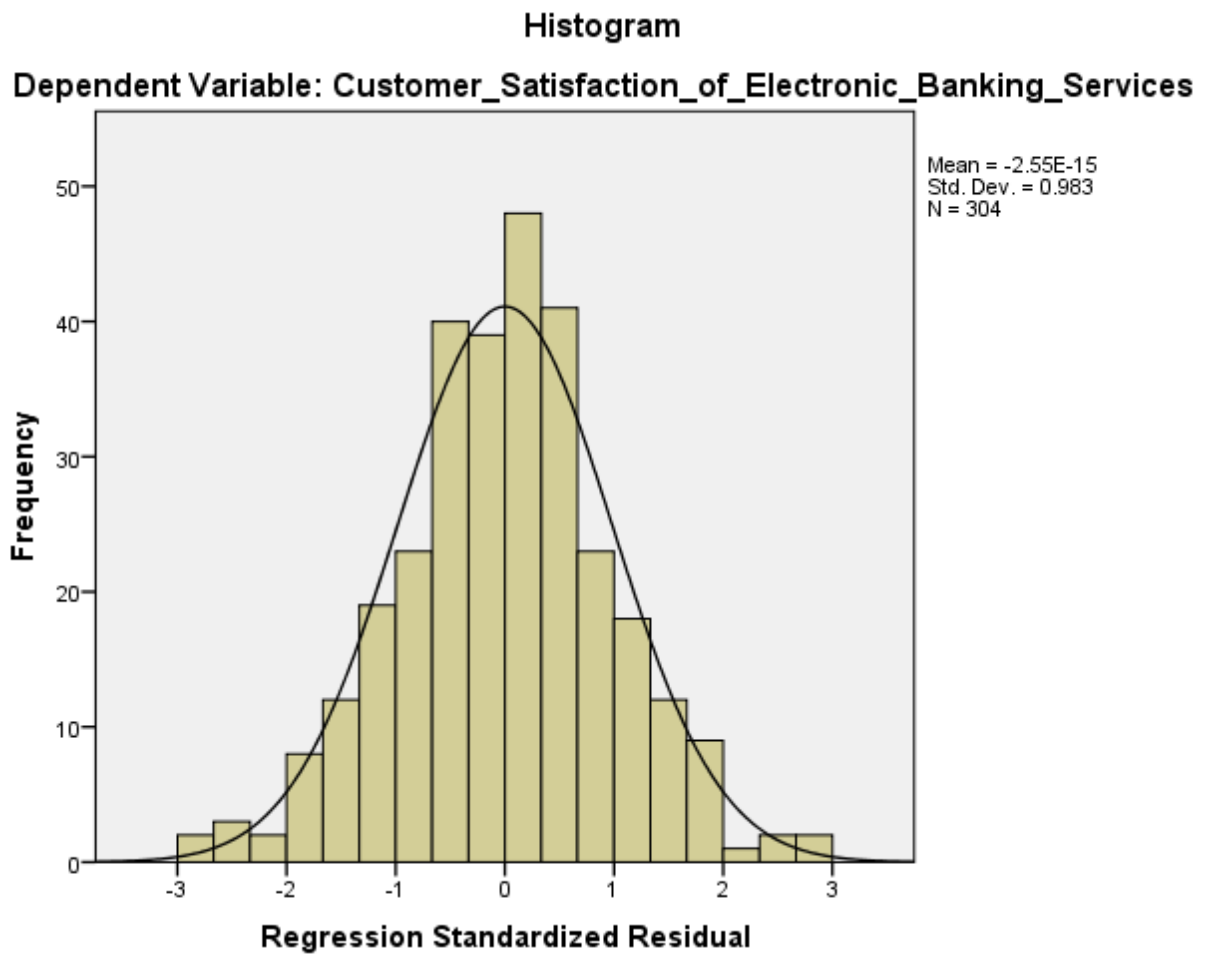
<b>Durbin-Watson</b>
<b>1.653</b>

Source: Own survey result, 2025

### 4.6.4. Normality Test

Frequency distributions assume many shapes and sizes. It is therefore useful to have some general descriptions of familiar types of distributions. We would like to think of our data in an ideal world as being symmetrically balanced around the middle of all scores. If we focus on the distributions (plot a vertical line through the middle of the distribution), they are symmetrical about this value. This is called a normal distribution and the associated curve is the bell-shaped curve. Burns, R B & Burns, R (2008), 24 - In Practical terms, the distribution is 6 standard deviations wide, ie 3 on either side of the mean. The percentage of cases that lie further than  $\pm 3$  standard deviations is so tiny that it is customary to treat  $\pm 3$  as if they were limits for the distribution in schematic diagrams. As you can see from the below table, the skewness is between  $\pm 3$ , it indicates the normal distribution. Figure Below also reveals that

the data is near normal. Histogram is simetrical at the center 0. (Nearly all variables were found to be normal).



**Figure 3: Tests of Normality**

Source: Analysis survey data, 2025

**Table 14: Normality Test using Skewness and Kurtosis**

<b>Descriptive Statistics</b>					
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Tangibles of Electronic Banking Services	304	.008	.140	-.629	.279

Reliability Efficiency of Electronic Banking Service	304	-.233	.140	-.487	.279
Responsiveness of Electronic Banking Services	304	-.153	.140	-.703	.279
Assurance Competence of Electronic Banking Services	304	-.412	.140	-.517	.279
Empathy Courtesy of Electronic Banking Services	304	-.083	.140	-.343	.279
Credibility of Electronic Banking Services	304	-.146	.140	-.574	.279
Security Privacy of Electronic Banking Services	304	-.555	.140	-.387	.279
Access Easy Navigation of Electronic Banking Services	304	-.151	.140	.065	.279
Communication of Electronic Banking Services	304	-.372	.140	-.345	.279
Understanding the Customer of Electronic Banking Services	304	-.238	.140	-.574	.279
Customer Satisfaction of	304	-.438	.140	-.610	.279

Electronic Banking Services					
Valid N (listwise)	304				

Source: Analysis survey data, 2025

The Kurtosis of any uni-variate normal distribution is 3. It is usual to refer to the Kurtosis of a distribution relative to this value. Distributions with Kurtosis less than 3 are called platykurtic, although this term does not imply the distribution is "flat-topped" as sometimes suggested. It is probably better to say that the distribution has tails which are shorter and have fewer extreme outliers than the normal distribution.

#### **4.6.5. Test of Linearity**

The fourth assumption to check for is Linearity or Linear Relationship among the Two Variables. Linearity means the slope of the population regression function is constant; hence, non-linearity means that change in the dependent variable depends on the value of one or more independent variables (Stock, 2007). The linearity test of the disturbance has been depicted in the figure below.

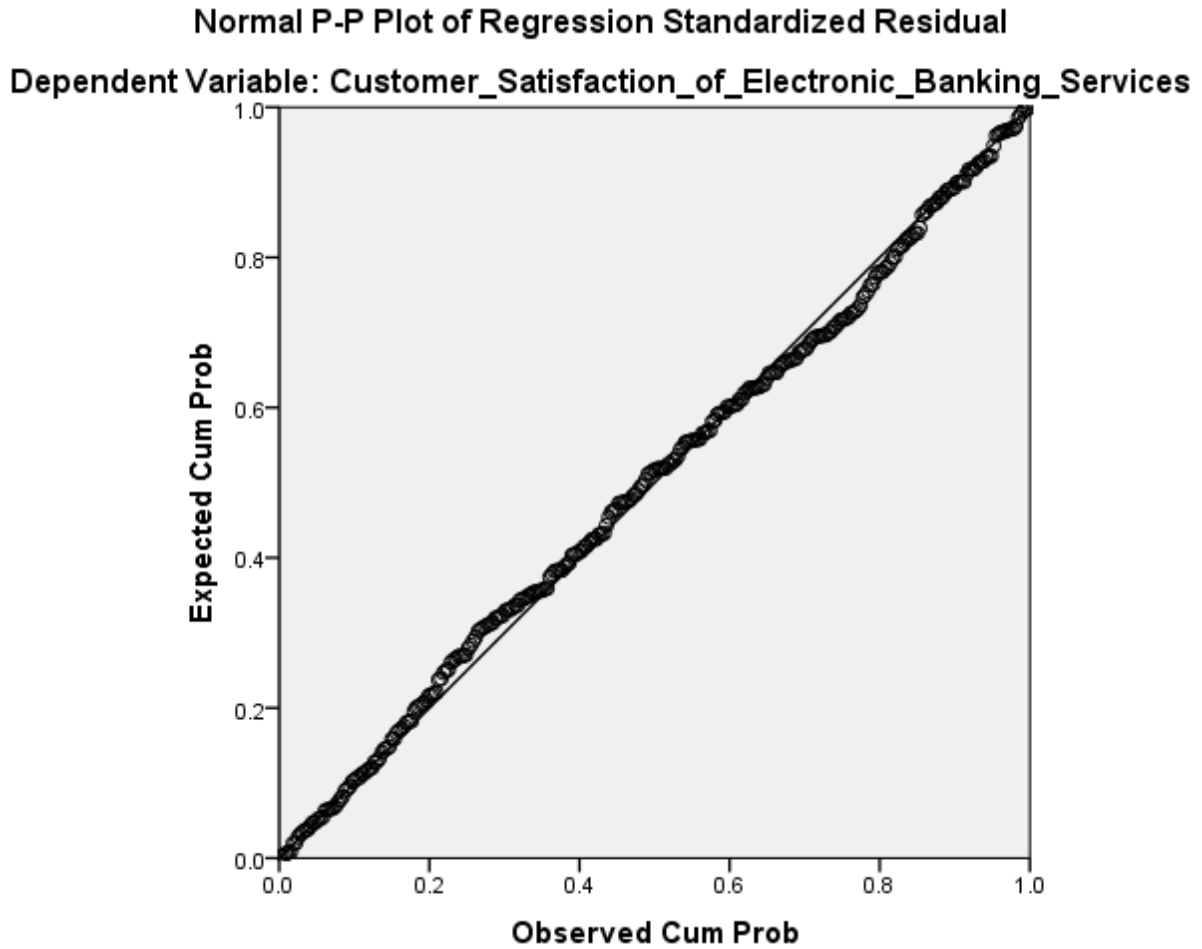


Figure 4: Linear distribution of the data

Source: Analysis of survey data, 2025

#### **4.7. Regression Analysis**

Standardized regression coefficients can range from 0 to 1, and it represent that portion of the variance of a dependent variable that is statistically explainable by one or more independent variable (Saunders et al., 2012). R square informs us: how much of variance in dependent variable is explained by the regression model from the sample, the adjusted value informs us: how much of variance in dependent variable would be explained if the model is derived from the population, based on which the sample is taken (Field, 2006).Regression coefficients (R) and R Square of the research are explained below.

**Table 15: Model Summary Table**

Model Summary <sup>b</sup>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.944 <sup>a</sup>	.891	.887	.1762804	1.653

**4.7.1. Analysis of Variance /ANOVA/ Test**

The ANOVA results show if the model significantly predicts the outcome better than using the mean as a “best guess“ (Field, 2006). It can be seen from the above that the ANOVA model is more likely to be significant, which means that the group means at least have one different from other groups. When you want to investigate the effect of a less than interval independent variable on an at least interval dependent variable, you use ANOVA. If the F test is not significant, then the model should be discarded and you shouldn't go any further (William and Barry, 2010).

To the contrary, on ANOVA test, Saunders et al., (2012) stated that a very small value to the significance (normally less than 0.05) indicates that the coefficient is not likely to have risen as a result of chance. A value less than 0.05 means that one can infer that the coefficient of multiple determinations is not due to chance. Therefore, the ANOVA test and table value is presented and discussed below.

**Table 16: ANOVA Table**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	74.553	10	7.455	239.916	.000 <sup>b</sup>
	Residual	9.105	293	.031		
	Total	83.658	303			

**4.7.2. Regression Coefficients or Model**

The Standardized regression coefficient  $\beta$  is the estimated regression coefficient showing the strength of the relationship between an independent variable and dependent variable on a

standardized scale where larger absolute values indicate stronger relationships (Domain is between -1 and 1) Williams and Barry, (2010).

**Table 17: Regression Standardized Coefficients**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.080	.087		-.913	.362
	Tangibles of Electronic Banking Services	.117	.030	.106	3.919	.000
	Reliability Efficiency of Electronic Banking Service	.192	.039	.198	4.974	.000
	Responsiveness of Electronic Banking Services	.089	.034	.088	2.617	.009
	Assurance Competence of Electronic Banking Services	.184	.044	.191	4.184	.000
	Empathy Courtesy of Electronic Banking Services	.089	.042	.089	2.137	.033
	Credibility of Electronic Banking Services	.087	.041	.088	2.140	.033
	Security Privacy of	.100	.025	.118	3.996	.000

Electronic Banking Services						
Access Easy Navigation of Electronic Banking Services	.052	.030	.060	1.764	.079	
Communication of Electronic Banking Services	.090	.024	.131	3.695	.000	
Understanding the Customer of Electronic Banking Services	.049	.042	.049	1.155	.249	
a. Dependent Variable: Customer Satisfaction of Electronic Banking Services						

The Impact of Tangible Aspects of e-Banking Services on The Attractive visual elements, the ease of use of the user interface, and the available arrangement of electronic banking systems influence how service recipients evaluate electronic banking services and the degree of service satisfaction ( $\beta = 0.106$ ,  $p = 0.000$ ). As in Gikandi and Bloor (2010) research, tangibility of services was also identified as one of the key SERVQUAL dimensions that shape customers' initial perception in the level of service quality.

Alalwan et al. (2018) found quality design and bank's sites which easy to be used positively affects the customer satisfaction on ebanking. Therefore, the banks in Addis Ababa need to enhance the look and feel of the digital platforms to win over customers.

**Reliability and Efficiency Implications** The reliability and efficiency of service have one of the strongest positive implications on the customer satisfaction ( $\beta = 0.198$ ,  $p = 0.000$ ). It is because of the consistency, accuracy, and reliability of the electronic banking system were highly valued by the customers. As highlighted by Gan and Clemes (2006), when evaluating service quality in internet banking, reliability is the most influential dimension. Banking transaction: customers feel confident about a banking system and get satisfied with it, when the system functions well and the transaction is error free. Hence, to enhance commercial banks' customer satisfaction and trust, it is necessary for them to offer a dependable technology infrastructure and to consider the unceasing maintenance of the system.

**Responsiveness of Electronic Banking Services:** While responsiveness had an influence on customer satisfaction, the impact was marginal ( $\beta = 0.088$ ,  $p = 0.009$ ). Customers appreciate rapid service recovery and service improvement when conducting service transactions electronically. Responsiveness is a key aspect of the value proposition in digital services (Gerrard & Cunningham, 2006). Real-time customer service via chatbots and help desks enable significantly enhance service provision with RolDavid et al. 27 drying at slot in Ethiopia's banking sector as service delivery has become more digitalized.

**Competence and assurance:** Confidence and ability to provide a high level of service are also significant contributors to customer satisfaction ( $\beta = 0.191$ ,  $p=0.000$ ). This factor portrays the confidence level of the customers towards the bank in terms of how professional and competent it is in delivering the e-service in a secure, accurate and timely manner. Assurance adds to trust because it resolves the fears of customers (Kang and James, 2004) and makes them feel good about the fact that they will not receive poor quality service. This supports prior research such as (Laukkanen, 2016) which found that conclusions of competence play a significant role in satisfaction and loyalty. Therefore, it is essential that banks leverage their systems and people to create and sustain an experience of trust, dependability, and a safe, efficient service delivery.

**Empathy and Courtesy:-** Empathy and courtesy ( $\beta = 0.089$ ,  $p = 0.033$ ) have statistically significant, albeit fairly moderate, effects on consumer satisfaction. This implies that banks are appreciated by their clients for having understanding, care, and personalization, even in digital venues. Empathy helps satisfaction by personalization in an emotionally charged service experience (Khera, Ng, Ogawa, & Sahay, 2022). Banks in Addis Ababa can enhance this form of service delivery by adding personalized messages and proactive assistance, in which personal relationships, as concerns service delivery, are paramount.

**Reliability of Electronic Banking Services:** Credibility ( $\beta=0.088$ ,  $p=0.033$ ) also has a statistically significant positive effect on customer satisfaction. That means satisfaction with electronic service depends on the trust the customers have on the integrity, honesty, and reputation of the banks. (Gerrard & Cunningham, 2006), availability of credibility reduces consumers' risk perception and promotes loyalty in the area of online financial transaction. In order to sustain this trust, banks need to be transparent, make good on their promises, and provide consistent service.

Confidence in personal and financial information security and privacy ( $\beta = 0.118$ ,  $p = 0.000$ ) is among the factors that positively affect satisfaction. Customer validation of their financial and personal information security underpins their satisfaction and trust. Security and privacy (defensive) lacking motivation greatly influences on online banking satisfaction. For Ethiopian commercial banks, to sustain customer satisfaction and preserve trust, it is crucial to adopt sophisticated cyber security measures and enhance customer awareness on secure digital behaviors.

Factors of Access and Communication Accessibility and simple use ( $\beta = 0.060$ ,  $p = 0.079$ ) are positive yet of no significance ( $p > 0.05$ ). This infers that customers value access to ease of use, and that ease of use is not a barrier to perceived electronic banking systems. Meanwhile, Communication ( $\beta = 0.131$ ,  $p = 0.000$ ). Sufficiency of Communication is a positive contributor to satisfaction which means that communication increases customer assurance and satisfaction is lower when obstructions delays meaning communication is not flowing. Online communication of customers regarding services to customers (Nguyen et al. 2020) satisfaction) purpose provides transparency and satisfaction. Of digital communication commercial banks are to satisfactory services to customers (Nguyger et al. 2020)s services. Furthermore, customers' commercial banks to digital communication systems to services customers and customer engaged.

The variable "Understanding the Customer" ( $\beta = 0.049$ ,  $p = 0.249$ ) was not statistically significant, indicating that banks' efforts to personalize services based on customer preferences are limited. Lemon and Verhoef (2016) emphasized that understanding customer needs through data-driven personalization is vital for satisfaction in digital contexts. The lack of significance here may reflect limited use of customer analytics by Ethiopian banks. Overall, the regression model shows that reliability, assurance, security, communication, and tangibles are the strongest predictors of satisfaction. These findings confirm the relevance of the SERVQUAL model in explaining customer satisfaction in electronic banking environments.

**Table 18: Hypotheses Testing**

Hypothesis No.	Independent Variable (Predictor)	Hypothesis Statement (H1)	B	Sig. (p-value)	Decision
H1	Tangibles of Electronic Banking Services	Tangibles have a significant positive effect on customer satisfaction.	0.106	0	Accepted
H2	Reliability and Efficiency of Electronic Banking Services	Reliability and efficiency have a significant positive effect on customer satisfaction.	0.198	0	Accepted
H3	Responsiveness of Electronic Banking Services	Responsiveness has a significant positive effect on customer satisfaction.	0.088	0.009	Accepted
H4	Assurance and Competence of Electronic Banking Services	Assurance and competence have a significant positive effect on customer satisfaction.	0.191	0	Accepted
H5	Empathy and Courtesy of Electronic Banking Services	Empathy and courtesy have a significant positive effect on customer satisfaction.	0.089	0.033	Accepted
H6	Credibility of Electronic Banking Services	Credibility has a significant positive effect on customer satisfaction.	0.088	0.033	Accepted
H7	Security and Privacy of Electronic Banking Services	Security and privacy have a significant positive effect on customer satisfaction.	0.118	0	Accepted
H8	Access and Easy Navigation of Electronic Banking	Access and easy navigation have a significant positive effect	0.06	0.079	Rejected

	Services	on customer satisfaction.			
H9	Communication of Electronic Banking Services	Communication has a significant positive effect on customer satisfaction.	0.131	0	Accepted
H10	Understanding the Customer of Electronic Banking Services	Understanding the customer has a significant positive effect on customer satisfaction.	0.049	0.249	Rejected

## **CHAPTER FIVE**

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

#### **5.1. Summary of Findings**

Customer satisfaction with the electronic banking services provided by some commercial banks in Addis Ababa has been the principal focus of this study. Findings from the analysis of customer perception of the electronic banking services showed that customers felt that some tangible dimensions of electronic banking services, such as availability of electronic banking and physical infrastructures, were appreciated, but deserved attention and improvement. Customers rated the digital platforms as reliable and modern, although some of the customers were dissatisfied due to digital downtimes and the un-intuitiveness of the digital service.

Reliability and efficiency of the e-banking services offered were, according to customer perception, the most important characteristics. High mean perception scores of customers represents that the electronic banking customers value the availability of the banking systems to carry out transactions and the accuracy of the transactions made. Unfortunately, some customers were dissatisfied due to the lack of stability in the electronic banking systems. Customers perceived that the banks were slow to respond to the customers needs with regards to the problems that the customers experienced with the electronic banking services. The banks have opportunities available to improve their internal operational efficiencies and communications to improve the response times to customers.

Customers perception of assurance and competence was positive which shows customers believe that the bank has the knowledge and expertise in managing data. Transaction and data privacy was also noted which shows the need for customers to feel protected. The empathy and courtesy portion of the survey shows that the personalization of services and the care for the customers needs were acknowledged but personalization of services and the care of individual needs were not always the case which means that there is room for improvement in regards to emotional engagement.

The credibility of electronic banking services also came from the banks reputation and there was a high level of trust from most customers but there was also a level of distrust that came from some customers as a result of some gaps of trust. The mixed feeling towards to security

and privacy showed the banks need for improvement in cybersecurity and the need to communicate the changes to security effectively. The accessibility and navigation results showed that most users of the services felt that the platform was easy to access even at lower bandwidth, however some users felt that the services were not as easy to use and even described the transfer of money as slow.

Mostly the results of communication showed moderate effectiveness and communication of support and security alerts were noted but communication was inconsistent during system down situations and situations with high security risk. Customization of services to customers was noted and received moderate responses. There was also a lack of personalization noted. Overall there was a high correlation of results that indicated that the dimensions of reliability, assurance, empathy, credibility, and security were the most outlined dimensions that impacted the improvement of satisfaction of customers.

The inferential analysis through regression models underscored that reliability and efficiency are the strongest predictors of customer satisfaction, followed by assurance and competence. Dimensions like responsiveness, credibility, and security also play vital roles, indicating that comprehensive service quality management is essential for fostering customer loyalty in digital banking.

## **5.2. Conclusion**

The results from this research reconfirm that in Addis Ababa Banking Sector, electronic banking service quality affects more than anything else customer satisfaction. Customers appreciate quality service, as it affects their satisfaction. Banks have excelled in quality service in system availability and customer support, but field communication, personalization, and responsiveness are still missing.

The interdependence of service reliability and customer satisfaction is high, indicating that seamless and uninterrupted transactions should remain a primary focus. Customer satisfaction also hinges on trust, which is built through transparent communication and security measures, both of which are lacking in this case. The satisfaction gaps in the dimension of customer support indicate that the banks have room to enhance service support, especially personal, to be more proactive in a service more tailored to the customer and connected more to the service offered.

The focus banks should have to the satisfaction gaps in their offering is underscored by the regression analysis that confirms the more a bank can focus on dimensions such as reliability and assurance to delivery of such support, the more improvement on customer satisfaction the bank can yield. Banks should focus on and invest their technological improvement on the gaps already identified, as well as their communication, staff training, and technological improvement based on the gaps already identified.

In light of these insights, it is evident that electronic banking service quality is a multifaceted construct that requires continuous monitoring and enhancement. By focusing on the identified key dimensions, banks can foster higher customer satisfaction, loyalty, and competitive advantage in Addis Ababa's dynamic banking landscape.

### 5.3. Recommendation

Based on the findings of this study, the following recommendations are proposed:

#### **Enhancement of System Reliability and Stability**

**Infrastructure Investment:** Banks should prioritize significant investment in upgrading their technological infrastructure to minimize frequent system outages and transaction errors.

**Service Consistency:** Focus must be placed on ensuring a seamless and uninterrupted transaction experience, as reliability is the strongest predictor of customer satisfaction.

**Continuous Maintenance:** Establishing a regimen for the unceasing maintenance of digital systems is necessary to maintain high levels of trust and dependability.

#### **Strengthening of Security and Privacy Protocols**

**Cyber security Implementation:** Banks are encouraged to implement advanced cybersecurity protocols to protect user data and financial assets.

**Transparent Communication:** It is essential to communicate security policies transparently. Reassuring customers about the safety of their transactions can mitigate the skepticism currently felt by many users.

**Visible Security Features:** Utilizing visible security features and educating customers on these measures can significantly drive up trust and confidence.

#### **Improvement of Responsiveness and Technical Support**

**Efficient Support Channels:** The development of robust support channels, such as real-time assistance via chat bots or dedicated help desks, is recommended to improve the speed of service recovery.

**Prompt Resolution:** Systems should be designed to ensure the prompt resolution of customer issues and technical glitches to prevent frustration and potential churn.

#### **Promotion of Personalization and Empathy**

**Data-Driven Personalization:** Banks should leverage customer data to offer tailored financial services and personalized recommendations based on individual usage patterns.

Emotional Engagement: Proactive and personalized communication helps foster a sense of individual attention, creating a stronger emotional connection between the customer and the bank.

### **Increasing Transparency and Proactive Communication**

Multichannel Notifications: Regularly informing customers about system updates, security alerts, and service changes through various communication channels is vital for building long-term trust.

Real-Time Alerts: Investing in real-time alert systems to notify customers of system outages or potential security threats can help manage expectations and prevent confusion.

Staff Training: Beyond technology, banks should invest in staff training to ensure that the human element of digital support remains professional, empathetic, and competent

## Reference

- Abdulfattah, F. (2012). The effect of electronic customer relationship on customer satisfaction: A study in web banking in Saudi Arabia. University of Huddersfield.
- Abenet Yohannes. (2010). Key factors that determine adoption of internet banking in Ethiopia.
- Abraham, H. (2012). Challenges and opportunities of adapting electronic banking in Ethiopia.
- Abubakar, A. (2014a). Effects of electronic banking on deposit growth in Nigerian banks. *Journal of Banking & Finance*, 12(3), 45–59.
- Alaa Eddin, H., & Al-Zubi, H. (2011). E-banking functionality and outcomes of customer satisfaction: An empirical investigation in Jordan commercial banks. *International Journal of Marketing Studies*, 3(1).
- Alabar, T. T. (2012). Electronic banking service and customer satisfaction in the Nigerian banking industry.
- Aladwani, A. M. (2006). An exploratory study of the critical factors influencing adoption of e-banking in Kuwait. *Banking & Finance Review*, 2(2), 59-70.
- Alalwan, A. A., Dwivedi, Y. K., & Rana, N. P. (2017). Factors influencing adoption of mobile banking by Jordanian customers: Extending UTAUT2 with trust. *International Journal of Information Management*, 37(2), 99-112.
- Alam, M. N., Uddin, M. M., & Bhuiyan, M. N. (2020). The impact of electronic banking service quality on customer satisfaction in Bangladesh: An empirical study. *Journal of Innovation and Business Best Practice*, 2020, 1-17.
- Alemu, A. M. (2019). Customer perceptions and satisfaction towards electronic banking services in Ethiopia. *International Journal of Bank Marketing*, 37(4), 877-898.
- Alemu, N. (2019). Challenges and prospects of electronic banking in Ethiopia. *Journal of Banking & Financial Services*, 14(2), 45-60.

- Al-Hawari, M., & Ward, T. (2006). The effect of automated service quality on bank financial performance and the mediating role of customer retention. *Journal of Financial Services Marketing*, 10(2), 168-182.
- Amoako-Tuffour, J., Osei-Tutu, E., & Okyere, P. (2018). Service quality and customer satisfaction in Ghanaian banking: An empirical analysis. *International Journal of Bank Marketing*, 36(4), 844-860.
- Balachandher, K. G. (2001). Electronic banking in Malaysia: Note on evolution of service and consumer reactions. Multimedia University.
- Beshir, E., & Zelalem, B. (2020). The effect of e-banking service quality on customer's satisfaction and loyalty. *The Strategic Journal of Business & Change Management*, 7(3), 818–832.
- Bhattacharjee, A. (2001). Understanding information systems continuance: An expectation-confirmation model. *MIS Quarterly*, 25(3), 351-370.
- Bitner, M. J. (1994). Encounter satisfaction versus overall satisfaction versus quality: The customer's voice. In Rust, R., & Oliver, R. (Eds.), *Service Quality: New Directions in Theory and Practice* (pp. 72–94). Sage Publications.
- Bowen, J. (1986). The relationship between customer loyalty and customer satisfaction. *International Journal of Contemporary Hospitality Management*, 13(5), 213–217.
- Bultum, A. G. (2014). Factors influencing adoption of electronic banking in African nations. *Journal of Management Systems & E-commerce*, 1(1), 20–34.
- Carman, J. M. (1990). Consumer perceptions of service quality: A comparison of service quality models. *Journal of Retailing*, 66(1), 33-55.
- CBET. (2020). Central Bank of Ethiopia Annual Report. Addis Ababa, Ethiopia.
- Cheah, K. G., Sanmugam, A., & Tan, S. Y. (2005). Profiling the internet banking adopter. *Journal of Internet Banking and Commerce*, 10(1).
- Chen, C. C., & Hu, Y. H. (2020). The effects of customer expectations, perceived service quality, and perceived value on customer satisfaction in the hospitality industry. *Journal of Quality Assurance in Hospitality & Tourism*, 21(1), 1-21.

- Chen, J. V., & Dhillon, G. (2003). Interpreting the dimensions of consumer trust in e-commerce. *Information Technology & People*, 16(4), 332-351.
- Chen, J., & Chen, S. (2009). Identify the significant factors influencing customer trust in the trust travel.
- Cheng, T., & Tam, K. Y. (1997). Factors influencing the adoption of Internet banking. *Journal of Organizational Computing and Electronic Commerce*, 7(2), 157-179.
- Dabholkar, P. A., Thorpe, D. I., & Rentz, J. O. (1996). A measure of service quality for retail stores: Scale development and validation. *Journal of the Academy of Marketing Science*, 24(1), 3–16.
- Daniel, E. (1999). Provision of electronic banking among the UK and Ireland. *International Journal of Bank Marketing*, 17(2).
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340.
- Devi, S. K., & Revathy, B. (2011). Customer satisfaction with internet banking service quality. *International Journal of Business Policy & Economic*, 4(1), 161–176.
- Doll, W. J., & Torkzadeh, G. (1988). The measurement of end-user computing satisfaction.
- Eze, S. C., Nwachukwu, M. U., & Nwachukwu, C. (2018). The impact of online banking service quality on customer satisfaction in Nigeria. *African Journal of Economic Review*, 6(2), 74-88.
- Farooqui, A., & Rajan, P. (2017). E-Banking issues & challenges. *IOSR Journal of Business and Management*, 19(10), 31-39.
- Fekadu, G. W. (2009). Electronic banking in Ethiopia: Practices, opportunities, and challenges. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.1492006>
- Fenuga, A. (2010). Impact of electronic payment on customer service delivery in Nigerian banks. *Nigerian Journal of Banking*, 5(2), 78–90.
- Gan, C., & Clemes, M. (2006). A logit analysis of electronic banking in New Zealand. *International Journal of Bank Marketing*, 24(6), 360–383.
- Garedachew, W. (2010). Electronic banking in Ethiopia: Practices, opportunities, and challenges. *Journal of Internet Banking and Commerce*, 15(2), 2-9.

- Gebremichael, S., & Chala, S. (2020). Customer satisfaction and service quality in Ethiopian electronic banking. *Journal of Banking and Financial Services*, 4(2), 45-59.
- Gerrard, P., & Cunningham, J. (2003). The diffusion of internet banking among Singapore consumers.
- Gerrard, P., & Cunningham, J. (2006). The diffusion of internet banking in Singapore customers.
- Gikandi, J. W., & Bloor, C. (2010). Web-based customer relationship management implementation in the banking industry. *Industrial Management & Data Systems*, 110(3), 370-387.
- Giridhar, K., & Thampi, S. M. (2021). Customer loyalty in Indian banking sector: The impact of service quality dimensions and customer satisfaction. *International Journal of Bank Marketing*, 39(2), 409-424.
- Gloessner, M., & Klingebiet, T. (2002). A customer perspective of e-services quality and transactional engineering management.
- Gronroos, C. (1984). A service quality model and its marketing implications. *European Journal of Marketing*, 18(4), 36-44.
- Guppy, A., & Madu, A. (2002). Dimensions of e-quality. *International Journal of Quality & Reliability Management*, 19(3), 246-258.
- Hammoud, J., Bizri, R. M., & El Baba, I. (2018). The impact of e-banking service quality on customer satisfaction: Evidence from the Lebanese banking sector. *SAGE Open*, 8(3), 2158244018790633.
- Haque, M. (2009). Issue of E-banking transaction: An empirical investigation on Malaysian customers' perception. *International Journal of Business and Management*, 4(10), 187-197.
- Howcroft, B., Hamilton, R., & Hewer, P. (2002). Consumer attitude and the usage and adoption of home-based banking in the United Kingdom. *The International Journal of Bank Marketing*, 20(3), 111-121.
- Jain, S., & Gupta, G. (2004). Measuring service quality: SERVQUAL vs. Serperscales. *The Journal for Decision Makers*, 29(2), 25-37.

- Jamal, A., & Nasser, K. (2003). Factors influencing customer satisfaction in the retail banking sector in Pakistan. *International Journal of Commerce and Management*, 13(2), 29–53.
- JamilHammoud, R., Bizri, R. M., & El Baba, I. (2018). E-banking service quality and customer satisfaction: Evidence from Lebanon. *International Journal of Business & Management*, 13(2), 45–60.
- Jiang, L., Wang, X., & Wang, Z. (2019). The impact of perceived service quality, product quality, and trust on customer satisfaction: A study of online shopping customers in China. *Journal of Customer Behavior*, 18(3), 219-239.
- Johnson, M. D., & Fornell, C. (1991). A framework for comparing customer satisfaction across individuals and product categories. *Journal of Economic Psychology*, 12(2), 267-286.
- Johnston, R. (1997). Identifying the critical determinants of services quality in retail banking.
- Kamel, S. (2005). The use of information technology to transform the banking sector in developing nations. *Information Technology for Development*, 11(4), 305-312.
- Kassa, W. (2012). The impact of electronic banking on customer satisfaction in Ethiopian banking industry. *Journal of Business & Financial Affairs*.
- Kassa, W. G. (2012). Impact of electronic banking on customer satisfaction in Ethiopia. *Ethiopian Journal of Business & Economics*, 7(1), 32–48.
- Kaur, H., & Kiran, R. (2015). Customer satisfaction in internet banking services. *International Journal of Business & Management*, 10(4), 123–135.
- Khan, H. F. (2017). E-banking: Benefits and issues. *American Research Journal of Business and Management*, 3(1), 1-7.
- Khan, H. F. (2020). Security and customer trust in e-banking. *Journal of Financial Services*, 12(3), 45-60.
- Khera, P., Ng, S., Ogawa, S., & Sahay, R. (2022). Measuring digital financial inclusion in emerging markets: A new index. *Asian Economic Policy Review*, 17(2), 213-230. <https://doi.org/10.1111/aepr.12377>

- Khera, S., Ng, S., Ogawa, R., & Sahay, B. (2022). Digital literacy and customer satisfaction in e-banking. *International Journal of Digital Banking*, 10(1), 45-60.
- Kim, D., & Malhotra, N. K. (2005). A longitudinal model of consumers' satisfaction with e-services. *International Journal of Service Industry Management*, 16(4), 289-305.
- Kimery, K. M., & McCord, M. (2002). Third-party assurances: Mapping the road to trust in e-retailing. *Information Technology & Management*, 3(2), 63–82.
- Kotler, P. (2000). *Marketing management* (6th ed.). Prentice-Hall.
- Kumar, V., et al. (2009). Customer perceptions of e-banking in developing countries: The case of Ethiopia. *International Journal of Bank Marketing*, 27(5), 377–393.
- Kumbhar, V. M. (2011). Factors affecting customer satisfaction in electronic banking: Some evidence from Indian banks. *Management Research and Practice*, 3(4), 1–14.
- Kuo, Y. F., Wu, C. M., & Chen, P. Y. (2009). The impact of green innovation on environmental and corporate performance: A stakeholder perspective. *Management Decision*, 47(7), 1146-1163.
- Kwon, W., & Kim, T. (2012). The effects of user data-driven personalization on customer satisfaction in mobile banking. *Journal of Digital Banking*, 4(2), 45-52.
- Laukkanen, T. (2016). Consumer resistance to internet banking. *International Journal of Bank Marketing*, 34(4), 600-617.
- Leelpongprasut, P., & Natsapun, P. (2005). A quality study of internet banking in Thailand.
- Liao, Z., & Cheung, M. (2002). The effect of free banking on overall satisfaction.
- Liao, Z., & Cheung, M. T. (2003). Challenges to internet E-banking. *Communications of the ACM*, 46(12), 248–250. <https://doi.org/10.1145/944012.944037>
- Luarn, P., & Lin, H. H. (2005). Toward an understanding of the behavioral intention to use mobile banking. *Computers in Human Behavior*, 21(6), 873-891.
- Miyazaki, A. D., & Krishnamurthy, S. (2002). Internet seals of approval: Effects on online privacy policies and consumer perceptions. *The Journal of Consumer Affairs*, 36(1), 28-49.

- Ndubisi, N. O. (2006). Factors influencing customer satisfaction and loyalty in the banking sector. *International Journal of Business and Management*, 1(1), 63–76.
- Ngoc, T. T., Van, P. T., & Nguyen, T. T. (2020). Impact of e-service quality on customer satisfaction: Evidence from Vietnamese commercial banks. *Journal of Asian Finance, Economics and Business*, 7(6), 365-374.
- Nguyen, D. T., Pham, V. T., Tran, D. M., & Pham, D. B. T. (2020). Impact of service quality, customer satisfaction and switching costs on customer loyalty. *The Journal of Asian Finance, Economics, and Business*, 7(8), 395–405.
- Nguyen, H. Q., Vu, T. H., Vuong, T. D., Nguyen, D. D., & Vu, T. T. (2020). Impact of e-service quality on customer satisfaction: Evidence from Vietnamese commercial banks. *Journal of Asian Finance, Economics and Business*, 7(6), 365-374.
- Olanipekun, W. D., Brimah, A. N., & Ajagbe, S. T. (2013). Role of electronic banking in enhancing human resource performance and customer satisfaction. *International Journal of Business and Behavioral Sciences*, 3(4), 36-44).
- Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research*, 17(4), 460-469.
- Oliver, R. L. (1997). *Satisfaction: A behavioral perspective on the consumer*. McGraw-Hill.
- Oliver, R. L. (1999). *Satisfaction: A behavioral perspective on the consumer*. McGraw-Hill.
- Olsen, L. L., & Johnson, M. D. (2003). Service equity, satisfaction, and loyalty: From transaction-specific to cumulative evaluations. *Journal of Service Research*, 5(2), 184–195.
- Olsen, L. L., & Johnson, M. D. (2003). Service equity, satisfaction, and loyalty: From transaction-specific to cumulative evaluations. *Journal of Service Research*, 5(3), 184–195.
- Olson, R., & Johnson, M. (2003). Service loyalty and customer satisfaction. *Journal of Service Research*, 6(2), 134–146.
- Omodele, T., & Tiwalade, A. (2019). Impact of customer support on e-banking satisfaction in Nigeria. *Journal of Financial Services*, 7(2), 33–46.

- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49(4), 41-50.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12-40.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12-40.
- Pikkarainen, T., Pikkarainen, K., Karjaluoto, H., & Pahlila, S. (2004). Consumer acceptance of online banking: An extension of the TAM. *Internet Research*, 14(3), 224–235.
- Roca, J. C., Garcia, N., & Varon, E. (2009). Understanding trust in e-commerce. *Online Information Review*, 33(5), 813-832.
- Rogers, E. M. (2003). *Diffusion of Innovations* (5th ed.). Free Press.
- Saini, R., & Chahal, H. (2014). Customer perceptions of service quality in Indian banking sector. *International Journal of Business and Management*, 9(2), 174-182.
- Santos, J. (2003). E-service quality: a model of virtual service quality dimensions. *Managing Service Quality*, 13(3), 233-246.
- Shittu, O. (2010). The impact of e-banking in African banking industry. *African Journal of Business Management*, 4(12), 234–245.
- Sintayehu, Y., & Chauhan, S. (2020). The effect of electronic banking service on customer satisfaction: Evidence from commercial banks of Ethiopia operating in Hawassa City Administration. *Journal of Positive School Psychology*, 6(8), 3228-3246.
- Stan, M. (1997). Plastic and electronic money: new payment systems and their implications. *Washington Post*.
- Suh, B., & Han, I. (2002). The impact of trust on customer acceptance of online banking. *Electronic Commerce Research and Applications*, 1(3), 247-263.
- Szymanski, D. M., & Hise, R. T. (2000). E-satisfaction: An initial examination. *Journal of Retailing*, 76(3), 309–322.

- Teka, B. M. (2017). Assessment of the practices and challenges of electronic banking adoption in Ethiopia. *International Journal of Research in IT and Management*, 7, 82–94.
- Timothy, T. (2012). Electronic banking services and customer satisfaction among Nigerian banks. *Journal of Business and Management*, 2(1), 56–65.
- Tirruneh, G. A. (2017). Measuring the service quality of Amhara credit and saving institutions towards small and micro-sized enterprises. *Singaporean Journal of Business Economics and Management Studies*, 5(10), 1–15.
- Tiwari, R., & Buse, S. (2007). Mobile services in banking sector: The role of innovative business solutions in generating competitive advantage. Hamburg University of Technology.
- Tiwari, R., & Buse, S. (2007). The mobile banking prospects: a strategic analysis of opportunities within the banking sector. *City University Press*.
- Tiwari, R., & Buse, S. (2007). The mobile commerce prospects: A strategic analysis of opportunities in the banking sector.
- Udo, G. J., & Nwankwo, S. (2011). Service quality and customer satisfaction in Nigerian banks. *International Journal of Business and Social Science*, 2(12), 290-297.
- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186-204.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425-478.
- Wang, H., & Wang, Y. (2006). Impact of internet service quality in banking sector.
- Wirtz, J., & Bateson, J. (1995). The impact of e-banking service quality on customer satisfaction. *Journal of Service Research*.
- Wu, H., Lin, C., Li, H., & Lin, H. (2010). A study of bank customers' perceived usefulness of adopting online banking. *Global Journal of Business Research*, 3(7), 101-109.
- Yang, Y. (1997). The security of electronic banking. *National Information Systems Security*, 26, 505–525.
- Yang, Z., & Jun, M. (2002). Customer perception of e-service quality.

- Yohannes, A. (2010). Key factors that determine adoption of internet banking in Ethiopia. Unpublished master's thesis, Addis Ababa University.
- Yousafzai, S. Y., Pallister, J., & Foxall, G. (2003). Factors influencing trust in online banking: A developing country perspective. *International Journal of Bank Marketing*, 21(4), 185–200.
- Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2006). *Services marketing* (4th ed.). McGraw-Hill.
- Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2006). *Services marketing: Integrating customer focus across the firm* (4th ed.). McGraw-Hill.
- Zeithaml, V. A., Parasuraman, A., & Malhotra, A. (2000). *Delivering quality service: Balancing customer perceptions and expectations*. The Free Press.

**ADDIS ABABA UNIVERSITY**  
**COLLEGE OF BUSINESS AND ECONOMICS**  
**MASTERS OF BUSINESS ADMINISTRATION (MBA) PROGRAM**

Survey Questionnaire

This questionnaire is designed by the final year post graduate students of Addis Ababa University, entitled: “**Assessing the Effect of E-Banking Service Quality on Customer Satisfaction in Ethiopian Commercial Banks.**”for the partial fulfillment of the course MBA thesis.

The information provided by you will be held strictly confidential and is used for academic purpose only. And you will not be held responsible for anything arising thereof. You are hereby are kindly requested to duly fill up and return the questionnaire promptly. Thank you in advance for your cooperation in advance for your utmost participation for the successful completion of the study. For further inquiry, I will be available with the following address:

Name: Meklit Gobeze Gedle

Tel (Mob) : +251 923240432

Email: [meklitgobeze12@gmail.com](mailto:meklitgobeze12@gmail.com)

**Instructions!**

- No need to write your name;
- Please put a (√) mark for your response ;
- Duly fill and return the questionnaire promptly

1. Age

- 18 – 25 Years
- 26 -35 Years
- 36– 45 Years
- 46– 55 Years
- 56 Years and above

2. Gender

- Male
- Female

3. Educational Background

- No formal education
- High school diploma
- Bachelor’s Degree
- Master’s Degree
- PhD

4. Your employment status

- Employed (private/public)
- Self Employed
- Unemployed

Other, please specify.....

5. Monthly Income Level

Less than 5000 ETB	<input type="checkbox"/>
5000 – 10000 ETB	<input type="checkbox"/>
10001 – 20000 ETB	<input type="checkbox"/>
20001 – 30000 ETB	<input type="checkbox"/>
Above 30000 ETB	<input type="checkbox"/>

**Part two: Factors Affecting Electronic Banking**

Please indicate your level of agreement by putting a (√) mark for your response for the following multiple questions presented below using a five points Likert’s scale, where Key: 1=strongly disagree, 2= disagree, 3=moderately Agree, 4= agree, 5= strongly agree

NO	Statement	Strongly disagree (1)	Disagree (2)	Mode rate (3)	Agree (4)	Strongly Agree (5)
<b>I. Tangibles of Electronic Banking Services</b>						
1	The electronic banking platform has an attractive and professional appearance.					
2	The design and layout of the online banking interface are modern and appealing.					
3	The bank’s digital infrastructure appears reliable and well-maintained.					
4	The visual layout of the platform makes it easy for me to find what I need.					
5	The physical facilities (ATMs, branches) support the electronic banking services effectively.					
<b>II. Reliability / Efficiency of Electronic Banking Services</b>						
1	The electronic banking system is available whenever I need it.					
2	Transactions through the					

	electronic banking platform are completed without errors.					
3	The bank provides consistent and dependable electronic banking services.					
4	The system performs transactions accurately and reliably.					
5	Technical issues with electronic banking are resolved promptly.					
<b>III. Responsiveness of Electronic Banking Services</b>						
1	Support responds quickly when I have questions or problems with electronic banking.					
2	The bank's support team provides helpful solutions promptly.					
3	I can easily reach customer support when I need assistance.					
4	The bank responds quickly to system outages or transaction errors.					
5	Issues related to electronic banking are resolved in a timely manner.					
<b>IV. Assurance / Competence of Electronic Banking Services</b>						
1	I trust that the bank's staff is knowledgeable and capable in handling electronic banking services.					

2	I feel confident that my personal and financial information is handled professionally by the bank.					
3	I trust the bank to handle my online transactions accurately and without error.					
4	The bank's staff explains electronic banking services clearly, instilling confidence in me.					
5	I believe the bank is reliable and competent in managing electronic banking services.					
<b>V. Empathy / Courtesy of Electronic Banking Services</b>						
1	The bank understands my specific needs when I use electronic banking.					
2	The online platform offers personalized options that suit my preferences.					
3	The bank shows genuine concern for my satisfaction with electronic banking.					
4	I feel valued as a customer when I use electronic banking services.					
5	The bank offers tailored services or advice based on my banking behavior.					

**VI. Credibility of Electronic Banking Services**

1	I believe the bank is trustworthy in handling my electronic banking transactions.					
2	The bank provides transparent and accurate information about its services.					
3	The bank's reputation increases my confidence in its electronic banking services.					
4	The bank's services consistently meet my expectations, making me feel secure in using them.					
5	The bank demonstrates <b>integrity</b> and <b>honesty</b> in all its electronic banking communications and transactions.					

**VII. Security / Privacy of Electronic Banking Services**

1	I feel confident that my transactions are handled securely by the bank.					
2	I trust that my privacy is respected and maintained during online banking.					
3	The bank's platform ensures that my personal data is safe, which enhances my confidence in using it.					
4	I am satisfied with the bank's overall approach to maintaining					

	my financial security.					
5	I feel assured that the bank takes all necessary measures to protect my online banking transactions.					
<b>VIII. Access / Easy Navigation of Electronic Banking Services</b>						
1	The online banking platform is easy to access from different devices.					
2	Navigating through the digital banking platform is straightforward.					
3	I can perform banking transactions quickly and easily.					
4	The platform design helps me find what I need efficiently.					
5	The system is accessible even with low internet bandwidth.					
<b>IX. Communication of Electronic Banking Services</b>						
1	The bank provides timely updates about system outages or security alerts.					
2	Transaction confirmations and alerts are sent promptly.					
3	The bank communicates clearly about any changes or issues affecting service.					
4	Customer support is accessible and communicates professionally.					
5	The bank provides helpful					

	instructions and tutorials for using digital services.					
<b>X. Understanding the Customer of Electronic Banking Services</b>						
1	The bank understands my specific needs and preferences in digital banking.					
2	The bank offers personalized recommendations based on my usage.					
3	The bank proactively provides relevant information or advice.					
4	The bank effectively responds to my feedback and complaints.					
5	The bank's digital services are tailored to suit my financial behavior.					
<b>XI. Customer Satisfaction of Electronic Banking Services</b>						
1	Overall, I am satisfied with the electronic banking services provided.					
2	The electronic banking services meet my expectations.					
3	I am satisfied with the convenience of using electronic banking.					
4	My overall experience with the bank's e-banking is positive.					
5	I would recommend the bank's electronic banking services to					

	others.					
6	I feel confident in using electronic banking regularly.					
7	The e-banking services have improved my banking experience.					
8	I am satisfied with the speed and efficiency of online transactions.					
9	I trust the bank's digital services to handle my transactions securely.					
10	I am satisfied with the support provided when I encounter issues with e-banking.					

Thank you !!!!!