



ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
SCHOOL OF COMMERCE
DEPARTMENT OF MARKETING MANAGEMENT
GRADUATE PROGRAM UNIT

**THE IMPACT OF DIGITAL BANKING SERVICE QUALITY ON
CUSTOMERS' SATISFACTION: THE CASE OF SELECTED BRANCHES
OF COMMERCIAL BANK OF ETHIOPIA IN ADDIS ABABA**

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JUNE, 2023

ADDIS ABABA, ETHIOPIA

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**THESIS SUBMITTED TO ADDIS ABABA UNIVERSITY SCHOOL OF
COMMERCE IN PARTIAL FULFILLMENT OF THE REQUIREMENT
FOR THE DEGREE OF MASTER OF ARTS IN MARKETING
MANAGEMENT.**

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JUNE, 2023


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ADDIS ABABA UNIVERSITY
SCHOOL OF COMMERCE GRADUATE PROGRAM
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Statement of Declaration

I Fikru Kumelachew, hereby declare that the thesis entitled " The Impact of Digital Banking Service Quality on Customers' Satisfaction in Addis Ababa: The Case of Selected Branches of Commercial Bank of Ethiopia " submitted at Addis Ababa University School of Commerce for the Degree of Masters of arts in Marketing Management is my own original work and has not been presented for any other Degree or Diploma in other institution.

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STATEMENT OF CERTIFICATION

This is to certify that Fikru Kumelachew has carried out his research work on the topic entitled: **The Impact of Digital Banking Service Quality on Customers' Satisfaction: The Case of Selected Branches of Commercial Bank of Ethiopia in Addis Ababa.** This thesis is her original work and is suitable for submission of Master's Degree in Marketing Management.

Advisor: Beza Libeyesus (PhD)

June 2023

ACKNOWLEDGEMENTS

God Almighty deserves all the praise for giving me the strength, courage, wisdom, and capacity necessary to continue my studies and finish this thesis.

I'd be happy to express my deepest thanks to my Advisor, Dr. Beza Libeyesus, for taking the time to review and provide helpful feedback on my thesis. I would like to personally acknowledge the staff, management, and customers of Commercial Bank of Ethiopia for their support, participation, and useful comments that helped the research be successful.

Finally, I want to express my sincere gratitude to everyone in my life for their prayers, encouraging words, and helpful suggestions.

Thank you all!!!

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Acronyms

ATM- Automatic Teller Machin

BSQ- Banking Service quality

CBE- Commercial Bank of Ethiopia

E-Banking- Electronic Banking

EBSQ- Electronic Banking Service Quality Model

NBE-National Bank of Ethiopia

PDA- Personal Digital Assistant

POS- Point of Sell

SPSS-statistical package for Social Sciences

SERVQUAL- Service Quality Model

USSD- Unstructured Supplementary Service Data

Abstract

The study is investigating how customers' satisfaction is affected by the quality of digital banking services in Addis Ababa in the case of Selected Branches of Commercial Bank of Ethiopia. This study intends to ascertain the impact of digital banking service quality on customer satisfaction since banks place a high focus on this objective. This study served as an explanation of the goal and/or research design. An approach to quantitative research was adopted. 400 CBE consumers make up the demographic of interest in statistics. Structured questionnaires were used to collect data. The questions were separated into two sections by the researcher. Inferential and descriptive data analysis approaches were used. The SPSS version 20 was also used to examine the data. The primary findings of the study were that the qualities of reliability, responsiveness, user-friendliness/ease of use, and customer service & support have a significant positive impact on the dependent variable customer satisfaction. According to the study, there is a direct relationship between the quality of digital banking services and client satisfaction. As a general rule, there is a need to educate and create knowledge of digital banking among the majority of the banking consumers of CBE.

Keywords: Digital Banking Service quality, customer satisfaction, reliability, responsiveness, user-friendliness/ease of use, and customer service & support

CHAPTER ONE: INTRODUCTION

1.1. Background of The Study

Due to changes in consumer behavior, banks' traditional services were no longer satisfactory. Customers today choose products and services that are easy to use and convenient, and tablets and mobile phones are efficient tools for finding information about products and services. Commercial banks have moved away from the old paradigm of operating through branches as a result of realizing the value of the digital revolution (Thuy Thu Nguyen, 2020). Modern day banking activity has evolved into the hottest topic in the financial sector thanks to digital banking services. Digital banking has emerged as a result of the widespread adoption of mobile devices and the internet in the banking and financial sectors (Varda Sardana & Shubham Singhania, 2020).

Chikoko and Munongo (2015) define digital banking services as the use of the internet, mobile devices, and other digital mediums as a delivery channel for banking services, including all traditional services such as balance enquiries, statement printing, fund transfers to other accounts, bill payment, and new banking services such as digital bill presentment and payment without visiting a bank. The implementation of digital banking has improved the efficiency and competitiveness of financial services, giving them a competitive edge (Alex Fahrur Riza, 2019).

With the advent of digital banking, the requirement for the majority of bank visits is eliminated. It is a cutting-edge service that is only now gaining attraction among banking consumers. Since it enables users to do the majority of actions they take at banks, such as checking their balances, transferring money, and paying bills online, it has significant potential for future expansion (Hyun-Soo Choi, 2020).

Clients can access their bank accounts with only one click thanks to digital banking technology, which makes any banking transaction easier. The way that banks conduct business has altered as a result of digital banking. Customers who do banking transactions online avoid going to the bank's physical location. Customers are substituting automated teller machines (ATM) for cashier teller counters and credit cards and digital cash for bank transactions, for instance. Additionally, it enables users to apply online for a variety of services, check their account

balances, give the bank instructions, and electronically transfer money to their accounts as well as pay bills and do other financial transactions. It heavily relies on information and communication technology (ICT) to supply financial services more quickly and on a 24-hour basis as promised. (Grui Anton, 2010).

Due to its popularity and capacity to reduce costs associated with having employees physically serve customers, accelerate processing times, increase speed, increase flexibility of business transactions, and generally provide better service, financial institutions around the world have increased their use of digital banking (Peterson K. Ozili, 2018). At the moment, academic studies and other associated publications predict that digital banking will expand swiftly and have a significant influence on all types of markets (Carmen Cuesta, 2015).

It would be a good idea to look into how to use digital banking using current ICT infrastructures as well as financial and legal systems in order to improve the quality of services provided by the country's banking industry in the future, even though there haven't been many studies on it in Ethiopia. Ethiopian researchers have not studied digital banking in-depth, despite the fact that other industrialized and emerging countries have. Research hasn't been done much in developing countries like Ethiopia. This is a result of Ethiopian consumers' slow adoption of the Internet and its use for digital banking (Worku G, Tilahun A, Tafa MA, 2016).

1.1.1 Digital banking in Ethiopia

Digital banking first appeared in Ethiopia in late 2002 when the country's largest state-owned commercial bank (CBE) deployed ATM s to serve the local population. The Commercial Bank of Ethiopia (CBE), which contributes significantly to the country's economic growth and development, was the first bank in Ethiopia to effectively introduce digital banking technology and implement the Card Banking Project in order to offer its clients contemporary banking services (Mohammed Arif Shaikh, September 2014). The five technologies now listed by CBE as facilitating digital banking services are the Automated Teller Machine (ATM), Point of Sale (POS), Mobile Banking, E-wallet (i.e. CBE Birr) and Internet Banking. The biggest difference between mobile and internet banking is how customers access their accounts. Mobile banking is done through an app on a mobile device, such as a smart phone or tablet. Users can do internet

banking on any desktop or laptop computer, smart phone, or tablet with an internet connection without having to download any apps (Mohammed Arif Shaikh, September 2014).

Digital banking or the use of modern technology to access banking services electronically is still not well-executed in Ethiopia. Money transfers and cash withdrawals without a passbook are still not permitted in most Ethiopian public and private banks. Cash is still king in the country since it is the primary method used for personal consumption. Due to the difficulties in counting, packing, transporting, and depositing huge amounts of cash, as well as the danger and annoyance of dealing with forgery and damaged notes, this has caused problems with cost and time, particularly for businesses (Gardachew Worku 2010). There is a critical need to strengthen the digital way of money transfer and transactions between banks from the standpoint of the public and the economy in order to facilitate a healthy flow of financial resources among financial institutions and maximize the contributions of the entire financial system to the growth processes as a whole.

All banks operating in Ethiopia should be aware of the importance of implementing digital banking systems in order to satisfy their customers and meet the demands of rapidly expanding domestic and international trades, as well as increasing international banking services, given the rising number of import-export businesses, rising international trades, and rising international relations. According to the researcher's firsthand findings, all Ethiopian banks must expressly state a time-frame for their technical growth and integration if they want to keep up with modern technology.

1.1.2. Background of Commercial Bank of Ethiopia

The Commercial Bank of Ethiopia (CBE) was founded as a State Bank in 1942, making it one of the country's oldest public banks. Since then, CBE has gone through several reforms and mergers, emerging as one of the country's most recognized and largest commercial banks. CBE now has over 35 million account holders in its 1838 branches, and the number of Mobile and Internet Banking customers has surpassed 5.5 million as of June 30, 2022. More than 7.7 million people have active ATM cards. Its reach to individual depositors, small and medium-sized enterprises, and private and governmental mega-investment projects has made it the country's largest single bank, with enormous economic influence (CBE Environmental and Social Policy, 2022).

CBE's outreach to individual depositors, small and medium-sized businesses, and private and governmental mega-investment projects has elevated it to the country's largest commercial bank, with significant economic impact. The CBE played a critical role in boosting the country's economic growth as well as generating funds for future investment. CBE has the opportunity to reach millions by raising awareness and improving adaptive capacity through environmentally friendly loan lines as part of its commitment to being a part of the solution to environmental deterioration and its impact on individual residents and businesses (CBE, Environmental and Social Policy, 2020).

The CBE's digital banking service is intended to "produce a cashless society in the country." The bank's digital banking strategy is consistent with the country's Growth and Transformation Plan (GTP), which aims to "mobilize funds through increased financial sector accessibility and service development," as well as "bring improved banking services and modern payment systems such as cards and mobiles with the effect of reducing transaction costs" (The revised strategy of E-payment service of CBE, 2016).

1.2. Statement of the Problem

In Ethiopia, most banks compete fiercely for clients by offering a variety of services. For clients to choose the finest bank to meet their needs, it is important to offer a variety of options. In order to maintain their competitive edge over rival banks, banks must also figure out how to please their consumers. Nearly all banks in Ethiopia are working quickly to introduce new technology-based goods and services including internet banking, mobile banking, ATM, POS, etc. in order to provide round-the-clock client service and stay current with the evolving global banking technology (Assefa, 2013).

We can assume that most banks in Ethiopia merely focus on attracting new digital banking clients in order to maximize the proportion of digital banking users; they neglect to properly inform their current digital banking clients about the key benefits of using the digital banking products they use, and they don't actively take proper steps to investigate how using digital banking services affects their customer satisfaction. Because it is more difficult to keep digital banking customers loyal, customer' satisfaction is likely to be much more important. Because banking has traditionally been a high-contact sector, the lack of direct human interaction in

digital banking services needs a closer examination of how technology is utilized to generate customer satisfaction. Banks must be informed about how to satisfy their customers, with a focus on service quality (Zavareha 2012).

Although digital banking services are increasingly being used and are more widely accessible, the goals of establishing a cashless society have not been met as anticipated. Digital banking has been utilized extensively in wealthy countries and is spreading quickly in underdeveloped countries. In contrast, digital banking systems are still in their infancy in Ethiopia, where cash is still the majority form of payment (Garedachew, 2010). Many obstacles must be overcome by the Ethiopian banking sector in order to fully adopt and customize digital banking infrastructures and take advantage of the opportunities provided by ICT applications in general. Despite the fact that research has been conducted on this topic in Ethiopia, it has been revealed that the lack of a network connecting the entire country; inadequacy of reliable and secure information infrastructure, particularly telecommunication infrastructure, lack of Internet network access and online payment infrastructure, as well as limited internet usage; slow ICT penetration in the banking sector; insufficient legal and regulatory support for E-banking, etc. are the major issues. The lack of Internet connection, particularly in the country's rural parts, makes transactions over the internet hard (Yinebeb, 2022).

While conducting preliminary research on some selected branches of CBE in Ethiopia, the researcher found that there is also a lack of willingness to use digital banking services. This is one of the challenges that are present. It should be noted that customers should be aware that using digital banking services enables them to a number of additional benefits. It should be noted that before a customer is ready to use online banking services, they should be properly informed so that they can be persuaded to take part in the usage of digital banking services. Nonetheless the bank exclusively focuses on attracting new Digital banking customers to maximize just the number of digital banking users; it neglects to properly inform its current Digital banking customers about the essential advantages of using the Digital banking products they use.

In addition, while quick survey on some selected branches of CBE the researcher also found that the issue of security and trust is additional challenge for most CBE customers while utilizing internet banking. The security of financial transactions is among the most important elements to

take into account while using digital banking service options. Customers of CBE's digital banking services regularly inquire about banks' policies about mistaken transactions that occur during online transactions. Would the banks be ready to settle the disagreement now and do further investigation later, or would it be the obligation of the customers to present proof? The level of confidence in this case would affect both the long-term acceptance of this alternative delivery method and the general security of transactions for CBE clients.

Customers frequently complain about less user-friendly digital banking platforms, such as Apps and USSD systems (Unstructured Supplementary Service Data) for mobile banking, CBE Birr/Agent Banking, and Internet Banking services, the navigation on tools provided in CBE's digital banking services. This is another issue that the researcher discovered while conducting preliminary research on some selected branches of CBE. Consumers typically reject an invention if it is still difficult and difficult to use (Worku, Tilahun and Tafa, 2016).

Despite CBE's efforts to ensure that customers benefit from digital banking, the bank receives complaints from customers regarding issues such as ATM machines running out of cash, statements not printing, cards becoming blocked, frequent ATM service breakdowns, a lack of technicians in all branches who can fix these breakdowns, a lack of sufficient backup systems that can provide customers with ATM service when temporary problems occur in the machine, and a lack of credit card services

Additionally, there is a lack of convenience in the use of digital banking services, a lack of credit facilities using digital banking services such as Mobile banking, CBE Birr Wallet, ATM cards and Internet Banking services, a lack of innovation and knowledge creation in the relevant fields, network interruptions, a lack of regulatory framework that is appropriate for e-commerce, and resistance to technological change among customers and service providers due to risk avoidance. This demotivates customers not to use digital banking services (Yinebeb, 2022). Long lines are still present in the banking hall, bank customers continue to handle excessive amounts of cash, and very little explores the digital banking products that are offered at CBE during the pretest of this study, which shows an imbalance of digital banking services throughout Ethiopia.

As mentioned in the previous section under the background of CBE, digital banking services were introduced by Commercial Bank of Ethiopia as a way to guarantee services excellence by

lowering waiting times, erroneous actions, expenses, and raising client satisfaction. Nevertheless, there aren't many studies available in Ethiopia that cover the whole range of digital banking benefits for increasing customer satisfaction. As a result, further research is still needed to determine how digital banking affects consumer satisfaction in Ethiopia.

As a result, it is vital to analyze CBE's digital banking service quality and its impact on customer satisfaction. This study was aimed at addressing gaps left by earlier studies by investigating the impact of digital banking attributes on customer satisfaction. Previous research has found that digital banking customer satisfaction is based on a variety of models, including those employed by Garedachew Fikadu in 2010, Milion Assefa in 2013, Worku G, Tilahun A, and Tafa MA in 2016. Despite the fact that many authors have created digital banking customer satisfaction models, the modified E-SERVQUAL model adopted by Amit Shankar and Charles Jebarajakirthy (Revised Version, 2018) and Syed Ali Raza, Amna Umer, Muhammad Asif Qureshi, and Abdul Samad Dahri (Revised Version, 2020) is used in this study. This model is suitable for measuring customer satisfaction because it is the most recent version to assess the impact of digital banking services on customer satisfaction.

Previous researchers observed a considerable association between the quality of the digital banking service and customer satisfaction, which was theoretically proven by a number of early researchers. However, the researchers have previously investigated the connections between service quality and customer satisfaction using the five service quality attributes (tangibility, reliability, responsiveness, assurance, and empathy). This SERVQUAL scale was developed to assess the quality of a service in general.

This research investigates important digital banking systems such as ATMs, POS, mobile banking, E-wallet/Agency Banking, and internet banking. The study's overall goal was to look at the impact of digital banking service quality on customer satisfaction at the Commercial Bank of Ethiopia. To address these gaps, the study will analyze the influence of digital banking service on customer satisfaction in Addis Ababa in the case of selected Commercial Bank of Ethiopia branches utilizing e - banking service quality attributes.

Previously, researchers used the SERVQUAL Service Quality Dimension to evaluate the influence of digital banking service quality on customer satisfaction. However, the researcher

demonstrated the impact of digital banking service quality on customer satisfaction in the context of Commercial Bank of Ethiopia using the six constructs of the conceptual model of digital banking service quality, namely reliability, responsiveness, ease of use, customer service and support, website design, and privacy and service security. Amit Shankar and Charles Jebarajakirthy (Revised Version, 2018) and Syed Ali Raza, Amna Umer, Muhammad Asif Qureshi, and Abdul Samad Dahri (Revised Version, 2020) are the models used. It is built with e-service quality model components in mind.

1.3 Research Question

The research has both general and sub research questions to address the objectives of the study.

1.3.1. General Research Question

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

1.3.2. Sub-research Questions

1. To what extent does reliability of digital banking service affect customer satisfaction at CBE?
2. To what extent does responsiveness of digital banking service affect customer satisfaction at CBE?
3. To what extent does user friendliness of digital banking service affect customer satisfaction at CBE?
4. To what extent does privacy and service security of digital banking service affect customer satisfaction at CBE?
5. To what extent does customer service and support of digital banking service significantly affect customer satisfaction at CBE?
6. To what extent does website architecture of digital banking service affect customer satisfaction at CBE?

1.4. Objectives of the study

1.4.1. General Research Objectives

The general objective of the study is to examine how digital banking service quality affects customers' satisfaction at CBE.

1.4.2. Specific Research Objectives

1. To investigate the effect of reliability of digital banking service significantly on customer satisfaction at CBE.
2. To investigate the effect of responsiveness of digital banking service significantly on customer satisfaction at CBE.
3. To investigate the effect of user-friendliness of digital banking service significantly on customer satisfaction at CBE.
4. To investigate the effect of privacy and service security of digital banking service significantly on customer satisfaction at CBE.
5. To investigate the effect of customer service and support of digital banking service significantly on customer satisfaction at CBE.
6. To investigate the effect of website architecture of digital banking service significantly on customer satisfaction at CBE.

1.5. Significance of the Study

The research paper has both practical and theoretical significance. The study is expected to enable Commercial Bank of Ethiopia to gain understanding of how its digital banking services affect customer satisfaction. The study's findings are also expected to aid bankers and other decision-makers in understanding how current consumers feel about digital banking technology and how that affects how the service is actually used. Additionally, it could give bank managers and decision-makers the chance to implement the necessary corrective actions to hasten the development of the favorable perception elements for the use of digital banking. The results of this study are also be helpful for academics and students as a resource to carry out additional research on the idea of the impact of digital banking services on client satisfaction.

1.6. Scope of the Study

The main goal of this study is to evaluate the impact of the CBE's digital banking services quality on customer satisfaction in Addis Ababa and to quantify the relative importance of each aspect of digital banking service quality (i.e. Card Banking/ATM & POS, Mobile Banking, Internet Banking and E-wallet/ CBE birr) in terms of influencing customer satisfaction. Contextually, the study placed a strong emphasis on digital banking services, particularly how it affects customer satisfaction at CBE. The geographic focus of the research contained one special

grade branch from each of the eight districts in the Addis Ababa region because grade four and grade five/special grade branches of CBE serve a large number of customers and are expected to have a higher proportion of customers who use digital banking than other low-grade branches of CBE. The grade four and special grade branches of CBE were therefore the study's target populations, and they were chosen using a stratified random sampling technique from each of the eight CBE districts in the Addis Ababa area. Only Addis Ababa branches were chosen due to a lack of resources and time, as well as the fact that CBE has more client accounts in the country than other private banks and digital banking products and services are commonly used throughout the country.

1.7. Limitation of the Study

This study was focused on investigating the impact of digital banking services service quality of CBE on customer's satisfaction on the selected eight branches of the bank in Addis Ababa. Therefore, it cannot be considered as an exact representative of the whole branches of CBE. For this reason, the sample might be too small to generalize the whole branches of CBE based on these finding. The conclusion drawn was also limited to the selected branches of CBE that are found only in Addis Ababa. Moreover, the reason behind studying on the selected branches is due to time and resource constraint. This could be the limitation of the study.

1.8. Organization of the Study

The study was divided into five chapters to ensure clarity and consistency in the topic. The first chapter of the research included the background, problem statement, questions, and objectives, as well as its significance and limitations. The second chapter discusses the study's implications to the present body of literature. After providing the relevant existing literature, the researcher offered a summary of the whole chapter in relation to the study. The study's third portion discusses the research techniques, data gathering methods and research methodology employed, a review of data analysis methodologies as well as the equipment used to acquire data. The fourth chapter discusses the study's findings. The data to be presented was statistically handled in order to reveal the connection of the variable under inquiry. The findings, suggestions, and limits of the study are separated into three pieces in the last chapter. With the three elements, the chapter should be able to handle the problem outlined in the previous three chapters of the study.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

This chapter provided the findings of a survey of the literature on digital banking service quality, digital banking service quality dimensions, and the effect of service quality on customer satisfaction. The student researcher attempted to analyze studies on digital banking service quality in banking industry in order to gain an understanding of E-service quality measurement and E-service quality aspects.

2.1. Theoretical Review

Digital banking services are being used by both developed and developing countries to maintain their competitiveness. The competition in the financial sectors has pushed the need to improve utilization of the digital platform across all enterprises. In order to decrease hold-ups, delays, expenses, and enhance customer service, banks decided to conduct research, assess, and work to offer digital banking service. Customers may use their digital banking services to access and learn more about their own personal accounts as well as do quick digital transactions from PCs and smart phones at their workplace or house whenever the time is suitable. (Mambi, 2010).

2.1.1. Concept of Digital Banking

The term "digital banking" was already interpreted in a number of different ways. The term, according to (Daniel,1999), refers to the distribution of bank information and services to customers via a range of platforms that can be used with a range of devices, such as PCs, mobile phones with browser or desktop software, telephones, and digital televisions. Any utilization of technological devices and digital means by a bank to conduct transactions and interact with customers is referred to as "digital banking" by Abid and Noreen (2019).

As per Sathye, M. (1999), it refers to providing consumers with bank information and services via a range of delivery platforms that may be utilized with a range of devices, including desktop and tablet computers, mobile phones with web browser, and digital TVs.

Digital banking is often referred to as an "online gateway, via which consumers may access numerous types of financial services ranging from buying assets to paying bills," according to Pikkarainen et al. (2004). With the touch of a mouse, customers may access various other sorts of financial operations through digital banking in addition to cash withdrawals (De Young,

2001). Digital banking has really advanced from a technique of distribution for financial institutions to one that may be applied to keep up with the rise of globalization and more intense competition (Flavián et al., 2004; Gan and Clemes, 2006).

Timothy (2012) describes digital banking as the use of a distant reach, such as the Internet, to provide services including opening a savings account, transferring funds among accounts, and receiving and paying bills online. There are primarily two alternatives for this. First, in addition to using its traditional distribution means, an existing bank with physical facilities can construct a website and offer these services to its customers. The second option is to create up a virtual bank, in which the computer server is housed in the same structure that serves as the bank's business address. Clients of virtual banks can deposit money and withdraw it for a charge via ATMs (Automated Teller Machines) or other virtual delivery channels managed by other companies. This research defines digital banking as the exchange of money from one digital terminal or device to another.

2.1.2. Forms of digital banking

A range of digital ordering methods are available for customers to use to access digital banking services. The most well-known ones are included here: internet banking, mobile banking, Agency Banking/E-wallet, POS, and ATM.

2.1.2.1. Automated Teller Machines /ATM

According to Love rock (2011), Automated Teller Machines (ATM) relieve employee stress and reduce bank line waiting times, which reduce the workload for bank tellers. The consumer will get the actual amount. Human error is completely out of the question when it comes to ATMs. At any time of day or night, a customer may use an ATM to withdraw cash up to a set limit. Any moment of time, customers can use ATM.

According to (Rose, 1999), "An ATM combines a computer terminal, database system, and cash vault in one unit. Customers can enter the bank's regular service with a debit card that consist a PIN code linked to the bank's computerized records 24 hours a day." It offers a variety of banking services to its clients.

2.1.2.2. Mobile Banking

Mobile banking (also written M-banking) refers to the process of performing balance checks, account transactions, payments, credit applications, and other banking activities on a mobile device such as a cell phone or Personal Digital Assistant (PDA). SMS banking was the first method of delivering mobile financial services (Amith Kumar Reddy, Dr. Megharaja. B, 2021). Literally, this entails carrying out financial transactions using a mobile device. A mobile banking transaction might involve a payment, such as a digital payment, a mobile purchase, or a mobile money transfer, or it can involve an account inquiry without a payment, including looking up your balances, available credit, or transaction history (Karthikeyan et al., 2017).

Mobile banking is used in many parts of the world, particularly in remote and rural areas with little to no infrastructure. This aspect of mobile commerce is also popular in countries where the nearest banks are located far away from customers, only in large cities. Tools for managing accounts, conducting market transactions, and accessing personalized information may be among the services offered (Tiwari & Buse, 2007).

2.1.2.3. Agency Banking/ E-wallet

Agent banking is a digital banking approach that allows consumers to access their accounts and business retail locations via a mobile phone device. For instance, CBE Birr / CBE Wallet are the agent banking service used in the case of Commercial Bank of Ethiopia. Customers can use CBE Birr on their mobile devices to pay bills, send and receive money transfers, and do other things. Local businesses serve as mini-branch locations for financial institutions, assisting with client registration, cash deposits, withdrawals, and a variety of payments. Mobile phone applications, USSD (Unstructured Supplementary Service Data), and SMS (Short Message Service) are ways that CBE Birr customers may access their accounts (Commercial Bank of Ethiopia 2023).

Commercial Bank of Ethiopia distributes CBE Birr, E-wallet banking service, through banking agents. The bank selects, employs, and authorizes agents to provide financial services on the bank's behalf through mobile device. A CBE Birr (Wallet Account), which is similar to a pre-paid account, allows a user to save money for future transactions. A PIN is used to protect the account. A CBE Birr can be used to purchase groceries, internet shopping, and plane tickets, among other things (Commercial Bank of Ethiopia 2023).

2.1.2.4. Point-of-Sale Transfer Terminals (POS)

POS is a digital channel to control the selling process by giving a salesperson an interface, most frequently at hotels, stores, petrol stations, or any other businesses with connections to banks (Shittu, 2010). POS terminals are used to take payment cards similarly to ATM s, however unlike ATM s, which require a lot of room and are stationary at comparatively permanent locations, they are highly portable and convenient to use. However, they are not totally self-service like ATM s because they require contact between the consumer and the merchant staff.

The point of sale (POS), sometimes known as the point of purchase (POP) or the checkout, is the point where a transaction takes place. A POS terminal or, more broadly, the hardware and software used for checkouts, the equivalent of an digital cash register, is referred to as a "checkout." The selling process is managed by a POS terminal via a salesperson-accessible interface. The receipt may be created and printed using the same system (Amith Kumar Reddy, Dr. Megharaja B., 2021).

As a result, POS terminals are far superior to ATMs in terms of establishing a cashless society and increasing deposit mobilization. It is also used to speed up the transaction process because the client can pay their bills directly to the merchant.

2.1.2.5. Internet banking

Internet banking, frequently referred to as digital banking, is the use of telecommunications and internet networks to provide bank clients with a variety of value-added goods and services (Ovia, 2012). It entails the use of a technology that allows users to execute financial transactions from their homes, offices, or internet. Some online banks are entirely virtual, with no physical presence, and others are traditional banks that also provide internet banking. Traditional bank customers may do all standard activities online, such as account transfers, balance inquiries, bill payments, and some even allow users to apply for loans online. Clients may view their account information at any time and from any location.

Clients of financial institutions can use internet banking to transfer funds via a secure website managed by the institution, which might be a physical or online bank, credit union, or society. It might encompass any online transaction. Banks are increasingly operating websites where

customers may do a number of tasks in addition to inquiring about account balances, interest rates, and currency rates (Amith Kumar Reddy, Dr. Megharaja B.; 2021).

With the assistance of their own computers or mobile devices with internet access, customers can conduct banking transactions with the bank utilizing this web-based digital home banking system. To do internet banking, you can utilize a device with internet connectivity, such as a laptop or a cell phone (Timotheus & Alabar, 2012).

2.1.3. Evolution of E- banking system

According to the Organization for Economic Cooperation and Development, since the late 1990s, digital banking has expanded from near obscurity to dozens of millions of users worldwide (R. Nitsure, 2003). On the other hand, several stages of digital transactions have led to the development of digital banking. The most recent technology generation includes the web-based internet, personal computers (PCs), automated teller machines (ATM), mobile banking, and home banking. While automated teller machines (ATMs) were the initial well-known machines to allow customers digital access, phone banking involves customers dialing their bank's computer system on a regular cell phone and using the phone keypad to execute financial transactions. PC banking took the place of phone banking by enabling users to contact their bank through a computer and a dial-up computer connection to the phone network.

Technology may be viewed of as the use of information to the achievement of a certain objective, as according Osabuohien E. (2008). In addition to computer systems, telephones, networks, and audiovisual software Frenzel C., ICT also refers to the knowledge and techniques needed to carry out tasks (works) in a particular setting (1996). In the late 1980s, it supplanted earlier nomenclature like Electronic Data Processing (EDP) and Management Information System (MIS); nonetheless, Frenzel, C. observes that the earlier terms are still in use (1996).

Additionally, as mentioned by Adewuyi (2011) I, the use of Information and Communication Technology (ICT) in the banking industry, also known as digital banking, has become increasingly significant and important for all banks and is truly necessary for both regional as well as international competitiveness in the banking industry.

As it makes use of the Internet for data transfer and software downloads as well as the web browser as the user interface, digital banking has the potential to reduce maintenance costs. Customers that use digital banking have 24/7 access to current information and financial services. Billing system, account balance viewing, and bank transactions between one's own accounts are the three major services provided by e-banks. They also provide a number of additional services, including loans, brokerage, share trading, service bundling, and others (UNCTAD, 2002).

The Secure First Digital Bank, which was established in the USA in 1995 and was the first Internet bank, was created by Shanmugham B. and Sohail M. (2003). Several well-known organizations, like Citibank and Bank of America, then gradually introduced their own online banking systems. This technical advancement has greatly raised the standard of financial operations. According to Adewuyi, I, only banks that have fully integrated ICT into every aspect of their business would be able to withstand the battle for existence in the new century (2011).

2.1.4. Challenges & Opportunities of Digital banking

The evolving financial landscape has presented new problems to the banking industry, as well as monitoring and regulatory bodies. The primary contributing causes are an increase in cross-border transactions as a consequence of much lower transaction costs, simplified banking procedures, and dependence on technology to provide critical financial security (Nsouli SM, Schaechter A, 2002).

2.1.4.1. Challenges in Digital banking

According to Daft (1982), while the creation of digital banking is a stunning idea, users may confront several challenges as a result of the specific invention. Daft coined the phrase "strategic risk." Financial institution management should be aware of, and prepared to deal with, the dangers connected with internet banking. Poor digital banking strategy and investment selections might enhance a financial institution's strategic risk.

Looking at the challenges Ethiopia confronts with digital banking, we see that, compared to other African countries, only 20% of Ethiopian homes are connected to an IT network, and a sizeable population is served by a single bank branch. The public's lack of financial literacy, the readiness

and ability of banking institutions to provide services, infrastructure, insufficient cash flow in rural areas, a shortage of agents, and the presence of few branches in rural areas are just a few of the challenges the country is currently facing. Evaluating the responsibilities of newly emerging third-party technological providers, evaluating prepaid balance restrictions, and extending the availability of mobile banking services are also critical Birutu (2012).

In order to fully integrate and adapt digital banking applications and to take use of the possibilities offered by ICT applications generally, the Ethiopian banking sector must overcome a number of challenges. The main difficulties for online banking applications are as follows. In Ethiopian, Abraham H. (2012) wrote that a few of the well-known issues with digital banking are given below.

1. The absence of financial services via the internet or through other digital channels like mobile phones
2. Security and privacy for data and networks
3. Legislation to protect employees and ensure the security of the Internet, as well as a lack of or constraint on government policies, regulations, and e-commerce laws
4. Telecommunications are inadequate.
5. Internet connections that is unstable and sluggish.
6. Absence of Internet knowledge

2.1.4.2. Opportunities in digital banking

While digital banking offers numerous advantages to users and new business prospects for banks, it also increases the hazards connected with traditional banking, as per Nsouli SM and Schaechter A (2002). Even if some countries have invested a lot of time and energy into changing their banking and regulatory laws, as the use of digital banking increases, ongoing review and adjustments will be necessary. Particularly at the international level, more cooperation and harmonization are still needed. Also, the administration of economic policy is more sensitive due to the possible easiness of transactions between banks and even across countries in a digital world.

To understand how the implementation of economic policy is impacted by digital banking, policymakers need a solid conceptual foundation. To fully grasp how the use of digital banking influences the formulation and implementation of economic policy, policymakers require a sound conceptual foundation. Without one, the markets will come up with the answer, maybe at a severe cost. It will be necessary to do further research on policy-related subjects in the near future (Nsouli SM, Schaechter A, 2002).

Ethiopia's most important potential comprises an under-served market, a stable and secure political climate, rapidly increasing mobile infrastructure, the availability of distribution channels (outlets), and a secure and competent banking system. While it is important to recognize that there are still a lot of challenges that digital banking services face, it is true that digital banking is now growing in popularity. It should be noted that there are various lucrative opportunities in digital banking, some of which are given below.

1. **Under-Served Rural Markets:** For the banking industry, the bulk of Ethiopia's population represents a largely unexplored market. All urban cities have banking services, although only a small number of sizable towns have banks. Banks must serve all local villages because the majority of Ethiopians still reside in rural areas BinyamTamene (2009).
2. **Numerous Channels:** For consumers to access their banking and other services, banks can provide a range of channels, such as ATMs, local branches, mobile banking, and so on Abiy Demilew (2008).
3. **Competitive Advantage:** By using digital banking, banks have a competitive edge over other businesses. Banks gain from the implementation of digital banking in a number of ways, such as cost savings, enhanced client relationships, expanded geographic reach, and so on. The benefits of Digital banking have given banks the opportunity to handle their banking operations more effectively Yayehyirad Kitaw (2006).
4. **The rise of Internet usage and computer literacy:** It is crucial or essential when using online banking that users have some familiarity with internet technology so they can quickly take use of the services. The banking sector should take advantage of the rapidly growing internet user base in Ethiopia in order to encourage more people to utilize online banking services (Garedachew, 2010).

2.1.5. Service Quality

Service quality has been described as the disparity between a customer's expectation of a service and their perception of the service providers (Parasuraman, Berry, & Zeithaml, 1985). Currently, there isn't a usable, universal, or all-inclusive definition of service quality. It is "the outcome of an assessment process in which the user contrasts his expectations with the service he believes he has consumed," claims Grooroos (2007).

The following criteria were used to describe quality: (a) meeting or surpassing customer expectations; (b) product or service features that satisfy expressed desires; (c) compliance with clearly specific requirements; and (d) robustness for usage, wherein the product fits the customers' demands and is defect-free (Toyin, David, and Stodnick , 2008).

Customer satisfaction is influenced by service quality, or perceived service quality. Some studies claim that service quality and customer satisfaction measure the same core idea and are thus equivalent. Some academics assert that customer satisfaction with a particular transaction precedes perceptions of the firm's overall quality and is, thus, a precursor to perceived quality. Others contend that customer satisfaction is influenced by perceived service quality and that the ideas of satisfaction and quality are separate. According to Fornell C. (1992), the primary cause of satisfaction as general psychological phenomena is a customer's wonderful experience with a good or service. Overall, it is considered that customer satisfaction increases as perceived quality improves.

2.1.5.1. The Five Service Quality Dimensions

Parasuraman, Berry, and Zeithaml (1985) discovered 10 overlapping characteristics of service quality that customers use to evaluate the quality of a service. Responsiveness, reliability, competence, courtesy, communication, access, credibility, understanding, security, and tangibles were the aspects. The 10 qualities were reduced to five in their 1988 work: reliability, tangibles, and responsiveness remained unchanged, while the other seven components fused into two aggregate dimensions named empathy and assurance. The SERVQUAL model developed by Parasuraman et al. (1988) presented a five-dimensional construct of perceived quality of service tangibles, reliability, responsiveness, assurance, and empathy in order to assess service quality in general (Parasuraman et al., 1988; Zeithamletel et al., 1990).

1. **Reliability:** – the capacity to deliver the given service properly and dependably. This is important because everyone wants to work with businesses that follow through on their obligations, and most businesses proactively let their clients know this (Andaleeb& Conway, 2006).
2. **Responsiveness:** - ability to assist consumers and deliver fast service. This dimension is concentrated on attentively and promptly responding to the client's questions, requests, and complaints (Andaleeb& Conway, 2006). When attempting to withdraw cash from an ATM, customers usually take advantage of the bank's responsiveness to digital banking. The client is required to ask the bank for prompt assistance in fixing their problem if the machine malfunctions for any number of reasons using either a POS machine situated in the bank or another method.
3. **Assurance:** -According to Parasuraman et al. (1985), assurance is the capacity of employees to inspire confidence and trust by their expertise, courtesy, and behavior. The professionalism, expertise, and ability of the team to instill trust in their job. Customers may have confidence and trust in employees who operate as the company's points of contact with them (Bolton & Saxena-Iyer, 2009).
4. **Empathy:** -According to Parasuraman et al. (1985), empathy is the considerate, one-on-one care that a company provides to each of its customers. It includes providing customers with individualized service, employing personnel that are conscious of their clients' requirements, and working at convenient times. Ananth et al. (2011) defined empathy as offering customized attention, convenient operating hours, keeping the customer's best interests at heart, and understanding their specific demands in their study on private sector banks.
5. **Tangibles:** -According to Parasuraman et al. (1985), "tangibility" is the physical appearance of objects like furniture, machinery, people, and written materials. Ananth et al. (2011) defined tangibility as having contemporary technology, a physical location, well-groomed employees, and aesthetically pleasing materials in their study of private sector banks. It defines how things that are utilized for communication and personal purpose seem on the outside. It reflects on the cutlery's appearance and condition, the restaurant's design, the staff's dress, the tableware's appearance, the layout of the menu, the restaurant's signage, and its marketing plan (Andaleeb& Conway, 2006).

2.1.6. Customer Satisfaction

Despite the fact that there are numerous publications on customer satisfaction, no one or commonly acknowledged definition exists in theoretical literature. According to Jamal (2004), for the majority of marketers in this business over the last four decades, satisfaction has been recognized as one of the most important theoretical and practical themes. Consumer satisfaction measures how effectively a company's products and services meet or surpass the expectations of its customers. Customer satisfaction may also be defined as the proportion of consumers whose reported experience with a firm surpasses predetermined levels of satisfaction. Another definition of customer satisfaction is the degree to which customers are happy with a company's products and/or services. According to Ahmed (2005), customer satisfaction is also described as "a term frequently used to measure a customer's view of a company's products and/or services." A difficult science to understand, it is. Each person's level of customer satisfaction is unique and depends on a range of psychological and physiological variables.

2.1.7. The Relationship between Service Quality and Customer Satisfaction

Studies have demonstrated a significant relationship between consumer satisfaction and service quality (Alagheband, 2006; Bedi, 2010; Keiningham, 2005). The relationship between the two parties will be strengthened when a customer receives high-quality service since he is more likely to act responsibly and have a favorable attitude about the business. Customer satisfaction is the most crucial element in assessing if a firm can guarantee the quality of its products or services (Parasuraman et al., 1985). The perceived value of a bank service cannot be measured using industry standard benchmark criteria for the banking industry. According to Bateson (1985, cited in Thakur (2011)), offering first-rate customer service is seen as a vital strategy for surviving and keeping a competitive edge.

2.1.8. Digital Banking Services Quality Dimensions

Given that several studies have found a connection between digital banking services and customer happiness, it is important to understand which elements or dimensions of these services have an influence on consumer satisfaction and how. These factors may be categorized as reliability, responsiveness, customer care and support, privacy and service security, simplicity of use, and website design, based on our assessment of the literature.

According to Parasuraman, Zeithaml, and Berry (1985), customer satisfaction is decided by the speed with which computerized banking services are given. Wirtz and Bateson (1995) and Khadem and Mousavi (1995) (2013) both affirm efficiency in terms of fast and effective service. According to Liao and Cheung (2002), one of the important criteria that clients seek for when evaluating the quality of their digital banking services is reliability. Kettinger and Lee's empirical experiment, conducted in 2005, yielded similar results.

Because client reaction is crucial in digital banking, the first dimension, reliability, is critical. Although reliability is one of the characteristics that might impact replies, rapid processing of financial transactions with no mistakes is commonly considered when evaluating the reality of digital banking service providers (Blut et al., 2014; Liang and Pei-Ching, 2015; Saccani et al., 2014).

The other component, privacy and security, reflects how freely a digital banking user contributes personal information on a digital banking platform (Muturi et al., 2013). Because there is no in-person connection, internet banking raises major privacy problems for consumers (Kim et al., 2009; Shankar and Jebarajakirthy, 2019). However, confidence in service providers has improved, and the necessary customer satisfaction response may be attained through trust (Safi and Awan, 2018). A better code of behavior for privacy and safety resulted in higher satisfaction (Orel and Kara, 2014; Thaichon et al., 2014).

The third factor of digital banking service quality is website design, which is described as numerous interactive aspects of the digital banking service that assist give users with transaction structure during and after completing a transaction, among other things (Wolfenbarger and Gilly, 2003). An updated website and improved interactive experience can lead to a better degree of satisfaction (Kim et al., 2009). The qualities of interactive websites promote trust, contentment, and loyalty to digital banking outcomes (Lee et al., 2006).

Customer service and support, the other crucial factor, may be described as the quickness with which any delinquency reported by the user during or after the service experience is resolved. In this perspective, both individuals and organizations might be considered users (Blut et al., 2015). Adaptation in website design causes problems for consumers (Thaichon et al., 2014), whereas providing a quick and effective solution to users on time results in higher satisfaction and loyalty

in digital environments in general (Chaudhry et al., 2009), and in digital banking in particular (Shankar and Jebarajakirthy, 2019). As a consequence, the following six dimensions are proposed for empirical investigation.

1. Reliability

Reliability is knowing how to consistently and exactly deliver the promised service. It requires precise charging, maintaining accurate data, and delivering services on time. According to the definition of reliability, a company must supply services as promised, be trustworthy in handling customer service issues, react immediately to consumer questions, deliver services on time, and maintain a record free of mistakes. Reliability is the most important factor in traditional service (Berry (1988) and Z. Parasuraman).

Customers have reported significant displeasure with the reliability of CBE's digital banking operations. There are times when digital banking is unavailable owing to poor connectivity, resulting in lengthy lines. When numerous government servant clients try to access their accounts at the end of the month, the digital banking system frequently runs out of funds. Service providers' sluggish reaction times in restoring damaged digital banking also contribute to unreliable service. However, there are times when internet banking performs as expected, if not better.

2. Responsiveness

It involves being prepared to help customers and provide prompt service. The phrase also describes the support provided to clients who complain about issues with online banking, such as simultaneous account debits without funds being allocated, card swipes with insufficient funds, a lack of specific currency denominations, the failure to issue receipts, and instances where the system is down for several days or even weeks. Customers have complained that the service is subpar, therefore this is another area that has to be improved. Four elements were taken from the sources provided by Madu and Madu (2002), Swaid and Wigand (2009), Surjadjaja et al. (2003), Tan et al. (2003), Yoo and Donthu (2002), and Yang (2003). (Hussain, S.M, 2014). The four criteria were as follows: "This website handles product returns well; "It advises me what to do if my transaction is not finalized; "It takes care of difficulties immediately; and "Providing solutions to your queries."

3. Customer service and support

Customer Service and support may be defined by the length of time it takes to handle any concerns acknowledged by the user during or after the service experience. Users in this context involve both individuals and organizations (Blut et al., 2015). Individual users, who have a greater effect on employees than corporations, are likewise concerned (Awan et al., 2017).

4. User Friendliness /Ease of use

The ease of use of digital banking is crucial, as is client concern about the time necessary to learn how to utilize digital banking (David, 2010). It is seen as a factor influencing digital banking acceptability and is associated with easy-to-remember pin codes and URL addresses, well-organized and useful software, quick site navigation, succinct and intelligible contents, and terms and conditions (Alagheband, Alagheband, 2006).

5. Privacy and Service Security

This is critical for digital banking users to maintain the security of their account information and that no records of their banking activity are leaked (Yang and Fang 2004). The lack of risk, uncertainty, or danger is defined as security. It comprises discretion, financial stability, and physical security. It is made up of employees who give clients reason to be confidence in their transactions, who are always pleasant, and who are competent enough to answer customer queries. A. Insuraman and colleagues (1985). Security is also defined as the protection of consumers' personalities and property. Furthermore, service providers Johnston R. maintain confidentiality (1997).

6. Website Architecture

It predominantly relates to the website's outside design, which includes the color scheme, script and design, images, audio files, and music, among other things. A interdisciplinary field of research centered on website design and development, including but not limited to networked distribution, information architecture, and technical development. Four of the acceptable items were written by Al-dweeri, R.M., Obeidat, Z.M., Al-dwiry, M.A., Alshurideh, M.T., and Alhorani, A.M. (2017). "Easy completion of online transactions" was one of the four items. The capacity of this internet gateway to aid clients in quickly completing a transaction, as well as the convenience of understanding which button to click for the next step.

2.2. Empirical Review of Literature

Several scholars are working on determining ways to evaluate the quality of digital banking services. Against this backdrop, numerous contributions have sought to define and delineate the domain of digital banking service quality (see, e.g. Collier and Bienstock (2006) create digital banking service quality using Mentzer et al.'s service quality model; Fassnacht and Koese (2006); Al-Tarawneh, K.A., 2012.; Kim et al. 2009; Parasuraman et al. 2005; Wolfenbarger and Gilly, 2003.

Sintayehu Y. (2015) performed study on the influence of electronic banking services on customer satisfaction, using case studies from selected commercial banks in Addis Ababa. The study's goal was to identify the e-banking factors that influence consumer satisfaction. The author used a case study research style, and the study used both a qualitative and quantitative approach. Despite the fact that businessmen and women are not active users of e-banking services, it has been found that the majority of e-banking consumers are younger and salaried. Despite the fact that e banking improves customer satisfaction in terms of dependability, service content, and transaction efficiency, consumers frequently face service disruptions owing to underdeveloped communications infrastructure and power supply.

AlaEddin M. and Hassan A. (2011) conducted study on digital banking functionality and customer satisfaction outcomes in Jordanian commercial banks to assess the adoption of digital banking functionality and the impact of digital banking on customer satisfaction outcomes. A purposive sample technique was utilized to recruit consumers with the appropriate demographic attributes (e.g., gender, age, and computer use), previous internet experience levels, and product-related expertise. Digital banking adoption (accessibility, convenience, security, privacy, content, design, speed, fees and charges), according to the research, has a positive influence on Jordanian Commercial Bank customers' contentment.

Most studies on digital banking are, in general, too far removed from our situation to be useful, and even the study of (Assefa, 2013), which was found to be qualitatively equivalent to the current problem, ignores CBE's digital banking customers. This study is intended to evaluate the impact of digital banking on customer satisfaction in CBE in Addis Abeba branches in order to

fill the current vacuum in the literature, methodology, and representative questions. Therefore, the following six dimensions are proposed for empirical investigation.

H.1. Reliability has a direct impact on Customer Satisfaction

Early research indicates that dependability positively raises customer satisfaction. Online consumers will have a positive and enjoyable banking experience because to improved digital banking efficiency. For online transactions to be successful, the dependability of digital banking services is a crucial need, and the dependability of service quality might impact customer satisfaction (Bressolles et al., 2014).

Hamilton and Crompton (1991) performed service quality study in a park, ranking service quality factors according to which had the greatest impact on service quality. Reliability was ranked second after tangibles, demonstrating that it remains an important indicator of service quality and hence customer satisfaction. Yuen and Chan (2010) evaluated the influence of retail service and product quality on customer loyalty and discovered that reliability is an important predictor of consumer satisfaction and hence loyalty. Prabha, Soolakshna, and Perunjodi (2010) revealed that dependability was significantly related to customer satisfaction in the Mauritius public sector.

Albrian et al. (2017) investigated all five characteristics of service quality and discovered that in cooperative societies, reliability has the largest effect on service quality and customer satisfaction. Amani (2017) researched service quality in Tanzanian higher education and concluded that the most important aspect of service quality is reliability. This meant that improving service reliability will improve student impression of service quality. If they could provide reliable and accurate service, students' opinions of service quality and satisfaction would improve.

A substantial correlation between dependability and customer satisfaction was found by Hamed et al. (2015) when they evaluated the impact of service quality reliability on customer satisfaction among Libyan online consumers. The website's dependability was demonstrated by its capacity to successfully execute orders, provide goods and services on schedule, and safeguard private and sensitive data.

H.2. Responsiveness has a direct impact on customer satisfaction

Early research' findings show that responsiveness has a positive direct effect on any company's ability to offer trustworthy services. If the desire to assist customers is carried out immediately, precisely, and successfully, it will have an impact on consumers' perceptions of any company's ability to conduct business. This result supports findings from studies by Shafiq et al. (2013) and Al-Hawajreh &Attiany (2014) that responsiveness affects customer satisfaction.

Munusamy et al. (2010) defined responsiveness as a staff member's or employee's eagerness to help clients and provide excellent service. Employee motivation to resolve problems customers have while using the services has a favorable influence on customer satisfaction. Saad Andaleeb & Conway (2006) assert that promptness has a positive effect on customer satisfaction. Customer satisfaction will thus increase as responsiveness, or the staff's readiness and promptness to give services to clients without their express request, increases. Along with consumer perceptions of employee responsiveness, such as the promptness and accuracy of service workers in resolving customer complaints, customer satisfaction will also rise (Mahamad & Ramayah, 2010).

H.3. Customer service and support has a direct impact on customer satisfaction

Customer service includes both pre- and post-sale help. The company should give assistance to stimulate a customer's interest and make them feel welcome before they make a decision. The conversation resembles that of a close friend more than it does a business. Once customers have paid for the products or services, the company should resolve any problems they had or promptly respond to their questions. The company should take action to resolve the concerns as appropriate. In the world of digital banking, support is crucial. Many people need advice on how to use the service since they lack the necessary technological expertise. Customers can want assistance since they might still need answers after utilizing a digital banking service. Support is essential for clients as a result Titida & Rangsana (2013).

A certain service experience's result is the level of customer satisfaction. Customer satisfaction is directly impacted by customer service and support. Customers who are pleased with the value they receive from customer support services are more likely to return, as well as to promote the goods or services to others and to share positive information about them (Wang,

2003). Customers that are satisfied are more likely to utilize services more frequently and refer them to others, which makes customer retention extremely profitable and successful at attracting new clients (Biscaia et al., 2017).

H.4. User-friendliness/ Ease of use has a direct impact on customer satisfaction

Previous studies support the use of user friendliness as a criterion for evaluating online user satisfaction. From the user's perspective, relevant information encompasses not only the type of information offered by the website, but also its degree of quality and accessibility. There is a positive and significant relationship between ease of use and satisfaction among Americans who are perceived to be extremely individualistic (Oghazie et al., 2021).

Customers' concerns about the time and effort required to learn how to utilize digital banking are connected to the importance of ease of use (David, 2010). Pin codes and URL addresses that are relatively easy to gather, software that is well-designed and simple to use, quick site navigation, understandable and clear information, and terms and conditions are all associated Alagheband (2006).

H.5. Service security has a direct impact on customer satisfaction

One of the major factors influencing consumers' willingness to use digital banking services is increasingly recognized as security. The level of assurance regarding security, a subject that has drawn more research interest, is related to how well digital banking maintains the protection of customers' financial and personal information (Krishnamurthy S. and Miyazaki A.; 2002, Kimery K. & McCord M.; 2002).

Research on how poor interface design, technological failures, a lack of responsiveness in digital services, a lack of security, and a lack of financial privacy can lower online consumer satisfaction further emphasizes the importance of privacy and security as deciding factors for whether or not customers will make purchases online. The privacy or security aspect is the most crucial one during this purchase stage because it's crucial to establishing a long-term relationship between the business and the customer's personal information (Dehghanpouriet al., 2020).

H.6. Website architecture has a direct impact on customer satisfaction

A user-friendly website reduces the likelihood of customers making mistakes and results in a more enjoyable purchasing experience. Previous research has supported the following theory: The more helpful a service is, the more delighted its consumers are, according to Srinivansan et al. (2002). Customers will grasp this website content since it is pertinent, concise, tailored, safe, and relevant (Chi, 2018). "System quality" refers to the efficiency and functionality of web-based systems that are accessible, flexible, responsive, and dependable to users (Chi, 2018). Furthermore, service quality refers to the customer service offered by website management to online consumers in order to improve their browsing and purchasing experiences (Chi, 2018).

2.3. Conceptual Framework

Previous study has found a link between client satisfaction and the quality of digital banking service. This link may be evaluated using the six criteria of Parasuraman et al. (2005)'s conceptual model of online banking service quality: reliability, responsiveness, and ease of use, customer service and support, website design, and privacy and security.

Customer satisfaction is determined by the quality of customer care provided by digital banking systems, according to Parasuraman, Zeithaml, and Berry (1985). Wirtz and Bateson (1995) and Khadem and Mousavi (2000) both emphasize the significance of prompt and efficient service (2013). According to Liao and Cheung (2002), one of the most important factors that clients look for when evaluating the quality of their digital banking services is reliability. In their empirical study, Kettinger and Lee (2005) discovered a similar result.

Researchers have identified and studied a number of factors related to privacy and security, such as upholding operational confidentiality, refraining from disclosing personal information, and making sure that customer data is protected to a high standard (Agarwal, Rastogi, & Mehrotra, 2009; Datta, 2010; Poon, 2007).

According to Madu & Madu (2002), being responsive is being eager to help clients and offer prompt service. Four categories may be used to categorize this service. First, the service may be adequately controlled and run by the digital banking system. Second, the digital banking

channels can point clients in the proper way if any processes go wrong. Third, it can offer a speedy fix for any potential mistake in digital banking activities. Finally, it offers real-time responses to client inquiries.

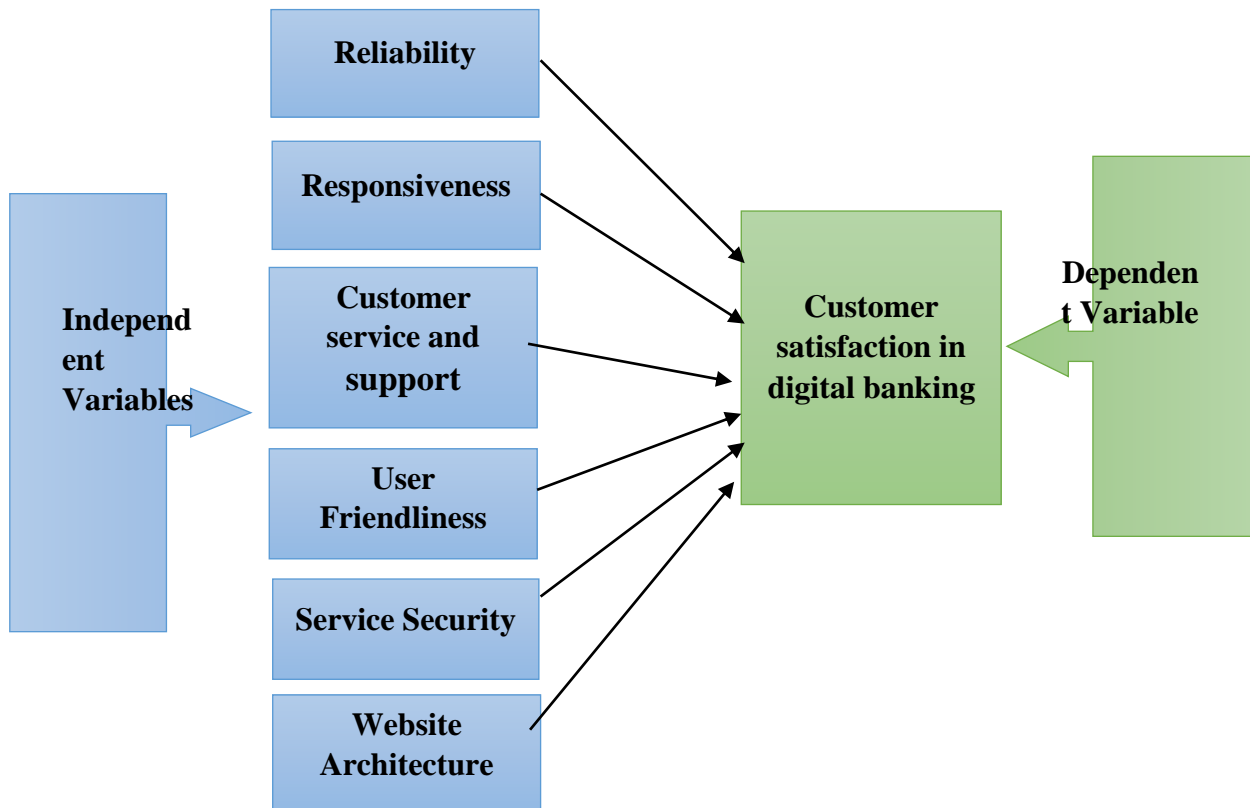
Theoretically supported by a number of early academics, previous studies found a significant correlation between customer happiness and the quality of the digital banking service. However, the five characteristics of service quality (tangibility, dependability, responsiveness, assurance, and empathy) have been used by the researchers to examine the relationships between service quality and customer satisfaction in the past. This SERVQUAL scale was created to evaluate service quality generally.

With a number of researches cited above align to indicate a link between digital banking service and consumer delight, the issue becomes: What characteristics or dimensions of digital banking service have an impact on client satisfaction, and how? According to our examination of the literature, these qualities may be classified as Reliability, Responsiveness, and Ease of Use, Customer service and support, website design, and Privacy and Service security.

However, the researcher used the six constructs of the conceptual model of digital banking service quality, namely reliability, responsiveness, ease of use, customer service and support, website design, and privacy and service security, to demonstrate the impact of digital banking service quality on customer satisfaction in the overall picture of Commercial Bank of Ethiopia. The models include Syed Ali Raza, Amna Umer, Muhammad Asif Qureshi, and Abdul Samad Dahri (Revised Version, 2020), as well as Amit Shankar and Charles Jebarajakirthy (Revised Version, 2018). It was designed with the elements of the e-service quality model in mind.

Figure 2.1 The modified E-SERVQUAL model

The model is adopted from of Amit Shankar and Charles Jebarajakirthy (**Revised Version on October 21, 2018**) and Syed Ali Raza, Amna Umer, Muhammad Asif Qureshi and Abdul Samad Dahri (**Revised Version on Jun 03, 2020**) It is constructed by using factors of e-service quality model.



CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

3.1. Research Design

Explanatory type of research design is more suitable since the goal of this study is to investigate the impact of digital banking services quality on customer satisfaction: the case of commercial bank of Ethiopia. The study intends for an explanatory design since it allows for a detailed explanation of the current condition of the impact of digital banking services on customer satisfaction as well as the direction and strength of the relationship through inferential statistics.

In this study, customer satisfaction and the quality of CBE's digital banking service are the dependent and independent variables, and the goal is to determine the relationship between these two variables. Explanatory research design was employed in order to meet the study's aims. Specific research questions and hypotheses are developed as mentioned above, which is a hallmark of explanatory research. The primary goal of explanatory research is to determine any causal relationships between the variables or factors that are relevant to the study problem.

3.2. Research Approach

This study employs quantitative research techniques. Quantitative research is a method of collecting and analyzing information gathered from various sources. The use of computational, statistical, and mathematical methods will drive the results. The quantitative research approach employs statistics and numbers, which are typically presented in figures. According to Yin (1994), a research approach should be chosen based on the research questions in that specific situation because each approach has its own merits and demerits in terms of how empirical data is collected and analyzed. To quantify the data, Likert scales were used, and then mean score analysis were used to gain an understanding of the findings.

3.3. Data Type and Source of Data

3.3.1. The Sources of Primary Data:

The researcher relied entirely on primary data for the time span of this study's investigation. The information was gathered through a questionnaire from a random sample of respondents who use the CBE's digital banking service. The information gathered from respondents via questionnaires

was the key data. Biggam (2008) defined primary data as information discovered independently by the researcher about a specific issue.

3.3.2. The Sources of Secondary Data:

Secondary information was gathered to support the study and to learn other researchers' findings in the field. The secondary data sources include business-related publications, newspapers, magazines, and library books. From these sources, the study's associated concepts such as digital banking definitions, history, advantages, and links to customer satisfaction. A variety of resources were used, including CBE annual reports, the internet, and other relevant documents. Additionally, information about the history of Ethiopia's commercial banks and information on the introduction of digital banking was gleaned from such secondary sources.

3.4. Sampling Techniques

For this experiment, samples were chosen using the stratified probability sampling method. The target population is divided into different strata, with individuals within each stratum being comparable to one another in terms of specific survey-relevant characteristics. In terms of survey costs and estimate accuracy, stratification is also utilized to increase sample design efficiency (John Wiley & Sons, Ltd., 2014). The researcher used stratified sampling to ensure that particular subgroups were represented in the sample. It also helps in getting precise estimates of each group's characteristics. This technique is frequently used in surveys to clarify differences across sub-populations.

3.5. Sample Size

Currently CBE has more than 37.9 million account holders in its more than 1842 branches and the number of Mobile and Internet Banking users also reached more than 6.6 million and 37k. Active ATM card holders reached more than 8.3 million and 17 million CBE Birr users (from CBE's Official website 2023). The total number of digital banking customers of CBE is 8.3 million based on the above data.

According to the Branch Grading System (BGS), CBE’s grade four and grade five/special grade branches have a big number of customers and a large amount of deposit. Since grade four and grade five/special grade branches of CBE serve a large number of customers and are thought to have a higher proportion of customers who use digital banking than other low-grade branches of CBE, the researcher picked one special grade branch from each of the eight districts in the Addis Ababa region. Therefore, the grade four and special grade branches of CBE was the study's target populations, and they were selected using a stratified random sampling approach from each of eight CBE districts of the Addis Ababa region, as described in the sample size section below.

Taro Yamane (1967) provided simplified formula and table to calculate simple size. As per the formula that is:

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

The sample size was = $\frac{231,317}{1+231,317(0.05)^2} = 399.31$

➤ 399.31 Which is approximately equals to 400.

Table 3.1 Digital banking users of some grade four and special grade branches selected from each district under Addis Ababa Region of CBE

No.	Districts	Branches	Branch Grade	Digital Banking users
1	YEKA	Ferensay Legaseyon Branch	4	26,459
2	KIRKOS	Meskel Square Branch	4	34,365
3	MERKATO	MehalGebeya Branch	4	28,269
4	BOLE	Edna Molle Branch	4	29,569
5	ARADA	Addis Ababa Branch	5	41,698
6	MEGENAGNA	Gerji Branch	4	23,268
7	NIFAS SILK	Nefas Silk Branch	5	26,321
8	KOLFE	Torhailoch Branch	4	21,368
Total Number of Digital Banking Users				231,317

3.6. Data Gathering Technique and Instruments

The survey questionnaire was used only as instruments to collect the primary data. Whether it is referred to as a scheduling form or a measuring instrument, a questionnaire is a systematic list of questions used to gather data from respondents. A brief introduction and explanation of the study's goals was followed by the need that each respondent complete a questionnaire. When consumers enter the bank hall during business hours in front of the five branches, the study questionnaires were handed out. Following their prompt selection of the suitable response, the questionnaires were returned.

Secondary data was acquired from the literature, journals, reports, and records that are currently available. These are the accounts provided by the second group—those who claimed to have learned about the object or incident but who did not actually witness it. They are typically viewed as texts that provide an interpretation and conversion of the source facts into a narrative that may be referenced by others. They were typically generated much later than the events being examined. Reports, journals, and other written materials are examples of secondary data, which are crucial for gathering information not possible from primary data.

3.7. Method of Data Analysis

Two statistical methods were used to assess the data once it had been collected. These statistical techniques combine inferential analysis with descriptive analysis. To analyze the broad issues, descriptive statistics like percentages and frequencies were employed. The validity of the hypothesis was tested and the problems with digital banking were investigated using inferential statistics such multiple linear regression analysis and analysis of variance. The model or conceptual framework was examined through the use of multiple regression analysis. The information gathered by means of the survey's questions was entered and coded using the Statistical Package for Social Science (SPSS) software version 20. For each independent and dependent variable, it provides means, standard deviations, correlations, and frequency distribution. The regression model was used to regress customer satisfaction against the six independent variables. The statistics that are most helpful for describing the data in this inquiry are the mean and standard deviation.

3.8. Validity and Reliability

Getting high-quality, dependable outcomes are the ultimate aim of any research endeavor (Yilmaz, 2013). Researchers should therefore make sure that the research approach they have chosen complies with the established norms and requirements. Validity and dependability are frequently used benchmarks in research technique to meet these goals.

3.8.1. Reliability Test

This study used Cronbach's alpha, a well-used technique to determine the overall instrument's internal consistency. Reliability is the degree to which a construct's measure is consistent or trustworthy, with an ideal value of 0.70. Cronbach's alpha coefficient was used to conduct the reliability test, and items that scored higher than the required level were kept.

According to Tavakol and Dennick (2011), it may not be necessary to provide the test's alpha if it measures more than one concept or construct because the test's increased number of questions will surely exaggerate the alpha's value. Therefore, in theory, rather than for the full test or scale, alpha should be determined for each of the ideas.

The coefficient of alpha ranges from 0 to 1, and a value of 0.5 or less often implies weak internal consistency dependability and is undesirable (Ramayah, 2011). Scales with coefficient alpha between 0.6 and 0.7 imply fair reliability and acceptability, according to Zikmund et al., (2000).

Table 3.2: Reliability Test

	Items	N	Cronbach's Alpha
Customer's Satisfaction level	5	38	.860
Reliability	3	38	.882
Responsiveness	4	38	.869
User-friendliness/ Ease of use:	4	38	.914
Customer Service and Support	4	38	.907
Privacy and Service Security	4	38	.865
Website architecture	5		.870

(Source: Researcher's Survey, 2023)

Based on the above range all the 28 items of variables designed were found to be a good measure of the internal consistency. The Variable's alpha coefficient is greater than 0.8 which implies that the data reliability is excellent and acceptable.

3.8.2. Validity Analysis

According to Kothari (2004), the validity of a measurement is the degree to which the differences between the subjects of the evaluation actually exist. In other words, as it demonstrates how properly an instrument evaluates the variables it is meant to evaluate, validity is the most important requirement. The construct validity of the study will be reviewed to confirm the standard of the research design materials.

According to Kothari (2004), content validity is the extent to which a measuring tool adequately addresses the subject being researched. The content validity is excellent if the instrument comprises a sample of the universe that is representative. It makes decisions mostly on the basis of judgment and intuition. There is no numerical method to represent it, but it may also be decided by a group of people who will assess how well the measurement tool complies with the requirements. The specialists checked the content veracity based on this.

3.9. Ethical Consideration

The personal integrity of each participant was respected in the process of conducting the research. Every participant in the research was informed properly in an accessible manner about the purpose of the research and asked orally his/her consent before any information asked was begun. No information was asked from a participant without his/her prior consent. The information provided by each respondent been kept confidential and will only be used for research purposes.

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS, AND DISCUSSION

4.1.Introduction

In this chapter, the findings of the data analysis performed in line with the study approach indicated in Chapter 3 are discussed. While descriptive statistics are used to interpret the demographic factors of respondents and the mean scores of service quality dimensions, inferential statistics are used to establish the relationship between service quality dimensions and customer satisfaction using correlation analysis through SPSS Version 20.

Several questions in the questionnaire evaluate consumers' satisfaction with Commercial Bank of Ethiopia's digital banking services. The surveys were distributed to customers of six selected CBE branches in each of the eight districts of Addis Ababa. The underlying assumption is that factors influencing consumer satisfaction have an influence on the quality of digital banking services, including reliability, responsiveness, customer service, and support, privacy and service security, user-friendliness or simplicity of use, and website architecture.

To determine the correlation between the independent and dependent variables, multiple regression and Pearson correlation were used. The questionnaires are distributed to customers of the eight CBE branches in Addis Ababa—eight in each of the city's eight districts. As a result, the questionnaire data is assessed in the way described below. This will assist us in achieving the study's objectives, which include identifying and comprehending the most recent trends in service excellence and client happiness in the actual world. The majority of the data obtained is based on how respondents interpreted the different E-SERVQUAL model components. Demographic information about the responders is also obtained.

4.1.1. Response Rate

Descriptive statistics are used to describe the responses to the different dimensions in general terms. As a result, 389, or 97%, of the total 400 participants provided accurate answers to the survey. This led the student researcher to dismiss 11 (2.8%) responses, and the remaining 389 properly completed questionnaires were used as data for analysis to present the findings and draw conclusions.

Table 4.1: A response rate of respondents

Response	Frequency	Percentage
Returned /responded to Questionnaires	389	97.2
Unreturned questionnaires	11	2.8
Total	400	100

4.2. Descriptive Analysis for Demographic Data

The data gathered will be analyzed and defined using this descriptive analysis. It is utilized to get into greater detail about the demographic elements. The social background of the respondent affects both their thought processes and, to a greater extent, their behavior. Gender, age, educational attainment, and length of relationship with the CBE digital service were included in the background data. Out of the total 389 respondents, men and women make up 251 (64.5%) and 138 (35.5%) of the respondents, respectively, in terms of gender. This suggests that male clients are more likely to favor CBE's digital banking services than female ones.

Table 4.2: Gender Distribution of Respondents

Gender of Respondent				
	Frequency	Per cent	Valid Percent	Cumulative Percent
Valid male	251	64.5	64.5	64.5
Valid female	138	35.5	35.5	100.0
Total	389	100.0	100.0	

According to Table 4.3, the age distribution of the respondents is as follows: 223 (57.3%) of them are between the ages of 20 and 30; 121 (31.1%) are between the ages of 31 and 40; 37 (9.5%) are between the ages of 41 and 50; and the remaining 8 (2.1%) are between the ages of 51 and 60. The CBE's digital banking services have a relationship with the population's generally younger clients, who range in age from 20 to 50 and make up around 97.9% of all respondents. Since they are anticipated to be devoted CBE clients, the bank may view this as an opportunity.

Table 4.3: Age Distribution of Respondents

		Age of respondents			
		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	20-30	223	57.3	57.3	57.3
	31-40	121	31.1	31.1	88.4
	41-50	37	9.5	9.5	97.9
	51-60	8	2.1	2.1	100.0
	Total	389	100.0	100.0	

The majority of respondents have educational levels above a diploma, according to the distribution of the third demographic variable, in the table below. When we look at the specific qualification levels, we see that 32 (8.2%) of the respondents have a master's degree or higher, 126 (32.4%) have a first-degree qualification, 89 (22.9%) have a college diploma, 107 (27.5%) have a high school qualification, and the remaining 35 (9.0%) have an elementary school qualification level.

Table 4.4: Academic Qualification of Respondents

		Education Status			
		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	Elementary School	35	9.0	9.0	9.0
	Secondary School	107	27.5	27.5	36.5
	Diploma	89	22.9	22.9	59.4
	Bachelor's Degree	126	32.4	32.4	91.8
	Master's degree and above	32	8.2	8.2	100.0
	Total	389	100.0	100.0	

In terms of the customers' experiences with digital banking services, as shown in Table 4.5 below, 78 (20.1%) of the customers have been with the bank for less than a year, 156 (40.1%) have been with the bank for approximately one to five years, and 155 (31.7%) have been with the bank for approximately more than five years. So that they could readily gauge their level of satisfaction, a sizable sample size of 80% of customers who have used CBE's various digital services for more than a year responded to the survey.

Table 4.5: Respondents' Length of Relationship with CBS's Digital Banking Services
Years using the digital banking services

	Frequency	Percent	Valid Percent	Cumulative Percent
Under 1 year	78	20.1	20.1	20.1
4-6 Years	156	40.1	40.1	60.2
Over 6 Years	155	39.8	39.8	100.0
Total	389	100.0	100.0	

4.3. Descriptive Analysis of Independent Variables

The mean and standard deviation of descriptive data were used to calculate the respondent's scores. For analysis, the variances among respondents and their mean scores have been compared. This study focuses on offering a relevant solution to the research questions, which involve figuring out how the standard of the chosen CBE branches' digital banking offerings affects customers' satisfaction at the chosen CBE branches that are located within the eight districts of Addis Ababa.

The mean scores for each variable were employed in the analysis of this study, which was done using descriptive statistics. To show the average responses of respondents for each question contained under each dimension of the predictor variable, this measurement was mostly used.

Using descriptive statistics, the researcher used the mean scores for each variable in the analysis of this study. This measurement was primarily used to show the median replies of respondents for each question contained under each dimension of the predictor variable.

Based on the following measurement scale ranges or intervals, an interpretation is made. According to Best (1997), the mean score between 1 and 1.80 is thought to be the lowest, followed by 1.8 and 2.61, which are believed to be lower, 2.62 and 3.41, which are thought to be average or moderate, 3.4 and 4.21, which are good or high, and 4.22 and 5, which are thought to be very good or excellent.

Table 4.6: Descriptive Analysis

Descriptive Statistics

	N	Mean	Std. Deviation
Reliability	389	3.4336	.66748
Responsiveness	389	3.2873	.78272
User-friendliness/ Ease of use:	389	3.6183	.54751
Customer Service and Support	389	3.7796	.56254
Privacy and Service Security	389	3.0019	.83891
Website architecture	389	3.1429	.76814
Valid N (listwise)	389		

Source: own survey 2023.

Table 4.6 provides the mean value of each independent variable, as can be seen from the descriptive analysis of the aspects of the quality of the digital banking service presented above. The table shows that all aspects of the quality of digital banking services are assessed as satisfactory. All of the e-banking service quality dimensions have mean values. The overall level of digital banking customer satisfaction (mean of 3.405) is influenced by **reliability** (mean of 3.4336), **responsiveness** (mean of 3.2873), **user-friendliness/ease of use** (mean of 3.6183), **customer service and support** (mean of 3.7796), **privacy and service security** (mean of 3.009), and **website architecture** (mean of 3.1429) of the digital banking services. This implies that

reliability, responsiveness, user-user-friendliness of use, customer service and support, privacy and service security, and web architecture influence bank customer satisfaction.

4.4. Inferential Analysis

In this part, regression analysis for the dimensions of digital service quality on customer satisfaction has been done in order to better understand the link between customer satisfaction and the quality of the explanatory variables for the digital banking service.

Inferential statistics are widely employed to compare the differences between the treatment groups. Inferential statistics employ measurements from the sample of experiment participants to compare the treatment groups and derive inferences about a wider population of people (C.W. Kuhar, 2010). The creation of hypotheses to explain a situation or an occurrence is aided by inferential statistics. By allowing you to make conclusions based on extrapolations, it varies significantly from descriptive statistics, which only summarize the data that has already been measured (Richard Chin, Bruce Y. Lee, 2008).

4.4.1. Assumption Tests

The following checks were made to ensure that the data were appropriate for assumption-based regression analysis before employing regression analysis: Following are descriptions of the casual effect and the correlation between a dependent and an independent variable.

4.4.1.1. Correlation Analysis

Correlation measures a monotonic link between two variables. A monotonic relationship between two variables, according to Patrick Schober, MD (2018), is one in which (1) as the value of one variable increases, the value of the other variable also rises, or (2) as the value of one variable increases, the value of the other variable decreases. As a result, with data that is correlated, a change in the magnitude of one variable is associated with a change in the magnitude of another variable, either in the same direction or in the opposite direction. And vice versa, greater values of one variable typically correlate with either higher or lower (positive correlation) values of the other variable.

Additionally, according to Marczyk, Dematteo, and Festinger (2005), correlation is likely the simplest and most practical way to assess the link between two or more variables. A correlation

coefficient above 0.8 between explanatory variables, according to Cooper & Schindler (2009), should be addressed because it indicates multi-collinearity issues. According to Malhotra (2007), the correlation coefficient can be 0.75. According to Hair et al. (2006), a correlation coefficient of less than 0.9 may not always indicate a major multi-collinearity issue.

The absolute amount of covariance, however, is difficult to understand or compare between studies because it depends on the measurement scale of the variables. Frequently, a Pearson correlation coefficient is employed to aid in interpretation. This coefficient, which runs from -1 to +1, is a dimensionless measure of the covariance.

In order to illustrate the strength of the relationship between the variables—dependent variables like customer satisfaction and independent variables like dependability, responsiveness, user-friendliness, customer service and support, privacy and service security, and web architecture—the correlation matrix below shows the correlation between variables with the Pearson correlation coefficient. Convergent validity was demonstrated using Pearson correlation analysis, and Pearson correlation coefficients show the size, direction, and strength of associations, whether they are positive or negative.

Based on the table of correlation coefficient results below, reliability, website architecture, and privacy and security of digital banking have positive and strong correlations with customer satisfaction. The correlation coefficients between customer satisfaction and reliability, website architecture, and privacy and security are positive coefficient relations with values of 0.846, 0.849, and 0.834, respectively. Additionally, with a value of 0.793, the correlation coefficient between responsiveness and customer satisfaction is favorable. This suggests that responsiveness and customer satisfaction are positively correlated. On the other side, there is a positive association between user friendliness and customer satisfaction, with respective correlation coefficients of 0.420 and 0.215. This suggests that there is a weak but positive association between user friendliness and consumer satisfaction with customer support.

Table 4.7: Correlation matrix of the dependent and independent variable

		Correlations						
		Customer Satisfaction Level	Reliability	Responsiveness	User-friendliness/ Ease of use:	Customer Service and Support	Privacy and Service Security	Website architecture
Customer Satisfaction Level	Pearson Correlation	1	.846**	.793**	.215**	.402**	.834**	.849**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	389	389	389	389	389	389	389
Reliability	Pearson Correlation	.846**	1	.564**	.198**	.338**	.700**	.618**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
	N	389	389	389	389	389	389	389
Responsiveness	Pearson Correlation	.793**	.564**	1	.405**	.326**	.782**	.796**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000
	N	389	389	389	389	389	389	389
User-friendliness/ Ease of use:	Pearson Correlation	.215**	.198**	.405**	1	.546**	.307**	.239**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000
	N	389	389	389	389	389	389	389
Customer Service and Support	Pearson Correlation	.402**	.338**	.326**	.546**	1	.379**	.348**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
	N	389	389	389	389	389	389	389
Privacy and Service Security	Pearson Correlation	.834**	.700**	.782**	.307**	.379**	1	.783**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
	N	389	389	389	389	389	389	389
Website architecture	Pearson Correlation	.849**	.618**	.796**	.239**	.348**	.783**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	389	389	389	389	389	389	389

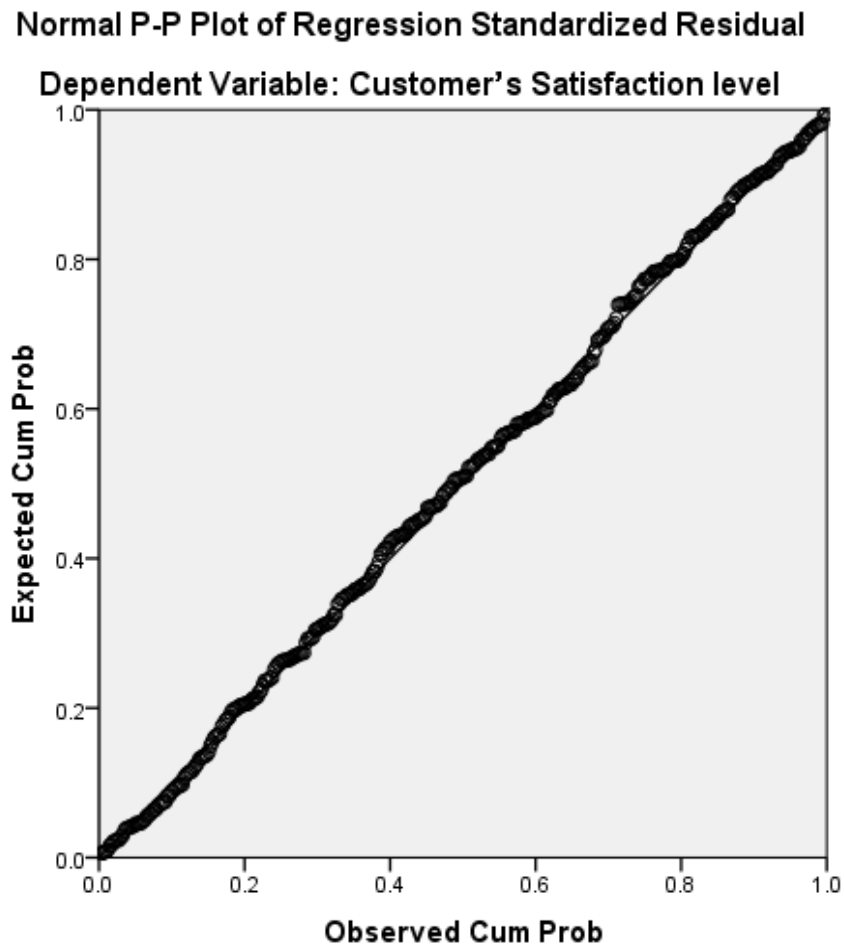
** . Correlation is significant at the 0.01 level (2-tailed).

Source: Own Survey 2023

4.4.1.2. Linearity Test

The relationship between the dependent variable and the independent variables (reliability, responsiveness, user-friendliness, customer service and support, privacy and service security, and web architecture) were plotted using SPSS software to determine whether the relationship was linear. Linearity is the measure of how closely the change in the dependent variable correlates with the change in the independent variables

Figure 4.1: The scatter plot of residuals



Looking from left to right in the above figures scatter plot of residuals does not reveal any significant differences in the residuals' dispersion. This finding implies a linear relationship between the variables.

4.4.1.3. Test of Normality of the Data

The premise underlying normally distributed data, according to Field (2005), is that the data originates from one or more populations with normal distributions. If these conditions are not true, the theory behind hypothesis testing is flawed since it relies on having populations with a normal distribution.

When sample sizes are high, even small deviations from normality for skewness and kurtosis yield significant results (Field, 2005). Smaller the standard deviations will be produced by the huge sample. As a consequence, the values of S (skewness) and K (kurtosis), as well as the accompanying standard errors, were determined. An absolute value of skewness and kurtosis between -2 and +2 is predicted to be significant at p 0.05.

Table 4.8: Test of Normality of the Data

	Descriptive Statistics				
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Reliability	389	.170	.124	-.442	.247
Responsiveness	389	-.209	.124	-.293	.247
User-friendliness/ Ease of use:	389	-.397	.124	-.131	.247
Customer Service and Support	389	-.398	.124	.170	.247
Privacy and Service Security	389	.321	.124	-.118	.247
Website architecture	389	.021	.124	-.526	.247
Valid N (listwise)	389				

Sources: own Survey 2023

The skewness and kurtosis absolute values in the table above are all between -2 and +2, which shows that all independent variables are strongly influenced by the dependent variables and that their p-values are less than 0.05.

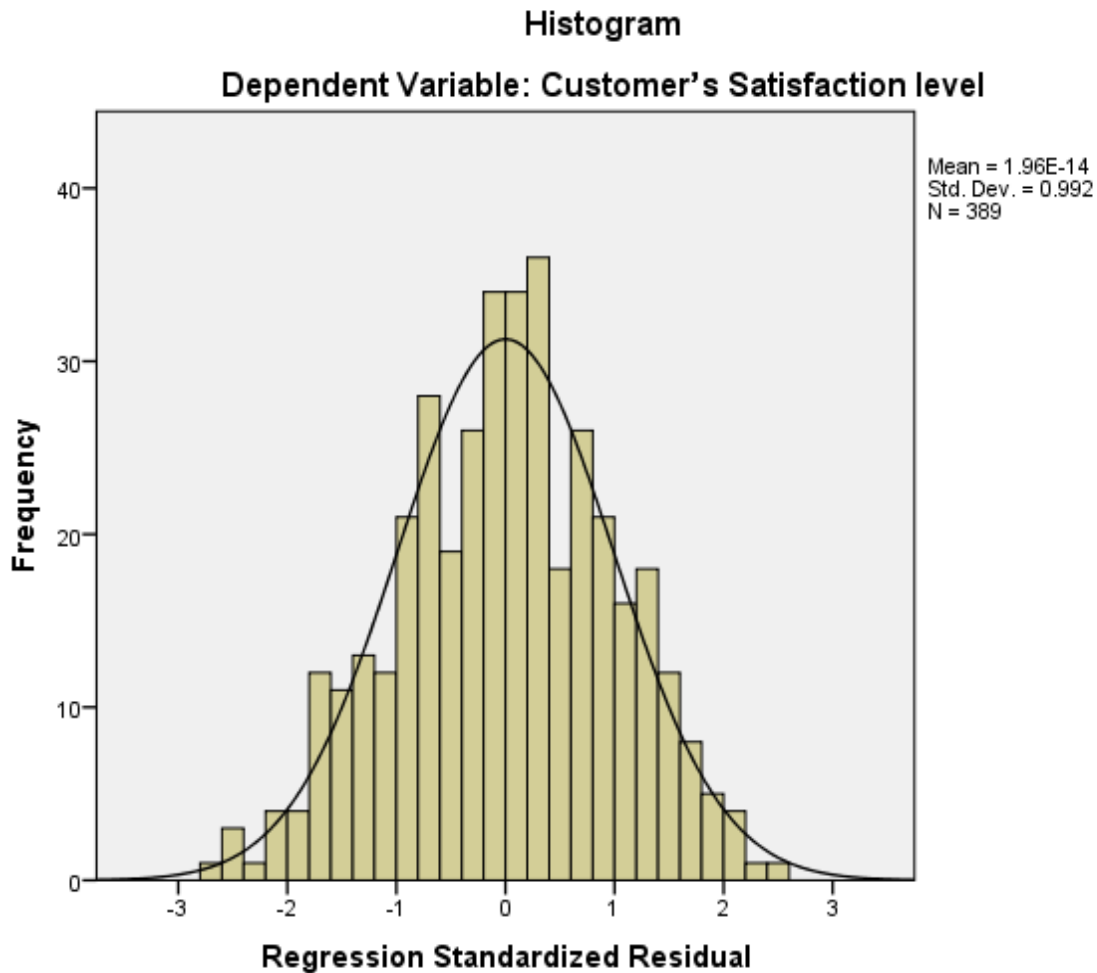


Figure: 4.2 Histogram: Dependent Variable

4.4.1.4. Multi co linearity Test

Regardless of whether multicollinearity occurs, a suitable regression model shouldn't result in a correlation between the independent variables. Using SPSS, check the multicollinearity of the data as a foundation for the VIF (variance inflation factor) value. There is no multicollinearity if the VIF value falls between 1 and 10; otherwise, multicollinearity problems exist.

Table 4.9 Multi co linearity Test

Model		Coefficients	
		Co linearity Statistics	
		Tolerance	VIF
1	Reliability	.489	2.043
	Responsiveness	.262	3.810
	User-friendliness/ Ease of use	.597	1.675
	Customer Service and Support	.617	1.622
	Privacy and Service Security	.259	3.864
	Website architecture	.278	3.592

a. Dependent Variable: Customer’s Satisfaction level

Source: Own survey 2023

According to the above coefficient output co-linearity statistics, which show that the independent variable VIF values range from 1 to 10, there are no issues with multi-co-linearity.

4.4.2. Regression Result

The overall regression model and its ANOVA are summarized as follows:

Table 4.10: The overall regression model (ANOVA and Adjusted R Square)

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.959a	.920	.919	.20669	.920	729.931	6	382	.000

a. Predictors: (Constant), Website architecture, User-friendliness/ Ease of use: Customer Service and Support, Reliability, Responsiveness, Privacy and Service Security

b. Dependent Variable: Customer’s Satisfaction level

The goodness of fit of the explanatory variables (reliability, responsiveness, user-friendliness, customer service and support, privacy and service security, and web architecture) in explaining the variations in customer satisfaction has been measured using R-squared. The corrected R-square value for the regression model was 0.919, as is made obvious in the above table. This shows that in this study, the explanatory factors dependability, responsiveness, user-friendliness of use, customer service and support, privacy and service security, and online architecture account for nearly 92 percent of the variation in customer satisfaction.

Therefore, the reliability, responsiveness, user-friendliness of use, customer service and support, privacy and service security, and web architecture of the Commercial Bank of Ethiopia's digital banking service are excellent explanatory variables of the customer satisfaction level. However, this does not imply that all these aspects of the digital banking service dimension have an equally significant correlation with the level of customer satisfaction.

Table 4.11 ANOVA^a

Model	Sum of Squares	DF	Mean Square	F	Sig.
1					
Regression	187.098	6	31.183	729.931	.000 ^b
Residual	16.319	382	.043		
Total	203.418	388			

a. Dependent Variable: Customer's Satisfaction level

b. Predictors: (Constant), Website architecture, User-friendliness/ Ease of use: Customer Service and Support, Reliability, Responsiveness, Privacy, and Service Security

The significance score indicates whether or not the overall regression model is a good predictor and whether or not the outcome was likely caused by chance based on the F-test result in the ANOVA table. The model is statistically significant in predicting how dependability, responsiveness, user-friendliness, customer service and support, privacy and service security, and web architecture affect customer satisfaction of Commercial Bank of Ethiopia Digital Service users because the significance value is 0.00, which is less than 0.05. The whole model is significant, as evidenced by the fact that the F crucial at the 5% level of significance is 0.00.

Table 4.12: Multiple Regression Coefficients

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.299	.089		-3.352	.001
Reliability	.486	.022	.448	21.637	.000
Responsiveness	.235	.026	.254	8.987	.000
User-friendliness/ Ease of use:	-.172	.025	-.130	-6.947	.000
Customer Service and Support	.130	.024	.101	5.473	.000
Privacy and Service Security	.084	.025	.097	3.406	.001
Website architecture	.273	.026	.289	10.526	.000

a. Dependent Variable: Customer’s Satisfaction level

The values of the standardized beta coefficient were the focus of the researcher's attention when analyzing the beta coefficient table in order to determine the relative significance of each independent variable. The six independent variables of responsiveness, reliability, user-friendliness, customer service, and support, privacy and service security, and web architecture, as well as the dependent variable (customer satisfaction), took the form of the regression equation in the linear multiple regression formula.

$$CS(Y) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6$$

Where:

- CS (Y): (Customer Satisfaction) in the dependent or predicted variable.
- X1: Reliability, X2: Responsiveness, X3: user friendliness, X4: customer service and support, X5: privacy and service security, X6: Web architecture.

- β_0 is the customer satisfaction level intercept, i.e., the value of customer satisfaction is dependent on when X_1 , X_2 , X_3 , and X_4 are 0.
- β_1 , β_2 , β_3 , β_4 , β_5 , and β_6 , are the regression coefficients representing the change in Customer satisfaction relative to the one-unit change in X_1 , X_2 , X_3 , X_4 , X_5 , and X_6 respectively.

Based on Table 4.12 and taking into account the unstandardized beta value, the regression equation for this study can be written as follows:

$$\text{Customer Satisfaction level}(Y) = -0.299 + 0.486X_1 + 0.235X_2 - 0.172X_3 + 0.130X_4 + 0.084X_5 + 0.273X_6$$

The relationship between dependent and independent variables is depicted by the regressing equation above. All independent variables have a sig. value that is statistically significant at a 5% level, supporting the hypothesis. This signifies that e-banking customer satisfaction has significantly increased as a result of reliability, service security, convenience of use, and performance.

Accordingly, the outcome of the multiple regression analysis revealed that, with a coefficient value of 0.486 and a significance level of 0.000, the dependability of digital banking services has a substantial positive impact on customer satisfaction. Customer satisfaction will rise by 0.486 units, or 48.6%, for every unit improvement in reliability, holding other factors constant and the value of the response variable constant.

Despite this, with coefficient values of 0.235 and a significance level of 0.000, the responsiveness of the digital banking service has a positive and significant influence on customer satisfaction. When all other predictors (independent) variables are held constant, the value of the response (dependent) variable, customer satisfaction, will improve by 0.235 units, or 23.5%, or 27.3%, for every unit increase in the responsiveness of the bank's digital banking service.

Additionally, with coefficient values of 0.130 and a significance level of (0.000), customer service and support related to digital banking services have a positive significant influence on customer satisfaction. Customer satisfaction will increase by 0.130 units, or 13.0%, for every unit increase in the value of the bank's customer service and support for its digital banking service, if all other predictive (independent) variables remain constant.

Moreover, the outcome of the multiple regression analysis demonstrates that, with coefficient values of 0.084 and a significance level of 0.000, the privacy and service security dimension of Commercial Bank of Ethiopia's digital banking service has a positive and significant influence on customer satisfaction. When all other predictors (independent) factors are held constant, the value of the response (dependent) variable, customer satisfaction, will increase by 0.084 units, or 8.4%, for every unit increase in the website's simplicity, privacy, and service.

On the other hand, the outcome of the multiple regression analysis reveals that, with coefficient values of -0.172 and a significance level of 0.000, the usability or ease of use of the Commercial Bank of Ethiopia's digital banking service has a negative influence on customer satisfaction. When all other predictors (independent) variables are held constant, the value of the response (dependent) variable, customer satisfaction, will decline by 0.172 units, or 17.2%, for every unit decrease in the ease of the bank's digital banking service.

Therefore, most explanatory factors, such as dependability, the responsiveness of customer service and support, privacy and service security, and web architecture, have a significant positive impact on the customer satisfaction of Commercial Bank of Ethiopia, whereas the user-friendliness or ease of use of CBE's digital banking service has a negative impact.

4.5. Hypothesis Testing

The alternative hypothesis reflects the significance difference on the outcome variable, and the hypothesis test specifies which investigational findings may lead to the rejection of the null hypothesis at the predetermined level of significance. As a result, the following discoveries have been made.

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Table 4.13 Summary of hypotheses test

No.	Hypothesis	Status	Reason
H1:	Reliability has a positive significant impact on customer satisfaction	Accepted	Correlation result, $r= 0.846$ Regression result $\beta= 0.486$, Sig 0.000
H2:	Responsiveness has a positive significant impact on customer satisfaction	Accepted	Correlation result, $r= 0.793$ Regression result $\beta= 0.235$, Sig 0.000
H3:	User-friendliness/ Ease of use has a negative impact on customer satisfaction	Accepted	Correlation result, $r= 0.215$ Regression result $\beta= -0.172$, Sig 0.000
H4:	Customer Service and Support has a positive significant impact on customer satisfaction	Accepted	Correlation result, $r= 0.420$ Regression result $\beta= 0.130$, Sig 0.000
H5:	Privacy and Service Security has a positive significant impact on customer satisfaction	Accepted	Correlation result, $r= 0.834$ Regression result $\beta= 0.084$, Sig 0.001
H6:	Website architecture has a positive significant impact on customer satisfaction	Accepted	Correlation result, $r=0.849$ Regression result $\beta= 0.273$, Sig 0.000

The above table 4.13 shows that variables that were tested by correlation statistical tests, reliability, website architecture, and privacy and security of digital banking have positive and strong correlations with customer satisfaction. The correlation coefficients between customer satisfaction and reliability, website architecture, and privacy and security are positive coefficient relations. Additionally, the correlation coefficient between responsiveness and customer satisfaction is favorable. This suggests that responsiveness and customer satisfaction are positively correlated. On the other side, there is a positive association between user friendliness and customer satisfaction. This suggests that there is a weak but positive association between user friendliness and consumer satisfaction with customer support.

Based on regression result, most explanatory factors, such as reliability, the responsiveness, customer service and support, privacy and service security, and web architecture, have a significant positive impact on the customer satisfaction of Commercial Bank of Ethiopia, whereas the user-friendliness or ease of use of CBE's digital banking service has a negative impact.

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

This chapter provides an overview of the study's findings and suggestions. In contrast, the recommendations were divided into two portions. It includes the essential recommendations as well as ideas for future research. It is also worth noting that the recommendations are based on the study's findings.

5.2. Summary

The purpose of this study was to determine the impact of digital banking service quality on customers' satisfaction in the case of CBE by using the following independent variables: Reliability, responsiveness, customer service and support, privacy and service security, user friendliness /ease of use, and website architecture. The primary conclusions are described here based on the prior discussion.

From the demographic characteristics of the respondents, the majority of the respondents are male 213 or (54.7%) and 176 or (45.3%) are female. The majority of customers i.e. about 66% have an education level of degree and above. On top of that majority of participants are relatively youngest customers of the total population that are ranging from age 18-50 that accounts about 96.2% of the total respondents. Furthermore, the large numbers respondents were 324 (83.3%) customers who have more than a year of experience of using various digital services of CBE so that they can easily measure their satisfaction level.

The relationship between service quality dimensions and overall satisfaction shows moderate and high Pearson correlation coefficients. The correlation coefficient between customer satisfaction with reliability, website architecture and privacy/security are positive coefficient relation with a value of 0.846, 0.846 and 0.834 respectively; this implies that the reliability, website architecture and privacy/security of digital banking have a positive and strong relationship with customer satisfaction.

In addition, the correlation coefficient between customer satisfaction and responsiveness is positive with a value of 0.793. This implies that there is a positive correlation between customer satisfaction and responsiveness. On the other hand, the correlation coefficient between customer satisfaction with Customer Support and User-friendliness has positive coefficient relation with the value of 0.420 and 0.215 respectively. This implies that there is positive but a weak correlation between customer satisfaction with Customer Support and User-friendliness.

5.3. Conclusion

The results of this study showed a relationship between client satisfaction and the quality of the digital banking service. six hypotheses, which were based on the direct correlations between the variables, were mostly validated by the correlation analysis. In conclusion, the findings showed that factors affecting the quality of the digital banking service had an impact on how satisfied customers were. The findings also have significant implications for the banking industry's ability to provide high-quality services and maintain repeat business, which might eventually result in consumer loyalty.

The researcher believes that the qualities of reliability, responsiveness and customer service & support have a significant positive impact on the dependent variable customer satisfaction based on the findings of the correlation and regression analyses. The levels of customer satisfaction rise when these many variables are correctly used. This will eventually lead to increased earnings for banks and client retention. The regression study shows that the expected dimensions of Privacy & Service Security and Website architecture have a positive but not significant impact on customer satisfaction, in contrast to the four independent variables mentioned above. On the other side, customer satisfaction is negatively impacted by the user-friendliness or simplicity of CBE's digital banking service. This suggests that when each service interaction connected to ease of use fails or gets worse, consumer satisfaction will decrease.

5.4. Recommendations

This paper's analysis has implications for the Commercial Bank of Ethiopia in terms of customer satisfaction with several aspects of digital banking services. The following recommendations are being forwarded to the appropriate bodies as a result of the study's findings.

According to the study, men made up the majority of CBE's digital banking customers. This is unfair, especially in a country where many organizations work to empower women. It is therefore recommended that banks take note of these trends and reverse them in order to attain some gender balance in their future workforce. Furthermore, the bank should work hard to grow the number of users in all categories, including age, educational status, and occupational status, and should do a fantastic task of appealing individuals to use digital banking.

The results of the correlation research show that customer satisfaction is positively and significantly correlated with all six dimensions of digital banking service quality. Because a client's interaction with a single bank is not guaranteed in the current competitive banking environment, these findings should not discourage the bank from working to improve customer satisfaction and sustainability.

In light of the study's findings and conclusion, it is advised that CBE address the issues raised as well as take advantage of any possible gains the bank may make by choosing the best course of action for ensuring that customers are satisfied with its superior customer service. The student researcher offers the following suggestions to address the issues the investigation has brought to light:

In order to understand consumers' expectations, bank management must appear and think like them. According to the findings of this study, the quality of E-banking services is defined by six major dimensions: reliability, responsiveness, ease of use, customer service and support, website design, and privacy and service security.

Based on the fact taken from the study CBE should improve its ability to perform the promised service with a certain time and its ability of solving complaints. The bank also should improve its ability to deliver its service correctly at the time agreed on. This will help the bank to improve the quality of its service delivery in relation to its reliability dimensions.

The bank should also improve the user friendliness of its digital banking products and motivate its employees to develop their willingness to facilitate the customer service and support service dimension and be never too busy to respond to customer's requests promptly. This will help CBE to eliminate all of its weakness and increase the satisfaction of its digital banking users.

The bank needs to continuously evaluate and improve the current security system while also establishing an appropriate legislative and regulatory framework for e-banking services. In order to lower customers' risk perceptions about security issues and give them confidence in their decision to use technology, the bank should educate customers about how the bank's e-banking service is safe and secure, as well as information about how to deal with problems if they arise, by informing them about the established legal and regulatory frameworks through all forms of media.

The bank should also strive to steadily enhance the degree of service growth while also providing a diversity of options in order to persuade customers to use e-banking technologies. In order to offer all customers a dependable and useful service, it should expand the availability of ATM, internet banking, and POS services throughout the nation. In order to improve and provide sustainable services throughout the year, ATMs, POS devices, mobile devices, and Internet banking network connections should be checked and maintained. This includes making prompt repairs when there are service interruptions.

In addition to extensive promotion that targets the general public through mass media, sponsorship for programs with large audiences, and various promotional methods, the bank should constantly educate its customers on how to access and use the services. Branch-level demonstrations should be the primary method of doing this. This will increase client awareness, help them get over their fear of using technology, and help them bust the idea that using the service requires a certain kind of mental effort.

5.5. Limitation and Direction for Future Researcher

One of the most often utilized banking methods worldwide right now is the usage of digital banking services. Despite its many benefits, a number of issues have prevented both the people and the bank from making full use of it. Because there are so many variables involved in using digital banking, it would be impossible to fully understand them all in a single study.

The study relied mainly on the questionnaire responses submitted by customers at the eight branches of CBE locations chosen for the investigation. As a result, the sample size may not be exactly representative of the whole digital banking users of CBE. Furthermore, because of the

study's selected sampling procedure, the findings may not apply to all CBE clients. As a result, it is recommended that further research be conducted to address the aforementioned issue.

The data was also obtained for a study that focused on a single type of service domain, namely various branches of CBE. Because digital banking service users can be found outside of CBE's branches and service domains in other sectors like as travel, sports, and e-commerce shopping websites, the findings should be applied with carefully to other service contexts.

References

1. Abid and Noreen (2019), The Impact of Electronic Banking on Financial Inclusion in Nigeria 28(1), pp.67-85.
2. Agarwal, Rastogi, & Mehrotra, (2009), Customers' perspectives regarding e-banking in an emerging economy 20(1), pp.47-65.
3. Ahmed, Rafiq & Saad, (2003), Internal marketing and the mediating role of organizational competencies
4. AlaEddin M. and Hassan A. (2011), E-banking functionality and outcomes of customer satisfaction: An empirical investigation 9(1), pp.45-69.
5. Alagheband (2006), Adoption of Electronic Banking Services by Iranian Customers. Master Thesis, Lulea University of Technology, Sweden. 64(1), pp.25-62.
6. Al-dweeri, R.M., Obeidat, Z.M., Al-dwiry, M.A (2009), the Impact of E-Service Quality and E-Loyalty on Online Shopping: Moderating Effect of E-Satisfaction and E-Tr 2(2), pp.79-93
7. Alex Fahrur Riza, (2019), Customer acceptance of digital banking in Islamic bank: Study on millennial generation pp.67-85.
8. Alshurideh, M.T., and Alhorani, A.M. (2017), The Impact of Electronic Service Quality Dimensions on Customers' E- Shopping and E-Loyalty via the Impact of E-satisfaction and E-Trust: A Qualitative Approach 6(2), Pp.1-19
9. Al-Tarawneh, K.A., (2012), Measuring E-service quality from the customers' perspective: An empirical study on banking services 7(2), pp.26-33
10. Amin, M., (2016), Internet banking service quality and its implication on e-customer satisfaction and e-customer loyalty 1(4), pp.398-404
11. Amit Shankar and Charles Jebarajakirthy (Revised Version,2018) The influence of e-banking service quality on customer loyalty: A moderated mediation approach, 24(6), pp.568-585.
12. Amith Kumar Reddy, Dr. Megharaja. B, (2021), Impact of E-Banking on Customer Satisfaction 7(2), pp.26-33.
13. Ananth et al. (2011), Service quality gap analysis in private sector bank - a customer perspective 2(2), pp.1-11
14. Andaleeb & Conway (2006), Customer satisfaction in the restaurant industry: An examination of the transaction-specific model 18(3), pp.181-219
15. Assefa Admassie (2013), The Political Economy of Food Prices: The Case of Ethiopia 4(2), pp.147-157

16. Bateson, (1985), Offering Appropriate Information Technologies at Different Stages in the Customer Service Life Cycle for Improved Service Delivery Self-Service consumer: An exploratory study. *Journal of Retailing*, Vol. 61, pp. 49–76, 1985.
17. Bedi, (2010), Impact of Service Quality on customer Satisfaction, 8(2), pp.91-121.
18. Biggam (2008), Qualitative research methods for the social sciences 49(4), pp.41-50.
19. Binyam Tamene (2009), Electronic-Banking in Ethiopia- Practices, Opportunities and Challenges 17(4), p.460
20. Birutu (2012), Electronic Banking and Customer Satisfaction in Imo State (A Study of Selected Commercial Banks in Imo State), pp.16-41
21. Biscaia et al. (2017), Assessing customer satisfaction and loyalty in the retail sector", *International Journal of Quality & Reliability Management*, Vol. 34 No. 9, pp. 1508-1529.
22. Blut et al., (2014), E-Service Quality: A Meta-Analytic Review June 2015 *Journal of Retailing* 17(4), pp.361-384.
23. Blut et al. (2015), E-Service Quality: Development of a Hierarchical Model September 2016 *Journal of Retailing*, 18(4), pp.36-44
24. Bolton & Saxena-Iyer (2009), Interactive Services: A Framework, Synthesis and Research Directions, 8(2), pp.91-121
25. Bressolles et al. (2014), A consumer typology based on e-service quality and e-satisfaction 17(4), pp.361-384.
26. Carmen Cuesta, (2015), The digital transformation of the banking industry 24(6), pp.568-585.
27. Environmental and Social Policy of Commercial bank of Ethiopia (2020), [Online] Available from [https://www.afdb.org/sites/default/files/documents/environmental-and social%](https://www.afdb.org/sites/default/files/documents/environmental-and-social%20policy.pdf)
28. Chaudhry et al., (2009), Consumer complicity with counterfeit products, pp. 19-21.
29. Chikoko & Munongo (2015), The Impact of Digital Banking Services on Performance of Commercial Banks Wadesango N, University of Limpopo Magaya B, Midlands State University
30. Collier and Bienstock (2006), Measuring Service Quality in E-Retailing 20(1), pp.47-65
31. Datta (2010), Acceptance of E-banking among Adult Customers: An Empirical Investigation in India 28(1), pp.67-85.
32. David, (2010), The Character of Consciousness (David J. Chalmers, pp.79-93
33. Fassnacht and Koese (2006), Quality of Electronic Services: Conceptualizing and Testing a Hierarchical Model, pp.79-93

34. Flavián et al., (2004), Corporate image measurement: A further problem for the tangibility of Internet banking services 19(4), pp.61-90.
35. Gan and Clemes, (2006), E-banking Functionality and Outcomes of Customer Satisfaction
36. GardachewWorku (2010), Electronic-Banking in Ethiopia- Practices, Opportunities and Challenges, pp. 11-42.
37. Grooroos (2007), Evolution and Conceptual Development of Service Quality in Service Marketing and Customer Satisfaction
38. Hamed et al. (2015), Determining the Influence of the Reliability of Service Quality on Customer Satisfaction: The Case of Libyan E-Commerce Customers 45(2), pp.46-58.
39. Horan, T., and Abhichandani, T. (2006), Service Quality and Customer Satisfaction in the Electronic Banking, pp. 13-29
40. Hussain, S.M, (2014), Measuring Quality of Electronic Service (E- Service) In Banking), pp.16-41
41. Hyun-Soo Choi, (2020), Physical Frictions and Digital Banking Adoption Forthcoming in Management Science, Vol. 14 No. 6, pp. 24-35
42. Johnston R. preserve confidentiality (1997), The Impact of internet banking service quality on customer satisfaction in the banking sector of Ghana
43. Karthikeyan et al., (2017), Mobile banking and AI-enabled mobile banking: The differential effects of technological and non-technological factors on digital natives' perceptions and behavior
44. Keiningham, (2005), Does customer satisfaction lead to profitability? The mediating role of share-of-wallet, Vol. 6(4), pp. 16-36.
45. Kettinger, W. J., & Lee, C. C. (2005). Zones of tolerance: Alternative scales for measuring information systems service quality. *MIS Quarterly*, 29, 607-621
46. Khadem and Mousavi (2000) Effects of self-service technology on customer value and customer readiness: The case of banking industry
47. Kim et al., (2009) An investigation of the effect of online consumer trust on expectation, satisfaction, and post-expectation, Vol. 3(1).
48. Kimery K. & McCord M. (2002), Third-party assurances: the road to trust in online retailing
49. Miyazaki, A.D. and Krishnamurthy, S. (2002) Internet Seals of Approval: Effects on Online Privacy Policies and Consumer Perceptions. *Journal of Consumer Affairs*, 36, 28-49.
50. Lee et al. (2006), An experimental design of service failure, recovery and speed analysis in cloud service, Vol. 21(1), pp. 16-28.

51. Liang and Pei-Ching, (2015); Internet-banking customer analysis based on perceptions of service quality in Taiwan, Vol. 12(4), pp. 14-26.
52. Liao and Cheung (2002), Internet-based e-banking and consumer attitudes: An empirical study, Vol. 65 No.6, pp. 11-39.
53. Madu and Madu (2002), Measuring Quality of Electronic Service (E- Service) In Banking, Vol. 17 No.3, 16-23.
54. Mahamad & Ramayah, (2010), Impact of Service Quality on Customer Loyalty and Customer Satisfaction in Islamic Banks in the Sultanate of Oman Vol.11, No. 2, pp 33-38.
55. Mambi, (2010), ICT law book: a source book for information & communication technologies and cyber law, Vol. 10 No. 1, pp. 157-72.
56. Maykil Sisay (2019), The Effect Of E-Banking Service Quality on Customer Satisfaction in The Case Of Commercial Bank Of Ethiopia, pp. 25-69
57. Mekides Adugna (2019), The Effect of E- Banking Attributes on Customer Satisfaction: The Case of Commercial Bank of Ethiopia pp.47-65
58. Mentzer et al (2001) Defining Supply Chain Management Vol.9(1) pp.25-42
59. Mohammed Arif Shaikh, September (2014) Ethiopian Banker's Perception of Electronic Banking in Ethiopia – A Case of Adama City, pp.55-82
60. Munusamy et al. (2010) Service Quality Transformation and Its Impact on Customer Satisfaction and Loyalty in Malaysian Retail Banking Sector
61. Muturi et al., (2013), The Role of Micro Financial Institutions on The Growth of Smes In Kenya: A Case Study of Micro Financial Institutions in Kisi Town, pp.19-38
62. Nsouli SM and Schaechter A (2002) Challenges of the e-banking revolution: finance and development Vol. 7(3), pp. 51-77s
63. Orel and Kara, 2014 Thaichon et al., (2014), The development of service quality dimensions for internet service providers: Retaining customers of different usage patterns, PP 46-51
64. Osabuohien E. (2008) Investigating the relevance of mobile technology adoption on inclusive growth in West Africa, p.48-56.
65. Parasuraman et al. (1988), SERVQUAL A Multiple-item Scale for Measuring Consumer Perceptions of Service Quality, Vol. 49.
66. Parasuraman et al. (2005), E-S-Qual: A Multiple-Item Scale for Assessing Electronic Service Quality, Vol. 64.
67. Parasuraman, Berry, & Zeithaml (1985), A Conceptual Model of Service Quality and its Implication for Future Research (SERVQUAL), Vol. 14 No. 3,

68. Parasuraman, Zeithaml, and Berry (1985), A Conceptual Model of Service Quality and its Implication for Future Research (SERVQUAL), Vol. 10 No. 1,
69. Peterson K. Ozili, (2018), Impact of digital finance on financial inclusion and stability Review, vol. 18, issue 4, 329-340
70. Pikkarainen et al. (2004) Consumer acceptance of online banking: An extension of the Technology Acceptance Model, pp.79-93
71. Poon, 2007 Perceived Risk and Behavioral Determinants of Using Internet Banking in Egypt
72. Prabha, Soolakshna, and Perunjodi (2010) Service Quality in the Public Service, pp.27-39
73. R. Nitsure, 2003 E-Banking: Challenges and Opportunities, pp.21-44
74. Saad Andaleeb & Conway (2006) Customer satisfaction in the restaurant industry: An examination of the transaction-specific model
75. Saccaniet al., (2014) Investigating the linkages between service types and supplier relationships in servitized environments, Vol. 1(3), pp. 63-73.
76. Safi and Awan, (2018) Effect of Electronic Banking on Customer Satisfaction in Kwara State, Nigeria, Vol.9(1) pp.85-92
77. Sathye, M. (1999) Adoption of Internet banking IOSR Journal of Business and Management (IOSR-JBM) Volume 11, Issue 2 (May. - Jun. 2013), PP 46-51
78. Schaupp and Belanger in 2005 A conjoint analysis of online consumer satisfaction, pp.25-42
79. Shafiq et al. (2013) and Al-Hawajreh & Attiany (2014) Impact of Service Quality on Customer Satisfaction: A Study of Hotel Industry of Faisalabad, Pakistan
80. Shankar and Jebarajakirthy, (2019) The influence of e-banking service quality on customer loyalty: A moderated mediation approach, pp. 68-72.
81. Shanmugham B. and Sohail M. (2003) E-banking and customer preferences in Malaysia: An empirical investigation, Vol. 19(1).
82. Shittu, 2010 Electronic Banking Application and Sterling Bank Customers' Adoption: Issues, Challenges and Benefits, Vol. 24(11).
83. Sintayehu Y. (2015) The Impacts of E-Banking Services on Customer Satisfaction: The Case of Selected Commercial Banks in Addis Ababa, p.58-68.
84. Srinivansan, et. al. (2002) Customer Loyalty in E-Commerce: An Exploration of Its Antecedents and Consequences
85. Surjadaja et al. (2003) Determining and assessing the determinants of e-service operations

86. Swaid and Wigand (2009) Measuring the quality of E-service: Scale development and initial validation, pp.30 &187
87. Syed Ali Raza, Amna Umer, Muhammad Asif Qureshi and Abdul Samad Dahri (Revised Version, 2020), pp.29 &186
88. Thaichon et al., 2014 An empirical model of home internet services quality in Thailand
89. Thuy Thu Nguyen, 2020 The Determinants of Citizens' Satisfaction of E-Government: An Empirical Study in Vietnam
90. Timotheus &Alabar, 2012Banks' New Products and Customer Satisfaction in the Nigerian Banks: An Assessment of the Impact of Banks' New Products and Customer Satisfaction in the Nigerian Banking Industry Paperback
91. UNCTAD, 2002 World Investment Report (2002), Transnational Corporations and Export Competitiveness, pp. 25-69
92. Varda Sardana & Shubham Singhania (2018), Digital Technology in the Realm of Banking: A Review of Literature Vol.14(3) pp.55-82
93. Wirtz and Bateson (1995) and Khadem and Mousavi (1995), The Impact of E-Banking Service Quality on Customer Satisfaction: Evidence from the Lebanese Banking Sector
94. Wolfinbarger, M. and Gilly, M.C. (2003) eTailQ: Dimensionalizing, Measuring and Predicting Etail Quality. Journal of Retailing, Evaluation of E-Service Quality through Customer Satisfaction (a Case Study of FBR E-Taxation), 79, 183-198.
95. Worku G, Tilahun A, Tafa MA, (2016), The impact of electronic banking on consumers' satisfaction in Ethiopian banking industry (the case of customers of Dashen and Wogagen bank in Gondar city, pp.13-46
96. Yayehyirad Kitaw (2006), The Evolution of Public Health in Ethiopia, pp.30 &187
97. Yoo and Donthu (2002), Testing cross-culture invariance of the brand equity creation process
98. Yuen and Chan (2010), The effect of retail service quality and product quality on customer loyalty Vol.8(1) pp.40-63
99. Zavareha (2012), E-Service Quality Dimensions and Their Effects on E-Customer Satisfaction in Internet Banking Services Vol.6(1), pp.17-25
100. Zeithaml, Parasuraman, and Berry, (1990) Delivering Quality Service: Balancing Customer Perceptions and Expectations. The Free Press, New York. Vol.14(3), pp.27-39

Appendix I

ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
SCHOOL OF COMMERCE
DEPARTMENT OF MARKETING MANAGEMENT
MAPROGRAM

**Questionnaire to be Distributed for the Digital Banking Customers of the Commercial
Bank of Ethiopia**

Dear Respondents;

This questionnaire was developed in an academic effort to gather information for a thesis paper titled "The Impact of Digital Banking Service Quality on Customers' Satisfaction in Addis Ababa: The case of Selected Branches of Commercial Bank of Ethiopia" in order to meet the University's requirements for awarding a Master of Art in Marketing Management. The answers to this questionnaire will be kept completely confidential and won't be utilized in any other way. I am kindly asking responders to offer correct information as a result.

NB:

- You are not obligated to put your name there.
- Try to respond to each of the questions below.
- For the closed-ended questions, use the (√) symbol to indicate your response in the provided box.

I appreciate your cooperation!

PART I: Demographic Information

1. Educational Qualification:

Grade10 completed	<input type="checkbox"/>	Grade12 completed	<input type="checkbox"/>	Certificate	<input type="checkbox"/>
College diploma	<input type="checkbox"/>	First Degree	<input type="checkbox"/>	Second Degree and above	<input type="checkbox"/>

2. Years using the digital banking services:

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

Part II: Questions Directly Related with the Study

Please respond to the following questions about the quality of the digital banking service. Please place a "√" or "X" mark in the box that represents your level of agreement. 1 means strongly disagree, 2 means disagree, 3 means neutral, and 4 means agree. 5 means strongly agree

No	I. Reliability:	5	4	3	2	1
1	“Does CBE's digital banking system effectively perform tasks?”					
2	“Do CBE's digital banking services arrive exactly as they're promised to?”					
3	“Does CBE deliver the promised quality of Digital banking service from the beginning?”					
	II. Responsiveness					
4	"Do CBE quickly react to your requests every time you are utilizing digital banking service?"					
5	"Do the CBE's digital banking services provide instructions on what to do if a transaction is unsuccessful?"					
6	“Does CBE act quickly to fix any potential problems with digital banking operations?”					
7	“Do the CBE's digital banking services answer your questions?”					
	III. User-friendliness/ Ease of use:					
8	“Is it simple to understand the text on CBE's digital banking services?”					
9	“Is using CBE's digital banking services simple to learn?”					
10	“Is it simple to develop skill using CBE's digital banking services?”					

11	“Did you find the digital banking services of CBE user friendly?”					
IV. Customer Service and Support						
12	“Do the digital banking services respond to your inquiries immediately?”					
13	“Is it simple to get in contact with staff immediately if a problem arises while using CBE's digital banking system?”					
14	“Do the digital banking services of CBE provide answers to your questions?”					
15	“Is there a degree of service customization available?”					
V. Privacy and Service Security						
16	“When using CBE's digital banking services, do you feel safe and secure?”					
17	“While you are using CBE's digital banking services, are your account balance and transaction information shared with or easily accessible by anybody else?”					
18	“Do the digital banking services will protect my ATM cards/Mobile banking PIN information?”					
19	“Can you check the correctness and completeness of all of the information related to your previous transactions using CBE's mobile banking or other digital banking services?”					
VI. Website architecture						
20	“Do you find it easy to complete online transactions?”					
21	“Is CBE's website responsive and easy to use on all devices?”					
22	Are the language, labels, and menu items on the CBE website simple to understand?					
23	“Is it simple to understand which button to click to proceed to the next step?”					
24	“Does CBE's online portal have the ability to assist customers to complete online transaction quickly?”					

Please mark the box next to the question that indicates how much you agree with the statement on customer satisfaction with a "X" by tapping here. 1= highly dissatisfied, 2= Dissatisfied, 3= Neutral, 4= satisfied 5= highly satisfied

No	Customer's Satisfaction level in relation to each dimension	5	4	3	2	1
1	"How satisfied are you with the overall digital banking (i.e. ATM, POS, Mobile banking, CBE Wallet and Internet banking) service quality of CBE?"					
2	"How satisfied are you with the reliability of the digital banking services of CBE?"					
3	"How satisfied are you with the responsiveness of the digital banking services of CBE?"					
4	"How satisfied are you with the User-friendliness/ ease of use of the digital banking services of CBE?"					
5	"How satisfied are you with the customer service and support of the digital banking services of CBE?"					
6	"How satisfied are you with the privacy and service security of the digital banking services of CBE?"					
7	"How satisfied are you with the website architecture of the digital banking services of CBE?"					
8	"Would you like to remain as a customer of the digital banking services of CBE?"					
9	"Would you like to recommend the digital banking services of CBE (i.e. ATM, POS, Mobile banking, CBE Wallet and Internet banking) to friends and people you know?"					

Source 

This instrument is adopted from of Amit Shankar and Charles Jebarajakirthy(**Revised Version on October 21, 2018**) and Syed Ali Raza, Amna Umer, Muhammad Asif Qureshi and Abdul Samad Dahri(**Revised Version on Jun 03, 2020**) It is constructed by using factors of e-service quality model.