**ST. MARY'S UNIVERSITY**
**SCHOOL OF GRADUATE STUDIES**

# THE EFFECTS OF E-BANKING SERVICES ON CUSTOMER SATISFACTION: A CASE STUDY OF SELECTED DASHEN BANK BRANCHES IN ADDIS ABABA CITY

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**ADVISOR: MESFIN TESFAYE (PhD)**

**July, 2025**

**ADDIS ABABA, ETHIOPIA**

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**A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY, SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION**

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## DECLARATION

I, Abreham Woldu, hereby declare that the thesis entitled "Examining the Effects Of E-Banking on Customer Satisfaction: A Case Study of Selected Dashen Bank Branches in Addis Ababa City" is my original work. I have carried out the present study independently with the guidance and support of the research advisor, Dr. Mesfin Tesfaye. Any other contributors or sources used for the study have been duly acknowledged. Moreover, this study has not been submitted for the award of any Degree or Diploma Program in this or any other Institution.

**Name of Advisor: Mesfin Tesfaye (PhD)**

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**Date: _____**

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## APPROVED BY BOARD OF EXAMINERS

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## Acronyms and Abbreviations

ATM - Automated Teller Machine

CBE - Commercial Bank of Ethiopia

COM - Compensation.

CON - Contact

E-Banking – Electronic Banking

E-commerce - Electronic Commerce

EFF - Efficiency

E-Payment - Electronic Payment

E-SERVQUAL - Electronic Service Quality

FUL - Fulfillment

IBSQ - Internet Banking Service Quality

ICT - Information and Communication Technology

M-Banking – Mobile Banking

MSc/MA - Master of Science/ Master of Arts

NBE - National Bank of Ethiopia

PC - Personal Computer

PDA - Personal Digital Assistant

PIN - Personal Identification Number

PLS-SEM - Partial Least Squares Structural Equation Modeling

POS - Point of Sale

POS – Point of Sale

PRV - Privacy

RES - Responsiveness

SMS - Short Message Service

SPSS - Statistical Package for the Social Sciences

SYS - System Availability

UNCTAD - United Nations Conference on Trade and Development

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## Abstract

*The banking industry has seen substantial change as a result of the rapid development of information and communication technology, especially with the advent of electronic banking (e-banking) services. This study aims to examine the effects of e-banking on customer satisfaction in strategically selected branches of Dashen Bank S.C. located in Addis Ababa, Ethiopia. Using a quantitative method, quantitative data were collected through structured questionnaires distributed to 96 e-banking users across five branches based on using convenience sampling method. The research framework is built on E-S-Qual (E-SERVQUAL) model as developed by the Parasuraman et. al, focusing on key service quality dimensions of efficiency, system availability, fulfillment, privacy, responsiveness, compensation, and contact as independent variables influencing customer satisfaction. The findings analyzed through descriptive and inferential analysis using SPSS, reveal that among the service quality dimensions analyzed, compensation and system availability emerged as the most influential predictors, followed by privacy. Contact showed significant but negative effect, while efficiency and fulfillment demonstrated weaker impacts in the presence of other variables. The study found that system availability, compensation, and privacy significantly enhance customer satisfaction in Dashen Bank's e-banking, while poor contact channels negatively impact it. Despite strong correlations, efficiency and fulfillment lacked independent significance due to multicollinearity. Recommendations include improving system reliability, strengthening compensation and privacy measures, revamping support channels, and streamlining overlapping functions.*



**Key Words: E-Banking, Efficiency, Fulfillment, Privacy, Responsiveness, Compensation, System Availability, Contact**

# CHAPTER ONE
# INTRODUCTION

## 1.1 Background of the Study

E-banking refers to a method of banking that allows customers to conduct transactions electronically without visiting a bank branch (Simpson, 2002). It represents a new paradigm in delivering banking products and services (Ojokuku and Sajiyube, 2012). The evolution of banking technology has been marked by changes in distribution channels, such as Automated Teller Machines (ATMs), Phone Banking, Tele Banking, PC Banking, and more recently, Internet Banking (Chang, 2003; Gallup Consulting, 2008).

E-banking services provide customers with the convenience and peace of mind to conduct transactions at their own time and pace (Martin and Kwaku, 2016). The competitive nature of the banking industry, driven by technological advancements and the emergence of multiple banks, has compelled institutions to upgrade their services to remain competitive (Das & Ravi, 2021). Banks that adopt advanced technologies and payment channels have seen increased profitability and business success (Endalkachew, 2013). Nonetheless, e-banking exposes customers to risks such as phishing, identity theft, and system breaches due to increased reliance on internet-based platforms (Yadav & Singh, 2021). These risks are amplified by inadequate cybersecurity measures and users' low awareness of digital threats. Strengthening encryption and multi-factor authentication can mitigate these vulnerabilities.

Customer satisfaction is defined as an overall evaluation of a customer's total purchase and consumption experience with a product or service over time (Fornell et al., 1996). It serves as a key metric for assessing business performance and service quality (Mohamud et al., 2017). As a critical component of business strategy, customer satisfaction enhances customer retention and promotes product repurchase (Kabu & Sonia, 2017). In a competitive environment shaped by technological advancements, analyzing customer satisfaction is essential for gaining a competitive edge (Mohsan *et al*., 2011). Improved customer satisfaction leads to loyalty, which ultimately enhances profitability.

In Ethiopia, most banks have embraced e-banking as a means of improving customer satisfaction. A study in Nigeria highlighted that e-banking significantly enhances customer satisfaction in banking services (Shittu, 2010). Key aspects of e-banking influencing satisfaction include efficiency, reliability, privacy

and security, responsiveness, and communication (Amith & Megharaja, 2021). Numerous studies have consistently shown the substantial impact of e-banking on customer satisfaction.

The Commercial Bank of Ethiopia (CBE) introduced e-banking to Ethiopia in 2001 through the deployment of ATMs (Bantyergu, 2022). Dashen Bank, as one of the pioneers in electronic payment systems, has been actively advancing the e-banking sector since 2009 (Gardachew, 2010). Today, Dashen Bank operates over 880 branches, employs 18,500 staff, and manages 2,000 POS terminals and 11,000 ATMs. As a forerunner in adopting e-banking, Dashen Bank's large-scale infrastructure necessitates a focused effort on enhancing customer satisfaction by understanding the specific factors influencing satisfaction levels.

### 1.2 Statement of the Problem

Traditionally, banking required customers to visit branches for services. With limited competition among a few banks, little effort was made to improve customer satisfaction (Birhanu, 2021). The evolution of internet-based service delivery in the 1980s, popularly known as e-banking, brought significant benefits, including money transfers, bill payments, cost reduction, and improved customer service, while enabling better account management (Abebe, 2016).

The banking industry is undergoing rapid changes marked by intense competition and increased reliance on technology. However, implementing e-banking systems remains challenging, particularly in developing nations, due to high installation and operational costs (Illuminatus, 2014). In Ethiopia, both public and private banks face frequent disruptions in e-banking services caused by underdeveloped telecommunications infrastructure, unreliable power supply, and limited customer knowledge (Hailu, 2019). Additional barriers include security risks and lack of trust in technological adoption (Hailemicheal, 2020). Dashen bank specifically encountered significant challenges in implementing e-banking, including deficiencies in technical and managerial expertise for system deployment, as well as limited customer awareness and familiarity with e-banking products (Addis, 2017). It struggled with security concerns, infrastructure gaps, and skill shortages in implementation (Selamawit, 2018).

While previous studies, such as those by Tigist (2020) and Shimeles (2021), have explored key aspects of e-banking service quality, their focus has been limited to a small number of branches and a narrow set of service dimensions, such as reliability, availability, and ease of use. These studies have largely overlooked

other critical factors affecting customer satisfaction, such as responsiveness, fulfillment, compensation, and customer support—dimensions that are increasingly important in the digital banking experience. Additionally, while these studies identify common challenges, including system disruptions, security issues, and technological barriers, they do not delve into how these challenges specifically impact customer trust, adoption rates, and overall satisfaction, particularly in the context of Ethiopia's rapidly evolving banking sector.

While previous studies, such as those conducted by Tigist (2020) and Shimeles (2021) have explored aspects of e-banking service quality, their scope has been limited in both geographic and conceptual terms. Shimeles (2021) focused exclusively on three branches and assessed only a narrow set of service quality dimensions, primarily reliability, availability, and ease of use. In contrast, this study extends the analysis to a broader range of branches and incorporates additional service dimensions that are critical to understanding customer satisfaction in the digital era, including responsiveness, fulfillment, compensation, and customer support.

Moreover, although Tigist (2020) and Shimeles (2021) identified common challenges such as system disruptions and security concerns, they did not empirically examine how these issues affect satisfaction levels. This study addresses these gaps by offering a more comprehensive and up-to-date assessment, better reflecting the current realities of Ethiopia's evolving e-banking landscape.

Furthermore, many of the studies reviewed are based on data that may be outdated in light of recent advancements in mobile banking, regulatory changes, and shifts in customer expectations. This limits the applicability of their findings to the current landscape of e-banking in Ethiopia. Additionally, the scope of these studies has been geographically confined to a few branches in Addis Ababa, leaving a significant gap in understanding how customer satisfaction and e-banking experiences differ across a wider range of branches with varying customer demographics and transaction volumes.

This study aims to fill these gaps by exploring a broader range of Dashen Bank branches and incorporating additional dimensions of customer satisfaction, such as responsiveness and compensation. It also examined the impact of technical and operational challenges on customer trust and satisfaction, providing up-to-date insights that reflect the current state of e-banking in Ethiopia. By doing so, the research offers practical recommendations for improving e-banking services and enhancing customer satisfaction, both

for Dashen Bank and other similar institutions, helping them navigate the complexities of digital banking adoption in the Ethiopian context.

## 1.3 Objectives of the Study

### 1.3.1 General Objective

The general objective of this study is to examine the effect of electronic banking on customer satisfaction in selected Dashen Bank Branches in Addis Ababa.

### 1.3.2 Specific Objectives

The research attempted to achieve the following specific objectives;

- To analyze how the dimensions of e-banking service quality—efficiency, system availability, fulfillment, privacy, responsiveness, compensation, and contact—affect customer satisfaction.
- To identify which dimensions of e-banking service quality have the most significant positive or negative impact on customer satisfaction.
- To provide evidence-based recommendations for improving e-banking services and enhancing customer satisfaction in the Ethiopian banking sector.

## 1.4 Research Questions

1. To what extent does e-banking service quality influence customer satisfaction in selected Dashen Bank branches?
2. How do the dimensions of e-banking service quality (efficiency, system availability, fulfillment, privacy, responsiveness, compensation, and contact) affect customer satisfaction?
3. Which service quality dimensions have the strongest positive or negative effect on customer satisfaction?

## 1.5 Significance of the Study

The study addresses important issues and investigates how e-banking impinges on customer satisfaction and service quality in Ethiopian banking. Since the provision of banking services is increasingly dependent on technology, a knowledge of how that technology affects customer experiences becomes pertinent to retaining competitiveness.

The findings offer Dashen Bank S.C. a concrete guide for enhancing its e-banking services, developing better relations with their customers, and realizing a stronger stance in the market. Other financial institutions, in turn, may extrapolate the findings to sources and constraints within their own digital services.

The study will add to the body of research on e-banking and customer satisfaction by casting light on and providing empirical evidence from Ethiopia. It could also be helpful as a reference for later authors in the wider field of service quality in digital banking.

### 1.6 Scope of the Study

This study aims to examine customer satisfaction with the electronic banking system in selected branches of Dashen Bank, with a specific focus on the Addis Ababa. The study focused on five selected branches within the city, chosen for their high number of e-banking users. These branches represent diverse geographic locations and customer demographics, providing a comprehensive view of customer satisfaction in the context of e-banking. They include Kera, African Union, Amoudi, Bole Michael and Leghar branches. The research was limited to this geographic area, and the findings cannot be generalized to other cities or regions.

Conceptually, this study was limited to assessing service-quality dimensions like efficiency, system availability, privacy, responsiveness, and fulfillment in electronic banking and their relations to customer satisfaction. In terms of methodology, the study employed a quantitative method whereby questionnaires were distributed to e-banking users at the said branches. The study does not consider qualitative approaches such as interviews or focus groups. Regarding time scope, data were collected within a specific period that started from February 2025 to April 2025 during which customer perceptions exist.

### 1.7 Limitations of the Study

This study examines the effect of e-banking services on customer satisfaction in selected Dashen Bank branches located in Addis Ababa City. As such, the findings and conclusions drawn are limited to the specific context and cannot be generalized to represent the entire e-banking services offered by Dashen Bank or other banks across Ethiopia.

The study faced several limitations, including the researcher’s limited experience in conducting research, which has a potential to affect the depth and quality of the findings. Additionally, respondent’s busy work schedules posed challenges in securing their participation timely, potentially impacting the response rate and the overall success of the study.

Additionally, the research faced challenges in adhering to the initially designed timeline, resulting in delays that have impacted the depth and scope of data collection. Consequently, the research may not be able to present data at the intended level of detail, which may affect the comprehensiveness of the findings.

Despite these limitations, the study provides meaningful insights into the relationship between e-banking services and customer satisfaction within the defined scope.

### 1.8 Operational Definition of Terms

**Efficiency***:* system is simple to use, structured properly, and requires a minimum of information to be input by the customer or the ease and speed of accessing and using the system (Sempane *et.al*, 2002).

**Fulfillment*:*** refers to the extent to which the system promises about order delivery and item availability are fulfilled (Chang, 2009).

**Privacy*:*** Degree to which the system is safe and protects customer information and customer believes the system is safe from intrusion and personal information is protected. (Oliver, 1997).

**System availability:** the correct technical functioning of the system. (Gangai K, 2013).

**Responsiveness:** quick response and effective handling of problems and returns through the system. (Lazarus R.S, 1999)

**Compensation:** The degree to which the system compensates customers for problems (Ajzen, I 1991).

**Contact:** The availability of assistance through telephone or online representatives. (Hasted D. 1999)

### 1.1 Organization of the Study

This study was structured into five chapters. The first chapter has been dedicated to provide an introduction, covering the statement of the problem, objectives of the study, research questions, significance of the study, scope, limitations, and operational definitions of key terms. The second chapter presents a review of related literature. Chapter three outlined the research methodology, including the research design, types and sources of data, sampling techniques, research instruments, dependent and independent variables, validity and reliability tests, ethical considerations, and model specifications for data analysis. Chapter four focused on the findings and discussion of the collected data. Chapter five concludes the study with a summary of findings, conclusions, and recommendations. Finally, a list of references and sample questionnaires have been included in the annex.

# CHAPTER TWO
# REVIEW OF RELATED LITRATURE

The subsequent section discusses the literature review of the study, it provides the reader with the explanation of the theoretical rationale of the problem being studied, types of electronic banking as well as what research has already been done and how the findings relate to the problem at hand. The purpose of the literature review is to avoid unnecessary intentional or accidental duplication of material already covered. Critical analysis was made and conceptual and empirical framework for the research were established.

## 2.1 Theoretical Literature

### 2.1.1 The Concept of E-Banking

Electronic banking is one of the most successful online businesses. E-banking allows customers to accept their accounts and execute orders through a simple to use web site. There is no special software for customers to install (other than a web browser and many banks don't change for this service some banks even lower costs for online transactions versus on site banking transactions. Electronic banking saves individuals and companies time and money (Amsale *et al*., 2014).

E-banking puts the power of banking tin to the hands of the customer and allows to the customers to choose self-service for all their banking needs with online served as customers can view their account histories, transfer funds, order checks, playbills, re order checks, or get in touch with the customer service department of the bank (Amsale *et al*., 2014). Electronic banking is an online service that allows customers to perform the same banking functions as in quicken, except that they can access their accounts directly over the internet (Daniel, 2002).

The concept of electronic banking has been defined in many ways; Daniel defined electronic banking as the delivery of banks "information and services by banks to customers via different delivery plat forms that can be used with different terminal devices such as personal computers and mobile phone with browser or desktop software, telephone or digital television" (Daniel E., 1999). Also, according Abid and Noreen, electronic banking defined as any use of information and communication technology and electronic means by a bank to conduct transactions and have interaction with stakeholders (Abid & Noreen, 2006).

Hassan *et al*., 2010 defined as E-banking is form of banking, where funds are transferred through an exchange of electronic signals between financial institutions, rather than the exchange of cash, checks, or

other negotiable instruments. E-banking is a generic term for delivery of banking services and products through electronic channels, such as the telephone, the internet, the cell phone, etc. The concept and scope of e-banking is still evolving. It facilitates an effective payment and accounting system there by enhancing the speed of delivery of banking services considerably (Jantana, 2007). Ovia argues that electronic banking is a product of e-commerce in the field of banking and financial services (Ovia, 2001).

The ownership of funds and transfers of funds between financial institutions are recorded on computer systems connected by telephone lines. Customer's identification is by access code, such as a password or Personal Identification Number (PIN), instead of a signature on a check or other physical document. E-banking involves individual and corporate clients, and includes bank transfers, payments and settlements, documentary collections and credits, corporate and household lending, card business and some others (UNCTAD, 2002).

Another definition of E-banking is that, it is the use of a computer or retrieve and process banking data (statements, transaction details, etc.) and to initiate transactions (payments, transfers, requests for services, etc.) directly with a bank or with other financial service provider remotely via a telecommunications network (Yang, 1997).

E-banking can be also defined as a variety of platforms such as internet banking or online banking, TV-based banking, mobile phone banking, and PC (personal computer) banking (or offline banking) whereby customers access these services using an intelligent electronic device, like PC, Personal Digital Assistant (PDA), automatic teller machines (ATMs), Point of Sale (POS) machines, kiosk, or touch tone telephone (Alagheband, 2006).

As we understand from the view of different authors that in a simple word, e-banking implies provision of banking products and services through electronic delivery channels. Electronic Banking has been around for quite some time in the form of automatic teller machines (ATMs) and telephone transactions. In more recent times, it has been transformed by the internet – a new delivery channel that has facilitated banking transactions for both customers and banks (Nitsure, 2003).

E-banking involves delivering banking services through digital channels, allowing customers to perform transactions remotely. It replaces physical interactions with secure electronic methods like passwords and PINs, offering greater speed, convenience, and cost efficiency. E-banking has evolved from basic tools like ATMs to advanced mobile and internet platforms. It enhances financial inclusion by leveraging ICT to

reach broader user bases. As technology advances, the scope of e-banking continues to grow, reshaping customer-bank interactions in the digital economy.

### 2.1.2 Types of E-Banking Channels

According to Worku *et al*., (2016), there are many electronic banking delivery channels to provide banking service to customers. Among them ATM, POS, mobile banking, agent banking and internet banking are the most widely used.

#### 2.1.2.1 Automatic Teller Machine (ATM)

Automated Teller Machine (ATM) is a machine where cash withdrawal can be made over the machine without going in to the banking hall. It also sells recharge cards and transfer funds; it can be accessed 24hours/7days with account balance enquiry. Timothy AT. (2012) An automated teller machine (ATM), also known as automated banking machine (ABM) or Cash Machine is a computerized telecommunications device that provides the clients of a financial institution with access to financial transactions in a public space without the need for a cashier, human clerk or bank teller Michael (2017). On most modern ATMs, the customer is identified by inserting a plastic ATM card with a magnetic stripe or a plastic smart card with a chip that contains a unique card number and some security information such as an expiration date.

According to Thompson (1997), Authentication is provided by the customer entering a personal identification number (PIN). Using an ATM, customers can access their bank accounts in order to make cash withdrawals, credit card cash advances, and check their account balances as well as purchase prepaid cell phone credit.

#### 2.1.2.2 Point of Sale (POS)

Point of sale (POS) also sometimes referred to as point of purchase (POP) or checkout is the location where a transaction occurs. A "checkout" refers to a POS terminal or more generally to the hardware and software used for checkouts, the equivalent of an electronic cash register. A POS terminal manages the selling process by a sales person accessible interface. The same system allows the creation and printing of the receipt. POS systems record sales for business and tax purposes (Shittu, 2010, Abebe, 2016).

Goods and services in a POS system, sales and payment information are collected electronically, including the amount of the sale, the date and place of the transaction, and the consumer's account number. If the transaction is done on a bank credit or debit card, the payment information is passed on to the financial

institution or payment processor, and the sales data is forwarded to the retailer's management information system for updating of sales records (Gerlach, 2000).

#### 2.1.2.3 Mobile Banking (M-Banking)

M-banking is a term used for performing balance checks, account transactions, payments, credit applications and other banking transactions through a mobile device such as a mobile phone or Personal Digital Assistant (PDA). The scope of offered services may include facilities to conduct bank and stock market transactions, to administer accounts and to access customized information (Tiwari, 2007).

According to Michael (2017), Mobile Banking refers to the provision and availing of banking and financial services with the help of mobile telecommunication devices. The scope of offered services may include facilities to conduct bank and stock market transactions, to administer accounts and to access customized information Michael (2017). According to Meuter (2010), mobile Banking consists of three inter-related concepts: mobile accounting, mobile brokerage and mobile financial information services. With mobile technology banks can offer a variety of services to their customers such as doing funds transfer while traveling, receiving online updates of stock price or even performing stock trading while being stuck in traffic. Smart phones and3G connectivity provide some capabilities that older text message-only phones do not (Shan, 2006).

#### 2.1.2.4 Telephone Banking

Telephone banking is a service provided by a financial institution, which allows its customers to perform transactions over the telephone (Vila *et al*., 2013). Most telephone banking services use an automated phone answering system with phone keypad response or voice recognition capability. To guarantee security, the customer must first authenticate through a numeric or verbal password or through security questions asked by a live representative.

With the obvious exception of cash withdrawals and deposits, it offers virtually all the features of an automated teller machine: account balance information and list of lates transactions, electronic bill payments, funds transfers between a customer's accounts, etc. Usually, customers can also speak to a live representative located in a call center or a branch (Michael, 2017).

Launched in 2021 by Ethio Telecom, Tele Birr became Ethiopia’s first and largest telephone bank service, reaching 34 million users within two years (Ethio Telecom, 2023). Its success is attributed to government-backed infrastructure it benefited from Ethio Telecom’s 70+ million mobile subscribers, enabling rapid

adoption (National Bank of Ethiopia, 2022). Moreover, interoperability with banks allowed Tele Birr to integrate with Ethiopia's banking system from inception, allowing seamless transfers (World Bank, 2023).

Launched in 2007 by Safaricom, M-Pesa transitioned the world into a glimmering beacon of mobile-money success. It altered and reshaped the landscape of Kenyan finance by allowing the unbanked population low-cost digital transactions. M-Pesa had over 51 million active users by 2023 across seven African countries, the largest share being from Kenya (Safaricom, 2023).

M-Pesa's success was mainly attributable to agent network expansion as it leveraged a vast network of agents (over 287,000 in Kenya alone), ensuring accessibility even in rural areas (Jack & Suri, 2011). M-Pesa also obtained regulatory support the Central Bank of Kenya (CBK) which adopted a pro-innovation stance, allowing M-Pesa to operate without stringent banking regulations (Muthiora, 2015). Studies show M-Pesa lifted 2% of Kenyan households (194,000 people) out of poverty by enabling small businesses and remittances (Suri & Jack, 2016).

#### 2.1.2.5 Agent Banking

An agent banking is a retail or postal outlet contracted by a financial institution or a mobile network operator to process clients‟ transactions. Rather than a branch teller, it is the owner or an employee of the retail outlet who conducts the transaction and lets clients deposit, withdraw, and transfer funds, pay their bills, inquire about an account balance, or receive government benefits or a direct deposit from their employer. Banking agents can be pharmacies, supermarkets, convenience stores, lottery outlets, post offices, and many more *(Wiki for banking agent, 2015).* Banking agents are usually equipped with a combination of POS card reader, mobile phone, barcode scanner to scan bills for bill payment transactions, PIN pads, and sometimes personal computers (PCs) that connect with the bank's server using a personal dial-up or other data connection. Clients that transact at the agent use a Magnetic Stripe (Mag-Stripe) bank card or their mobile phone to access their bank account or e-wallet respectively. Identification of customers is normally done through a PIN. With regard to the transaction verification, authorization, and settlement platform, banking agents are similar to any other remote bank channel *(Wiki for banking agent, 2015).*

Banking agents are the backbone of mobile banking, i.e., performing transactions over a mobile device, most often a mobile phone. To enable clients to convert cash into electronic money and vice versa which can be sent over their mobile phone, clients will have to visit a branch, ATM, or banking agent. Especially in remote and rural locations, where cash is still the most important way to pay and transact, a mobile

banking service is dependent on banking agents to enable clients to effectively use the service. *(Wiki for banking agent, 2015).*

#### 2.1.2.6 Internet Banking

Internet banking, sometimes called online banking, is an outgrowth of PC banking (England *et al*., 2008). Internet banking uses the internet as the delivery channel by which to conduct banking activity, for example, transferring funds, paying bills, viewing checking and saving account balances, paying mortgages, and purchasing financial instruments and certificates of deposits.

An Internet banking customer accesses his or her accounts from browser software that runs Internet banking programs resident on the bank's World Wide Web server, not on the user's PC. England *et al*., (2008), define a "true Internet bank" as one that provides account balances and some transactional capabilities to retail customers over the World Wide Web. Internet banks are also known as virtual, cyber, net, interactive, or web banks Michael (2017). Internet banking allows customers of a financial institution to conduct financial transactions on a secure website operated by the institution, which can be a retail bank, credit union or society. Banks increasingly operate websites through which customers are able not only to inquire about account balances, interest and exchange rates but also to conduct arrange of transactions (Timothy, 2012).

With the advent of e-banking, service delivery has undergone transformation. These services are now accessible to customers through ATMs, POS, mobile, and internet platforms. By harnessing these channels, convenience is increased, while financial inclusion is furthered in rural locations. Local adaptation under supportive regulation is the modality tested by innovations such as M-Pesa and TeleBirr. Service quality in terms of security, reliability, and ease of use will always remain at the core of ensuring satisfaction. Banks should, therefore, not just race recklessly toward the next shiny innovation but should maintain their service standards throughout to sustain competitiveness in this industry.

### 2.1.3 Challenges of E-Banking in Ethiopia

According to Abraham (2012) described that among the common problems known in Ethiopian which are related to electronic banking few of them are lack of banking services through the web or other electronic means such as using mobile phone, weak telecommunications, lack of Internet awareness, broken and slow Internet connections, data and network security and privacy, lack and limitation of government policies,

regulations and e-commerce laws, as well as legislation to protect workers and to make the Internet secure.(Abebe, 2016).

A key challenges for e- banking applications are low level of internet penetration and poorly developed telecommunication infrastructure, lack of infrastructure for telecommunications, lack of suitable legal and regulatory framework for E-Commerce and E-Payment, high rate of illiteracy, high cost of internet, absences of financial institutions networks that link different banks, frequent power interruption, resistance to changes in technology among customers and staff due to lack of awareness on the benefits of new technologies, fear of risk, lack of trained personnel in key areas, tendency to be content with the existing structures and people may be resistance to new payment systems (Gardachew, 2010).

Wondwossen and Tsegai (2005) also studied on the challenges and opportunities of E-payments in Ethiopia; and they found that the main obstacles to the development of E-Payments are, lack of customers trust in the initiatives, unavailability of payment laws and regulations particularly for E-payment, lack of skilled man power and Frequent power disruption (Abebe, 2016).

Ayana (2012) conducted his study on "Adoption of Electronic banking system in Ethiopian Banking industry: and that according to his findings, that E-banking system, such as ATM, mobile banking, internet banking and others were not well adopted by Ethiopian banking industry. This is due to low level of ICT infrastructure and lack of legal frame work at NBE, which can initiate banking industry to implement the system. In addition to the above two basic factor, the result of the study shows that security risk and lack of trust on the use of technological adoption are other major barriers for the system. The level of security risk associated with E-banking product or service, such as ATM, internet banking, mobile banking and others, pose different challenges to different banks (Abebe, 2016).

With increasing attention given to digital financial services, the uptake of e-banking also faces systemic challenges in Ethiopia. Poor ICT infrastructure, limited internet connectivity, and frequent interruptions of the power supply constitute the barriers to the delivery of reliable service. Disallowing well-established regulatory frameworks and e-commerce laws makes one lose trust in digital transactions. Public awareness is low, illiteracy in digital matters abounds, and there is resistance to change, all serving as hindrances to adoption. E-banking has to grow alongside improved infrastructure, enhanced legal reforms, and universally applied digital literacy campaigns.

### 2.1.4 Service Quality and Customer Satisfaction

In online environments, service quality is defined as the extent to which a website facilitates efficient and effectives hopping, purchasing, and delivery of product and services (Zeithaml *et al*., 2002). Santos (2003) described e-service quality in terms of overall customer evaluations and judgments regarding the excellence and the quality of e-service delivery in the virtual marketplace. A study by Parasuraman *et al*. (2005) on the Internet service quality of online shopping websites resulted in the development of a service quality scale, the-SQ scale, consisting of seven dimensions: efficiency, system availability, fulfillment, privacy, responsiveness, compensation and contact. According to Zeithaml *et al*. (2001), they have developed 11 dimensions of service quality that is: reliability, responsibility, access, flexibility, and ease of navigation, efficiency, assurance, security, price knowledge, site aesthetics and customization or personalization.

#### 2.1.4.1 E-Service Quality

Ensuring high-quality services provides numerous advantages to service organizations, such as retaining customers, increasing profitability, reducing costs, enhancing corporate image and spreading positive word-of-mouth recommendations (Shamil & Sumatirante, 2022). E-service has been defined as a web-based service or an interactive service that is delivered ont he internet through electronic device (Ghosh *et al*., 2004, Zeithaml *et al*., 2000). Rowey (2006) conceptualizes E-service as deeds, efforts, or performances whose delivery is mediated by information technology.

Generally, it can be defined as an interactive content-centered and internet-based customer service that is driven by customers and integrated with the support of technologies and systems offered by service providers, which aim at strengthening the customer-provider relationship. Given the technology quality dimensions of e-service quality that are different from the traditional service context, e-service quality has been regarded having the potential to not only deliver strategic benefits but also to enhance operational efficiency and profitability (Cronin, 2003).

Different scholars and authors defined e service quality in different dimensions from their view. Much previous research supports this. For example, Dabholkar (1996) found the following Web these e-service quality aspects: site design, reliability, and delivery, ease of use, enjoyment and control in the context of E-service, Zeithaml *et al*, (2000) found efficiency, reliability, fulfillment, privacy, responsiveness, compensation, and e-service quality dimensions in the online retailing context which has been later adopted in this study. In Yoo and Douthu (2001) ease of use, aesthetic design, processing speed, and security were the-service quality found in online retailing context.

Cox and Dale (2001) identified six e-service quality aspects, while Wolfinbarger and Gilly (2002, 2003) found these four e-service quality aspects: website appearance, communication, accessibility, credibility, understanding and availability in online retailing. Lee and Lin (2005) developed eservice model including web site design, reliability, responsiveness, trust, and personalization in the online retailing context. Field, Heim, Sinha (2004) identified web site design, reliability, security, and customer service e-service quality dimensions. Kim *et al*., (2006) identified 9 e-service quality items, being: efficiency, fulfillment, system availability, privacy, responsiveness, compensation, contact, information and graphic style in online retailing.

#### 2.1.4.2 Electronic Banking Service Quality

When we are taking about electronic banking, we could be within the conceptualization context of internet. As it has been defined by different scholars and authors, according to Daniel (1999) electronic banking is the delivery of banks‟ information and services by banks to customers via different delivery platforms that can be used with different terminal devices such as personal computer and mobile phone with browser or desktop software, telephone or digital television.

Electronic banking, therefore, could be categorized into PC Banking, Internet Banking, and Telephone based banking. It is a construct that consists of several distribution channels. Internet banking is the situation where "customers can access their bank account via the internet using an electronic device like, PC or mobile and web-browser (Arunachalam & Sivasubramanian, 2007, p.2). According to Zeithaml *et al*., (1996) through e-banking, a bank could enhance its reputation, customer retention, get new customers and financial performance by delivering superior quality internet services to its valued customers.

#### 2.1.4.3 Customer Satisfaction

Customer satisfaction is, "the consumer's response to the evaluation of the perceived discrepancy between prior expectations (or some other norm of performance) and the actual performance of the product as perceived after its consumption" (Tse & Wilton 1988, p. 204). The ultimate goal of any organization is generation of profits and that can be achieved with attaining customer perception and satisfaction. A satisfied customer with E-Banking service will come back and refer the electronic banking services to other as well, generating more sales and hence more profits. Banks are no different as they also thrive for profits. Customer satisfaction is considered as a necessary condition for customer retention and loyalty and hence helps in realizing economic goals.

According to Tse and Wilton (1988) Banks are now moving its business towards online along with the conventional banking. Internet banking is just the extension of conventional branch banking. Here the services are being provided online that were originally provided in the branches. Thus, customer satisfaction has got great importance in electronic banking as well. High level of satisfaction is demanded by the customer as customer expectation in electronic banking is very high and competition is also high with little differentiation in type of services offered. Hence, bankers along with the researchers have realized the importance of customer satisfaction in internet banking (Tse & Wilton, 1988). In the context of e-banking customer satisfaction refers to is the customer's assessment regarding the services in comparison to conventional banking (Rizwan *et. al*., 2021).

#### 2.1.4.4 Customer Perception and Satisfaction with E-Banking

The ultimate goal of any organization is generation of profits and that can be achieved with attaining customer perception and satisfaction. A satisfied customer with E-Banking service will come back and refer the electronic banking services to other as well, generating more sales and hence more profits. Banks are no different as they also thrive for profits. Customer perception and satisfaction is considered as a necessary condition for customer retention and loyalty and hence helps in realizing economic goals. Banks are now moving its business toward online along with the conventional banking. Internet banking is just the extension of conventional branch banking.

Here the services are being provided online that were originally provided in the branches. Thus, customer satisfaction has got great importance in e-banking as well. High level of satisfaction is demanded by customer as customer expectation in the e-banking is very high and competition is also high with little differentiation in type of service offered. Hence, bankers along with the researches have realized the importance of customer satisfaction in e-banking (Tse & Wlton, 1988). Meeting or exceeding customer expectations will result in a good or better customer experience which will, in turn, lead to customer satisfaction (Bruce Mwiya, *et al*., 2022).

Service quality and customer satisfaction are crucial to the success of e-banking, especially in competitive, tech-driven markets. In e-banking, service quality includes efficiency, responsiveness, security, and personalization, all of which shape user experience. High-quality services boost satisfaction, loyalty, and profitability through repeat usage and positive word-of-mouth. In Ethiopia, where adoption is growing amid infrastructure and regulatory challenges, understanding service quality perceptions is vital. Aligning digital innovation with customer expectations is key to sustaining competitive advantage.

## 2.2 Empirical Review

Some related studies are conducted by different researchers in different parts of the world. However, there are limited numbers of studies conducted in Ethiopia on the adoption of E-Banking technological innovation. Specifically, Gardachew (2010) conducted research on the opportunities and challenges of E-banking in Ethiopia. The aim of his study was focused on analyzing the status of E-banking in Ethiopia and investigates the main challenges and opportunities of implementing E-banking system. The author identifies some challenges of using E-banking system, such as, lack of suitable legal and regulatory frame works for E-commerce and E- payments, political instability in neighboring countries, high rates of illiteracy and absence of financial networks that links different banks. Wondwossen and Tsegai (2005) on their study found that the main obstacles to the development of E-payments are lack of customers trust in the initiatives, lack of payment laws and controlling system especially for E-payment, lack of skilled manpower and frequent power disruption were the main obstacles.

Aladwani (2001), on his work that the major challenges of E- banking in Kuwait Banks were lack of Internet specialists and volatilities in technology are critical issues relevant to E-banking development. The study also indicates that general and IT managers‟ technical problems are the major challenges for the growth of e-banking. Khorshid and Ghaneh, (2009) identified that good will of bank, regulations and laws are the main challenges for the development of e-banking.

Ayana (2012), conducted a study titled “Adoption of Electronic banking systemin Ethiopian Banking industry: and that according to his findings, that E-banking system, such as ATM, mobile banking, internet banking and others were not well adopted by Ethiopian banking industry. This is due to low level of ICT infrastructure and lack of legal frame work at NBE, which can initiate banking industry to implement the system. In addition to the above two basic factor, the result of the study shows that security risk and lack of trust on the use of technological adoption are other major barriers for the system. The level of security risk associated with E-banking product or service, such as ATM, internet banking, mobile banking and others, pose different challenges to different banks (Abebe, 2016).

Michael (2017) on his study on the effect of E-Banking on financial performance of Kenyan Banks found that E- banking had some impact on the Kenyan Banks profitability as well as the impact electronic banking has had on the financial performance of these institutions. He found out that profits have improved after the introduction of electronic banking in the banks involved in this study.

Bahia (2007) and Vila *et al*., (2013) provide evidence respectively for cost reduction and productivity gains as a result of technological change for European Union banks. Carlson and Lang (2001), showed that E-banking lowers operational costs while increasing customer satisfaction and retention in the Turkish retail banking sector. Meuter (2010) suggests that e-banking is driven largely by the prospects of operating costs minimization and operating revenues maximization. According to Ombati *et al*., (2011), Technology (IT) offers banks the potential to dramatically reduce operating costs and improves the quality of management information hence making banking more profitable.

Beshir and Zelalem (2020) conducted a study in Ethiopia examining the impact of e-banking service quality on customer satisfaction and loyalty, employing a Structural Equation Model (SEM). Their research identified efficiency, responsiveness, ease of use, privacy, and commission fees as statistically significant determinants ($p < 0.05$) influencing customer satisfaction, which served as the dependent variable in their analysis.

Samuel Godadaw *et. al*., (2023) in their study titled "Examining the effect of electronic banking service quality on customer satisfaction and loyalty: an implication for technological innovation" analyzed e-banking service quality in Ethiopia using survey data from 385 customers. Results showed responsiveness, reliability, security, speed, and convenience significantly drive satisfaction and loyalty ($p<0.05$), while system availability and ease of use had no impact. The findings suggest Ethiopian banks should prioritize quick, secure, and reliable services to enhance customer retention. The research highlights gaps in addressing service charges and uptime, critical for digital banking growth.

Shamil & Sumatiratne (2022) conducted a study titled "The Influence of e-Banking Service Quality on e-Customer Satisfaction and Loyalty: A Sri Lankan Study." This study tested a modified e-SERVQUAL model (Raza *et al*., 2020) to assess how internet banking service quality (six dimensions) impacts e-customer satisfaction and loyalty. Results confirmed partial mediation by satisfaction, with gender and bank type (state/non-state) moderating these relationships. Key limitations include urban bias in sampling and pandemic-era data collection, which may skew post-pandemic applicability. The study calls for standardized e-SERVQUAL metrics to address inconsistent models in digital banking research.

Raza *et al*., (2020) examined internet banking service quality (IBSQ) in Pakistan using a modified e-SERVQUAL model with six dimensions (e.g., efficiency, user-friendliness). Data from 500 banking customers, analyzed via Partial Least Squares Structural Equation Modeling (PLS-SEM), revealed that all IBSQ dimensions (e.g., responsiveness, personal needs) significantly enhanced e-customer satisfaction.

Basavaraju *et al.* (2024) examined digital banking service quality in Bengaluru, India, using a Likert-scale survey of 216 customers and confirmatory factor analysis (CFA). Results identified four key dimensions—efficiency, system availability, privacy, and responsiveness—as significant predictors of customer satisfaction ($p < 0.05$), explaining 60.6% of variance. The study highlights the need for banks to prioritize transaction speed and data security to enhance user loyalty in India's rapidly growing digital banking sector.

Several global and local studies have examined e-banking adoption, challenges, and impact, offering valuable context for this research. In Ethiopia, scholars like Gardachew (2010) and Ayana (2012) identified key barriers including weak ICT infrastructure and legal gaps, while Wondwossen and Tsegai (2005) highlighted trust issues and power disruptions. Recent research by Beshir and Zelalem (2020) and Samuel Godadaw et al. (2023) focuses on service quality dimensions—such as efficiency, responsiveness, and privacy—as critical to customer satisfaction and loyalty. Similarly, international studies from Sri Lanka (Shamil & Sumatiratne, 2022) and Pakistan (Raza et al., 2020) affirm that e-banking quality strongly influences satisfaction, moderated by factors like gender and technological readiness. Research from developed countries further shows that while e-banking reduces operational costs and boosts profitability, its success remains context-dependent, emphasizing Ethiopia's need to address its specific socio-technical constraints.

### 2.2.4 Conceptual Framework

The conceptual framework of the study shows that how the independent variables of the study have effect on the dependent variable.

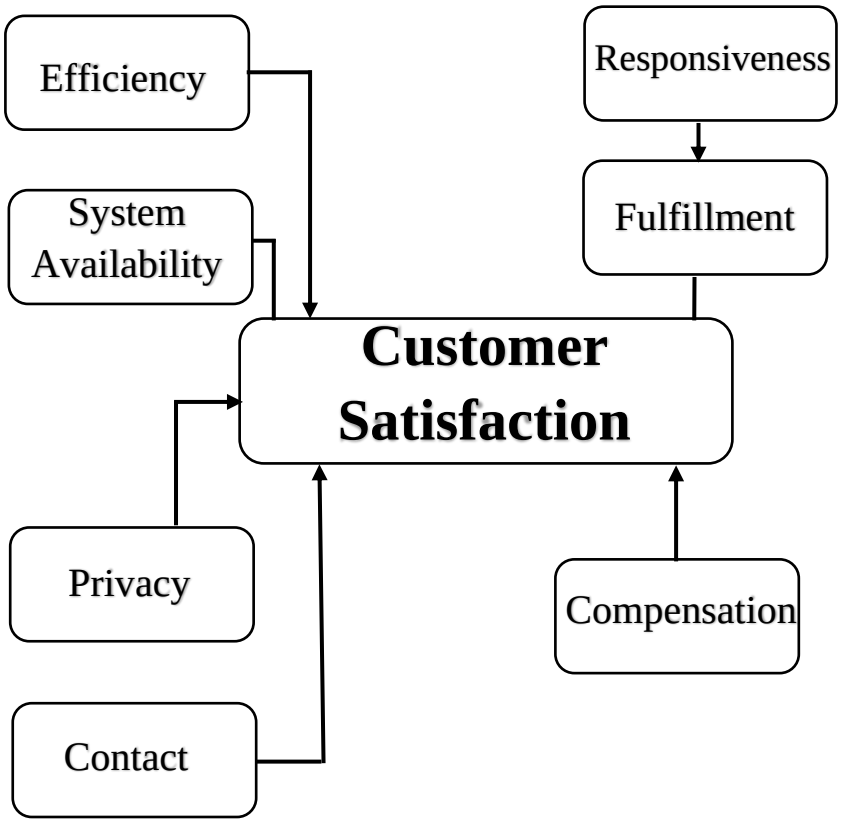



**Fig.2.1 Conceptual Framework**
Source: Parasuraman, Zeithamal, & Malhotra, 2005

### 2.3 Research Hypothesis

The following hypotheses were formulated with regard to the effect of e-banking on customer satisfactions.

**H1** – Efficient e-banking operation has statistically significant effect on customer satisfaction.

**H2** – System availability has statistically significant effect on customer satisfaction.

**H3 -** Fulfillment has statistically significant effect on customer satisfaction.

**H4 -** Privacy contains statistically significant effect on customer satisfaction.

**H5 -** Responsiveness has statistically significant effect on customer satisfaction.

**H6 -** Compensation has statistically significant effect on customer satisfaction.

**H7 -** Contact possesses statistically significant effect on customer satisfaction.

# CHAPTER THREE
# RESEARCH DESIGN AND METHODOLOGY

This chapter outlines the research design and methodology employed in the study. A well-crafted research design ensures the selection of appropriate methods, research instruments, sampling strategies, and data types (De Wet, 1997). This section covers the research design, sampling techniques, and instruments used to examine the impact of the electronic banking system on customer satisfaction at selected Dashen Bank branches. It also discusses the dependent and independent variables, data sources, data collection methods, procedures used for gathering data, validity and reliability tests, ethical considerations, and model specifications employed for data analysis. Finally, the chapter concludes with an overview of the data analysis methods applied in the study.

## 3.1 Description of the Study Area

The research was conducted in Addis Ababa City, the capital and largest city of Ethiopia. Addis Ababa is the country's economic and financial hub, hosting numerous banks, businesses, and institutions. It is also a central hub for technological innovation, including the adoption and use of e-banking services.

Dashen Bank, one of the leading private banks in Ethiopia, has a well-established presence in Addis Ababa, with a significant customer base utilizing its e-banking services. The study focused on five selected branches within the city, chosen for their high number of e-banking users. These branches represent diverse geographic locations and customer demographics, providing a comprehensive view of customer satisfaction in the context of e-banking. They include Kera, African Union, Amoudi, Bole Michael and Leghar branches.

## 3.2 Research Approach and Design

### 3.2.1 Research Design

Saunders et al. (2007) define research design as the overall plan for addressing research questions. This study adopted a causal research design, which is used to measure the impact of specific changes on existing assumptions by establishing cause-and-effect relationships. Causal research is particularly useful for testing hypotheses and providing explanations. The choice of this design is justified by the study's objective—to investigate the effect of electronic banking on customer satisfaction at selected Dashen Bank branches in Addis Ababa. Since e-banking is a key driver of the transition toward a cashless society, understanding its

influence on customer satisfaction requires a structured approach that identifies causal links rather than mere correlations.

### 3.2.3 Research Approach

Research approaches provide a framework for the entire research process, from broad assumptions to specific methods of data collection, analysis, and interpretation. These decisions, while interconnected, do not necessarily follow a fixed order in practice or presentation (Phillips & Burbules, 2000). Generally, there are three main types of research approaches: qualitative, quantitative, and mixed methods. Qualitative research focuses on words and descriptions (quality), while quantitative research emphasizes numbers and statistical data (quantity). The mixed approach combines both qualitative and quantitative elements (Phillips & Burbules, 2000).

For this study, a quantitative methods approach was utilized, incorporating statistical tests such as correlation and regression to examine the relationship between independent and dependent variables. The reason for choosing the quantitative research approach was to meet to meet the purpose of examining how an independent variable affects a dependent variable quantitatively. This approach also helped describe each variable and explore the demographic characteristics of the respondents. The study has targeted e-banking customers from selected Dashen Bank branches in Addis Ababa, using purposive sampling to identify relevant participants.

## 3.4 Target Population, Sample Size and Sampling Techniques

### 3.4.1 Target Population of the Study

The study targets e-banking customers of Dashen Bank from five selected branches in Addis Ababa (Kera, African Union, Amoudi, Bole Michael, and Leghar). The population includes both male and female customers who are 18 years or older**,** literate, and actively use Dashen Bank's e-banking services. This group is chosen to ensure that the respondents are capable of providing informed feedback on their satisfaction with the bank's e-banking offerings.

### 3.4.2 Sample Size

Currently, there are 196 Dashen Bank branches in Addis Ababa. To ensure a representative and manageable sample, the researcher has selected five branches based on specific criteria such as transaction volume,

customer diversity, and the level of E-Banking adoption. The choice of five branches balances the need for comprehensive coverage while maintaining feasibility in data collection. A total of 96 E-Banking users from these branches were surveyed, providing an adequate sample size at a 90% confidence level.

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

$$n = \frac{2{,}428}{1+2{,}428\ 0.10^{\ 2}} = \mathbf{96}$$

Where, n =sample size, N=population size and e= level of precision considered 10%.

| No. | Name of Branches | Number of E-Banking Users |
|---|---|---|
| **1.** | Kera | 748 |
| **2.** | Africa Union | 447 |
| **3.** | Amoudi | 389 |
| **4.** | Bole Michael | 240 |
| **5.** | Leghar | 604 |
| | Total E-Banking Users | 2,428 |

Data Source: An Interview with a Manager at Dashen Bank Kera Mr. Tsegab Ayele.

**Table 3.1: Sample Size**

### 3.4.3 Sampling Method

Data was collected from customers of five selected Dashen Bank branches. The study employed a convenience sampling method, as this approach enabled the researcher ensure the representativeness of the sample. By targeting specific customers who were likely to provide meaningful and relevant insights, the method ensured that the data collected is rich and directly aligned with the study's objectives. This is particularly useful in exploratory research, where depth of understanding is prioritized over generalizability. Given the focus on gaining detailed insights into specific banking phenomena, purposive sampling is justified as it allows for the selection of participants who can offer the most informative perspectives.

### 3.5 Tools for Data Collection

The data used to conduct this study have been the primary data gathered through questionnaires. The questionnaires were physically distributed to the customers of Dashen Banks in Addis Ababa. A structured questionnaire was developed, drawing upon the E-SERVQUAL model to assess customer satisfaction with e-banking services.

The first section was devoted to basic demographic details of the respondents, such as age, gender, educational background, and frequency of e-banking usage. This information has helped contextualize the responses and identify patterns in customer satisfaction based on different user profiles. The subsequent section of the questionnaire comprise a series of closed-ended questions designed to capture responses on a Likert scale, ranging from Strongly Disagree (1) to Strongly Agree (5). This tool ensures systematic and quantifiable data collection, facilitating statistical analysis. The last section was qualitative and required detailed responses from participants for deeper insights concerning challenges faced by users in E-Banking.

#### 3.5.1 Validity and Reliability

The validity and reliability of any test or measuring instrument used in data collection are crucial. Validity refers to the extent to which a test or measuring device accurately measures what it is intended to measure, while reliability refers to the consistency of the test, survey, observation, or other measurement tools (Phillips & Burbules, 2000). For this study, Cronbach's Alpha (α) was conducted to assess the reliability of the instrument, ensuring its consistency. Additionally, to determine the relationships between the variables and test the research hypothesis, correlation and regression analysis were used.

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .917 | .916 | 8 |

Before conducting the main analysis, a reliability test was performed to assess the internal consistency of the items used to measure each variable. This step was essential to ensure that the items consistently reflected the intended constructs. Conducting the reliability analysis after data collection also helped determine whether respondents interpreted and responded to the items in a consistent manner.

To assess the reliability of the questionnaire, Cronbach's Alpha was used, as it is the most commonly applied method for evaluating the internal consistency of surveys composed of multiple Likert-scale items**.** Reliability analysis is particularly important for confirming that the instrument consistently measures the intended constructs. According to Hair *et al*. (2005), a Cronbach's Alpha value above 0.700 indicates an acceptable level of reliability. Accordingly, the reliability of the questionnaire items was tested using Cronbach's Alpha to ensure the materials used in this research were statistically sound and dependable. Thus, the reliability coefficient of the above items for all variables is above 90%. This implies that the items were internally consistent to measure variables and understandable to the respondents too.

| **Item Statistics** | | | |
|---|---|---|---|
| | Mean | Std.Deviation | N |
| Efficiency | 19.38 | 2.074 | 96 |
| System Availability | 12.13 | 1.446 | 96 |
| Fulfilment | 19.70 | 1.953 | 96 |
| Privacy | 19.40 | 1.878 | 96 |
| Responsiveness | 20.69 | 1.791 | 96 |
| Compensation | 11.93 | 1.371 | 96 |
| Contact | 12.24 | 1.220 | 96 |
| Customer satisfaction | 15.42 | 1.587 | 96 |

**Table 3.2: Validity and Reliability**

Table 3.2 provides a comprehensive summary of key performance metrics for various service dimensions. Each row represents a specific aspect of service quality, such as Efficiency, System Availability, Fulfilment, Privacy, Responsiveness, Compensation, Contact, and Customer Satisfaction. For each aspect, three statistics are reported:

-Mean: The average score received, indicating the general level of performance for that aspect.

-Std. Deviation: The standard deviation, which measures the variability or consistency of the scores. A lower value suggests more consistent responses, while a higher value indicates greater variability.

- N: The sample size, which is 96 for all aspects, showing that each metric is based on the same number of observations.

This table allows for quick comparison across different service dimensions, helping to identify strengths (e.g., high mean scores and low variability) and areas for improvement (e.g., lower mean scores or higher variability). For example, Responsiveness has the highest mean (20.69), suggesting it is a strong area, while Compensation and System Availability have lower means (11.93 and 12.13, respectively), indicating potential areas for focus. The consistent sample size ensures comparability across all metrics.

### 3.6 Model Specification

The model formulated for this study is designed to test the research hypothesis established earlier. Most of the dependent variables included in the model are based on and adapted from Parasuraman et al.'s (2005) E-SRVQUAL framework.

$$CS = \alpha + B_1 FUL + B_2\, EFF + B_3\, SYS + B_4 PRV + B_5 RES + B_6 COM + B_7\, CON + e_i$$

*Where:*

FUL: Fulfillment, the extent to which the service delivers what it promises.
EFF: Efficiency.
SYS: System Availability.
PRV: Privacy.
RES: Responsiveness.
COM: Compensation.
CON: Contact.

**α**: is a constant, represents the customer satisfaction when all independent variables are zero.

**$B_1$, $B_2$...$B_7$**: are the coefficient, in which every marginal change in variables on customer satisfaction independency affects correspondingly.

$e_i$: **Error term**, accounting for unobserved factors affecting CS.

### 3.7 Data Analysis

At the stage of data analysis, used inferential analysis methods this method uses to make interpretations about a set of data. The analysis of the data enables to examine the relationship between dependent and independent variables, and which sets of variables predict customer satisfaction. The data was processed

using the Statistical Package for Social Sciences (SPSS) Version 25. To assess the reliability and consistency of the instrument, Cronbach's Alpha (α) analysis was conducted. Additionally, correlation and regression analysis were utilized to examine relationships between variables and test the research hypothesis.

### 3.9 Ethical Considerations

Ethical considerations are crucial in ensuring the integrity of the research process. Before data collection began, the purpose, objectives, and intentions of the study were explained verbally to each respondent by the data collectors. To facilitate this process, support letter from St. Mary University and student identification cards were provided. Throughout the research, any form of unethical practices or scientific misconduct aimed at altering or fabricating results to meet the researcher's needs were strictly avoided, ensuring that the study adhered to its stated objectives.

# CHAPTER FOUR
# RESULT AND DISCUSSION

The study's quantitative results are shown in this section, with particular attention paid to the regression relationships between the independent and dependent variables. Every variable was noted in various cross-sectional units. Descriptive statistics, Pearson correlation analysis, tests of linear regression assumptions, and the final regression results pertinent to the study are thus included in this section.

## 4.1 Demographic Analysis

### 4.1.1 Response Rate

A total of 100 questionnaires were distributed to customers across five Dashen Bank branches in Addis Ababa. The response rates are presented in the table below.

| **Items** | **Response Rate** | |
|---|---|---|
| | **Number** | **Percent** |
| Sample Size | 96 | 100% |
| Collected | 96 | 96% |
| Unengaged Response | - | - |
| Uncollected | - | - |
| Total | 96 | 96% |

Source: Survey Data, 2025.

**Table 4.1 Response Rate**

From the total of 96 questionnaires distributed, all were returned. As a result, 96 valid responses were retained and used for the analysis.

### 4.1.2 Demographic Characteristics of Respondents

Key demographic features of the customer market considered include gender, age groups, marital status, educational level, monthly income, and occupation of customers. Gender was analyzed to find out whether male or female customers were more active in banking transactions. The age range variable helped to identify the dominant age ranges that performed branch service transactions, mainly at the African Union and Kera branches. Educational level was to assess engaging customer groups based on the most common educational background. Marital status was considered to assess which category of

single, married, etc., was more involved at the Amoudi and Bole Michael branches. Monthly income referred to the average monthly earnings of customers; the occupation of customers was further analyzed to understand what kinds of jobs were held and how they could entail longer-lasting relationships with the bank, especially at the African Union and Kera branches. The detailed findings for each demographic characteristic are described below.

| | | Count | Percent | Valid Percent | Cumulative percent |
|---|---|---|---|---|---|
| sex | Male | 52 | 54.2% | 54.2% | 54.2 |
| | Female | 44 | 45.8% | 45.8% | 100.0 |
| age | 18-26 | 30 | 31.3% | 31.3% | 31.3 |
| | 27-35 | 35 | 36.5% | 36.5% | 67.7 |
| | 36-43 | 27 | 28.1% | 28.1% | 95.8 |
| | Above 44 | 4 | 4.2% | 4.2% | 100.0 |
| marital status | Married | 39 | 40.6% | 40.6% | 40.6 |
| | Unmarried | 42 | 43.8% | 43.8% | 84.4 |
| | Divorced | 11 | 11.5% | 11.5% | 95.8 |
| | Widowed | 4 | 4.2% | 4.2% | 100.0 |
| education background | Diploma Holder | 25 | 26.0% | 26.0% | 26.0 |
| | BSc/BA | 38 | 39.6% | 39.6% | 65.6 |
| | MSc/MA | 20 | 20.8% | 20.8% | 86.5 |
| | Others | 13 | 13.5% | 13.5% | 100.0 |
| occupation | Business | 24 | 25.0% | 25.0% | 25.0 |
| | Public sector employee | 27 | 28.1% | 28.1% | 53.1 |
| | Private sector employee | 21 | 21.9% | 21.9% | 75.0 |
| | profession/Self employed | 18 | 18.8% | 18.8% | 93.8 |
| | Other | 6 | 6.3% | 6.3% | 100.0 |
| | 1001-3000 | 5 | 5.2% | 5.2% | 5.2 |
| | 3001-6000 | 22 | 22.9% | 22.9% | 28.1 |
| | 6001-9000 | 39 | 40.6% | 40.6% | 68.8 |
| | Above 9000 | 30 | 31.3% | 31.3% | 100.0 |

**Table 4.2: Demographic Profile of Respondents**
Source: Survey Data, SPSS Output 2025.

The respondent profile numbers 54.2% male and 45.8% female respectively. This slight imbalance has male respondents outnumbering female counterparts. The educational background of the respondents reveals that 26% hold a diploma, 39% possess a BSc (BA) degree, 20% hold an MSc (MA), and the remaining 13% are classified under ‘Other’. The predominance of BSc (BA) degree holders suggests a generally well-educated respondent pool. This level of knowledge enhances the legitimacy of their

answers and suggests a substantial input to the evaluation of the efficacy of the bank's service delivery procedures and the e-banking system.

Occupational profile reveals that, 28% of the respondents work in the public sector, 21% work in the private sector, 18% are self-employed, 6% are in the 'Other' category, and 25% are business owners. Such distribution suggests that people under the 'other' category make up the least percentage of the sample, while the bulk of respondents work for the government.

Based the age profile of the respondents, 31% of the respondents are between the ages of 18 and 26, 36% are between the ages of 27 and 35, 28% are between the ages of 36 and 43, and 4% are older than 44. As a result, the majority of responders fall within the 27–35 age range, which is often seen as a tech-savvy and productive cohort. This implies that people in this age bracket are the ones that use electronic banking the most.

As shown in the table above, in terms of monthly revenue, 17% of the respondents earn below 1,000-birr, 24% earn between 1,001–3,000 birr, 22% fall within the 4,001–6,000-birr income range, 25% earn between 6,001–9,000 birr, and 10% earn above 9,001-birr. The largest proportion of respondents which make up 25% are within the 6,001–9,000-birr income bracket, indicating that this income group represents the majority among the surveyed participants.

As indicated in the table above, 40.6% of the respondents were married, 43.8% were unmarried, 11.5% were divorced, and 4.2% were widowed. This shows that the majority of the respondents were unmarried, representing half of the total sample.

## 4.2 Descriptive Statistics

### 4.2.1 Efficiency

**Descriptive Statistics**

| Efficiency | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| E-banking makes easy to find what service i need. | 96 | 1 | 5 | 3.68 | 1.041 |
| E-banking makes easy to get anywhere the service | 96 | 2 | 5 | 3.48 | .917 |
| E-banking enables me to complete a transaction quickly. | 96 | 3 | 5 | 4.30 | .667 |

| | | | | | |
|---|---|---|---|---|---|
| E-banking enables a wide service delivery process at once. | 96 | 3 | 5 | 4.15 | .711 |
| E-banking is fast to get service. | 96 | 2 | 5 | 3.77 | .957 |
| Valid N (listwise) | 96 | | | | |

Source: Survey Data, SPSS Output 2025.

**Table 4.3: Descriptive Statistics of Efficiency**

The aforementioned table's mean values range from 3.48 to 4.30, suggesting overall positive perceptions toward e-banking functionality and speed. Standard deviations (SD) range from .667 to 1.041, showing relatively moderate to low variability in responses.

Concerning item-by-item analysis from the above table respondents perceived that E-banking makes easy to find the service they need with Mean: 3.68 and SD: 1.041 indicating moderate satisfaction with how easily users can navigate and identify services. The relatively high SD implies mixed opinions. The other item pertains to the statement E-banking makes services easy to get anywhere with Mean: 3.48 and SD: .917. This is the lowest mean in the table, suggesting users are less satisfied with the geographical accessibility of services. There is some variation in perception. Another statement concerns with E-banking's assistance to complete a transaction quickly with Mean: 4.30 and SD: .667. With the highest mean, this shows broad agreement that e-banking is effective at completing transactions. Consistency among users is seen in the low SD.

In relation to the item with statement "E-banking enables a wide service delivery process at once" with *Mean:* 4.15 | *SD:* .711. Users largely agree that e-banking allows for broad service access, with relatively low variation. The last item measured incorporated a statement "E-banking is fast to get service." This item gained *Mean:* 3.77 and *SD:* .957. This shows that overall satisfaction with account accessibility is moderately high. Responses to the speed-related items were a little more varied.

With continuously high means and low SDs, overall efficiency (speed and rapid service) is the feature of e-banking that is most favorably appraised. Usability and coverage should be improved, as seen by the considerably lower and more inconsistent ratings for navigation and service accessibility from every

location. Although the data indicates that users are generally satisfied with the speed and scope of e-banking services, accessibility and the simplicity of finding particular services may need to be improved.

Users rate e-banking highly for speed and transaction completion, particularly for quick service delivery (mean = 4.30). However, satisfaction drops for service accessibility and ease of navigation, with lower means (3.48–3.68) and higher standard deviations. To improve perceived efficiency, the system should enhance user interface design and expand geographic accessibility.

### 4.2.2. System availability

**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| E-banking system is always available for Service | 96 | 1 | 5 | 3.68 | 1.041 |
| E-banking system delivers service appropriately. | 96 | 3 | 5 | 4.30 | .667 |
| The system not fails to deliver what Promised/ordered. | 96 | 3 | 5 | 4.15 | .711 |
| Valid N (listwise) | 96 | | | | |

Source: Survey Data, SPSS Output 2025.

**Table 4.4: Descriptive Statistics of System Availability**

The statement “E-banking system is always available for service” obtained a mean score of 3.68 with a relatively high standard deviation of 1.041. This implies that although most users believe the system is accessible, there is a significant range in user experiences.

On the other hand, “E-banking system delivers service appropriately” had the highest mean of 4.30 and the lowest standard deviation at .667, demonstrating the high degree of consistency in user perception and the overwhelming agreement that services are provided appropriately. This indicates a high degree of dependability and contentment with the operational performance of the system.

Lastly, the item “The system does not fail to deliver what is promised or ordered” also received a high mean of 4.15 and a low standard deviation of .711. This shows that users have a high degree of

confidence in the e-banking system's dependability and integrity in providing services, indicating that they generally trust it to live up to its promises.

Although users are generally happy with the precision and dependability of service delivery, there is always opportunity for development in terms of guaranteeing constant availability and extending smooth access across various places.

Users express strong confidence in the e-banking system's ability to deliver promised services accurately and reliably, as shown by high mean scores (4.30 and 4.15) and low variability. However, the relatively lower mean (3.68) and higher standard deviation for system availability suggest inconsistent access experiences among users. To enhance satisfaction, the bank should focus on improving system uptime and ensuring uniform accessibility across all service points.

### 4.2.3. Fulfillment

**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| E-banking helps to deliver service according to your order. | 96 | 2 | 5 | 4.18 | .725 |
| E-banking makes service available for Delivery within a suitable time frame. | 96 | 2 | 5 | 4.22 | .714 |
| E-banking allows sending and receiving service order from any branch. | 96 | 1 | 5 | 3.68 | 1.041 |
| E-banking is truthful about its service offerings. | 96 | 2 | 5 | 3.48 | .917 |
| E-banking delivers accurate transaction Services as you desired | 96 | 3 | 5 | 4.15 | .711 |
| Valid N (listwise) | 96 | | | | |

Source: Survey Data, SPSS Output 2025.

**Table 4.5: Descriptive Statistics of Fulfillment**

The item “E-banking helps to deliver service according to your order” received a high mean score of 4.18, with a standard deviation of .725, showing that the majority of consumers concur that e-banking consistently provides the services they have requested. The comparatively low variability indicates that the system can consistently meet service expectations for the user.

Similarly, “E-banking makes service available for delivery within a suitable time frame” achieved a slightly higher mean of 4.22, paired with a standard deviation of .714. This indicates that users are highly satisfied with the promptness and effectiveness of the services provided. The majority of consumers believe the system is prompt and responsive, which strengthens their faith in the platform's ability to function dependably.

The statement “E-banking allows sending and receiving service orders from any branch” had a mean of 3.68 and a relatively high standard deviation of 1.041, reflecting mixed perceptions. Although many users find this function accessible, some might have run into technical or branch-related restrictions that limit the versatility of the service.

“E-banking is truthful about its service offerings” received the lowest mean score at 3.48 and a standard deviation of .917, indicating moderate trust levels. This shows that while people are not very critical, there may be some skepticism or gaps in communication between what is offered and what is delivered.

Lastly, “E-banking delivers accurate transaction services as you desired” earned a mean of 4.15 with a standard deviation of .711, showing users generally believe the platform performs with transactional precision and reliability. Users are generally quite happy with the e-banking services timeliness, accuracy, and accessibility. Nonetheless, there is need for development in areas pertaining to branch-wide functionality and service providing openness.

Users report high satisfaction with timely and accurate service delivery via e-banking, as reflected by strong mean scores for promptness (4.22) and accuracy (4.15). However, lower scores for branch-wide service access (3.68) and truthfulness of offerings (3.48) highlight concerns about service consistency and transparency. Improving system-wide functionality and aligning service claims with actual delivery will help enhance user trust and overall fulfillment satisfaction.

### 4.2.4. Privacy

| Descriptive Statistics | | | | | |
|---|---|---|---|---|---|
| | N | Minimum | Maximum | Mean | Std. Deviation |
| E-banking enables to protect my personal bank account in formation | 96 | 2 | 5 | 4.18 | .725 |
| E-banking does not share my personal transaction with other. | 96 | 2 | 5 | 4.22 | .714 |
| E-banking protects information about my financial transaction securely. | 96 | 2 | 5 | 3.84 | .875 |
| E-banking allows me to control my account balance | 96 | 1 | 5 | 3.68 | 1.041 |
| E-Banking Provides safety and security | 96 | 2 | 5 | 3.48 | .917 |
| Valid N (listwise) | 96 | | | | |

Source: Survey Data, SPSS Output 2025.

**Table 4.6: Descriptive Statistics of Privacy**

The statement “E-banking enables to protect my personal bank account information” received a relatively high mean score of 4.18 with a standard deviation of .725, indicating that most users believe the platform is effective in safeguarding their personal banking details. The low variability suggests consistent satisfaction among users regarding this aspect of data protection.

Similarly, “E-banking does not share my personal transaction with others” scored a mean of 4.22, the highest in this group, with a standard deviation of .714. This reflects a strong user perception that privacy is respected, and the platform ensures confidentiality in handling transaction data.

In contrast, “E-banking protects information about my financial transaction securely” yielded a slightly lower mean of 3.84 and a standard deviation of .875, suggesting a more varied perception. While the general view is still positive, some users may have concerns or inconsistent experiences with data security, possibly reflecting anxiety over breaches or lack of clarity in security measures.

The item “E-banking allows me to control my account balance” had a mean of 3.68 and a high standard deviation of 1.041, indicating more divergent opinions among users. While some find it easy to monitor their account status, others might face usability issues or system limitations that hinder full control over their balances.

Lastly, “E-banking provides safety and security” scored the lowest mean at 3.48 with a standard deviation of .917, suggesting moderate confidence in overall system security. This lower score, combined with relatively wide variation, may point to user skepticism or gaps in communication regarding the platform’s protective mechanisms.

Overall, users express strong confidence in privacy protection, particularly regarding the non-disclosure of transaction details and account information security. However, concerns remain around general safety features and account control, indicating a need for enhanced security communication, interface improvements, or user education to boost trust and consistency in the user experience.

Users express strong satisfaction with privacy, especially regarding non-disclosure of transaction data (mean = 4.22) and protection of account information (mean = 4.18), showing trust in e-banking confidentiality. However, lower satisfaction with account control (mean = 3.68) and overall security (mean = 3.48) reflects concerns about usability and safety assurance. To enhance trust, the bank should improve transparency in security features, user education, and system interfaces for better control and perceived protection.

### 4.2.5. Responsiveness

**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| E-banking system allows for correcting transaction errors | 96 | 3 | 5 | 4.30 | .667 |
| E-banking system handles problems well | 96 | 3 | 5 | 4.15 | .711 |
| E-banking offers a meaningful guarantee | 96 | 2 | 5 | 4.18 | .725 |
| E-banking is responsive to confirm my Transaction through SMS. | 96 | 2 | 5 | 4.22 | .714 |

| | | | | | |
|---|---|---|---|---|---|
| The bank takes care of problems through e-banking. | 96 | 2 | 5 | 3.84 | .875 |
| Valid N (listwise) | 96 | | | | |

Source: Survey Data, SPSS Output 2025.

**Table 4.7: Descriptive Statistics of Responsiveness**

The item “E-banking system allows for correcting transaction errors” received the highest mean score of 4.30 with a standard deviation of .667, indicating that users have a strong and consistent belief that the system is effective at correcting mistakes and maintaining transaction accuracy. This suggests a high level of confidence in the system’s reliability and corrective functionality.

Similarly, “E-banking system handles problems well” had a high mean of 4.15 and a standard deviation of .711, showing general agreement that the platform is capable of managing issues effectively. The relatively low variability reflects consistent user experience with problem resolution.

The statement “E-banking offers a meaningful guarantee” scored a mean of 4.18 and a standard deviation of .725, revealing that users have faith in the system's ability to deliver on its service promises with assurance and dependability. This implies that consumers of e-banking believe the system is reliable and supported by adequate assurances or remedies.

The item “E-banking is responsive to confirm my transaction through SMS” also received a high mean of 4.22 with a standard deviation of .714, demonstrating a high level of satisfaction with real-time communication and transaction verification, both of which are essential for fostering user confidence in digital financial services.

Finally, “The bank takes care of problems through e-banking” had a slightly lower mean of 3.84 and a standard deviation of .875, indicating that although a large percentage of users concur with this statement, a sizable portion hold less positive opinions, maybe as a result of inconsistent problem-solving practices or delayed communication.

Strong customer satisfaction with error repair, problem solving, and transaction confirmations is revealed by the statistics, indicating that the system is operating effectively. To satisfy all user expectations, however, it seems that aspects like general response and customer support via e-banking platforms need to be improved in terms of speed and consistency.

Customers express strong satisfaction with the e-banking system's responsiveness, especially in correcting errors (mean = 4.30) and confirming transactions via SMS (mean = 4.22), suggesting high system reliability. They also perceive meaningful service guarantees and effective problem handling, though with slightly lower satisfaction for general issue resolution (mean = 3.84). To improve user experience further, the bank should enhance consistency and speed in addressing broader e-banking problems through responsive customer support.

### 4.2.6. Compensation

**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| The bank compensates me for problems it creates | 96 | 2 | 5 | 3.48 | .917 |
| The bank compensates me if what I ordered doesn't arrive on time | 96 | 3 | 5 | 4.30 | .667 |
| The bank recovers error and corrects the transaction. | 96 | 3 | 5 | 4.15 | .711 |
| Valid N (listwise) | 96 | | | | |

Source: Survey Data, SPSS Output 2025.

**Table 4.8: Descriptive Statistics of Compensation.**

The statement "The bank compensates me for problems it creates" received the lowest mean score of 3.48 and a standard deviation of .917, indicating moderate agreement among users. The comparatively large range implies that although some consumers have had favorable experiences with compensation, others could believe the bank is inconsistent or less responsive when it comes to handling client losses or poor customer service.

In contrast, "The bank compensates me if what I ordered doesn't arrive on time" received the highest mean of 4.30 and a low standard deviation of .667, reflecting strong agreement and consistent satisfaction. This shows a dependable and customer-focused service philosophy in time-sensitive transactions and shows that users generally trust the bank to fulfill its delivery commitments and compensate for delays.

The item “The bank recovers error and corrects the transaction” had a mean of 4.15 with a standard deviation of .711, suggesting that users are generally confident in the bank’s ability to identify and fix transaction errors. The consistency of responses reflects a positive perception of the bank’s technical capacity and accountability in handling mistakes.

According to the data, users greatly appreciate and have a favorable opinion of the bank’s time-based compensation and error-correction procedures, which strengthens confidence in its online services. General compensation for more general service problems, however, is perceived as being applied less consistently, indicating the need for more prompt and transparent customer service and redress procedures.

Customers show high satisfaction with the bank’s compensation for delayed services (mean = 4.30) and error correction (mean = 4.15), reflecting trust in time-sensitive support and technical reliability. However, general compensation for service issues received the lowest satisfaction (mean = 3.48) with high variability, suggesting inconsistency in handling broader customer grievances. To strengthen customer trust, the bank should standardize and clearly communicate its general compensation and redress policies.

### 4.2.7. Contact

**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| E-banking provides a telephone number to get information. | 96 | 2 | 5 | 4.18 | .725 |
| The bank has customer service representative available online / on telephone | 96 | 2 | 5 | 4.22 | .714 |
| The bank offers the ability to speak to assistance person if there are problems occur. | 96 | 2 | 5 | 3.84 | .875 |
| Valid N (listwise) | 96 | | | | |

Source: Survey Data, SPSS Output 2025.

**Table 4.9: Descriptive Statistics of Contact.**

The item “E-banking provides a telephone number to get information” received a high mean score of 4.18 with a standard deviation of .725, suggesting that most users are satisfied with the availability of contact information. Building trust in digital banking requires a consistently favorable phone-based assistance experience, which is implied by the comparatively low fluctuation.

The statement “The bank has customer service representatives available online or on telephone” scored the highest mean in this group at 4.22 with a standard deviation of .714, reflecting strong user agreement. The success of the bank's customer care infrastructure across digital channels is reinforced by the fact that users believe its support staff to be responsive and easily available.

In contrast, “The bank offers the ability to speak to an assistance person if problems occur” had a lower mean score of 3.84 and a higher standard deviation of .875. The larger variance indicates that some users may have encountered obstacles or delays in contacting human support during problem resolution, maybe as a result of lengthy wait times or restricted live assistance hours, even if users generally concur with this statement.

In general, users believe that the e-banking system offers sufficient and easily available channels of communication, especially when it comes to giving contact information and ensuring staff availability. To boost customer happiness and encourage responsiveness, it could be better to guarantee immediate access to human care in times of need.

Customers are highly satisfied with the availability of contact information and online/telephone customer service, as shown by high mean scores (4.18 and 4.22) and low variability. However, satisfaction drops slightly (mean = 3.84) when it comes to actually speaking with a support person during problems, indicating occasional access issues. To improve customer trust and responsiveness, banks should enhance real-time access to human support during critical situations.

### 4.2.8. Customer satisfaction

| Descriptive Statistics | | | | | |
|---|---|---|---|---|---|
| | N | Minimum | Maximum | Mean | Std. Deviation |
| I am satisfied by application of e-banking | 96 | 1 | 5 | 3.73 | .840 |
| I am satisfied by e-banking to informed me by SMS | 96 | 2 | 5 | 3.65 | .894 |
| I am satisfied by e-banking 24 hrs. on including holiday via ATM, M-banking... | 96 | 3 | 5 | 4.06 | .792 |
| I am satisfied by e-banking to always not to visit bank in urgent case. | 96 | 3 | 5 | 3.98 | .754 |
| Valid N (listwise) | 96 | | | | |

Source: Survey Data, SPSS Output 2025.

**Table 4.10: Descriptive Statistics of Customer Satisfaction**

The highest satisfaction was recorded for the item "I am satisfied by e-banking 24 hrs. on including holiday via ATM, M-banking...", which had a mean score of 4.06 and a low standard deviation of .792, indicating strong and consistent approval of the 24/7 availability of e-banking services. Similarly, "I am satisfied by e-banking to always not to visit bank in urgent case" scored a high mean of **3.98** with a standard deviation of .754, showing that users value the convenience e-banking provides in avoiding physical bank visits during urgent situations.

On the other hand, "I am satisfied by application of e-banking" had a mean of 3.73, and "I am satisfied by e-banking to informed me by SMS" received the lowest average satisfaction at 3.65, with standard deviations of .840 and .894, respectively. These higher deviations suggest more varied experiences and potentially lower reliability in these areas.

In conclusion, customers are typically quite satisfied with the availability and ease of e-banking services, but they are somewhat less satisfied—and more inconsistent—with SMS alerts and the overall application experience.

Customers expressed the highest satisfaction with the 24/7 availability of e-banking services and the ability to avoid physical bank visits in urgent cases. Lower satisfaction scores and higher variability

were observed for SMS notifications and overall application performance, indicating inconsistent experiences. This suggests the bank should maintain system availability while improving the reliability and user experience of alerts and app interfaces to boost satisfaction.

### 4.3 Inferential Analysis

#### 4.3.1 Pearson Correlation Analysis

**Correlations**

| | | Efficiency | System Availability | Fulfilment | Privacy | Responsiveness | Compensation | Contact | Customer satisfaction |
|---|---|---|---|---|---|---|---|---|---|
| Efficiency | Pearson Correlation | 1 | .863** | 9.22** | .922** | .920** | .718** | .699** | .863** |
| | Sig. (2-tailed) | | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| | N | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 |
| System Availability | Pearson Correlation | .863** | 1 | .863** | .760** | .710** | .798** | .240* | 1.000** |
| | Sig. (2-tailed) | .000 | | .000 | .000 | .000 | .000 | .018 | .000 |
| | N | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 |
| Fulfillment | Pearson Correlation | 1.000** | .863** | 1 | .922** | .920** | .718** | .699** | .863** |
| | Sig. (2-tailed) | .000 | .000 | | .000 | .000 | .000 | .000 | .000 |
| | N | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 |
| Privacy | Pearson Correlation | .922** | .760** | .922** | 1 | .808** | .518** | .693** | .760** |
| | Sig. (2-tailed) | .000 | .000 | .000 | | .000 | .000 | .000 | .000 |
| | N | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 |
| Responsiveness | Pearson Correlation | .920** | .710** | .920** | .808** | 1 | .476** | .761** | .710** |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | | .000 | .000 | .000 |
| | N | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 |
| Compensation | Pearson Correlation | .718** | .798** | .718** | .518** | .476** | 1 | .250* | .798** |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | .000 | | .014 | .000 |
| | N | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 |
| Contact | Pearson Correlation | .699** | .240* | .699** | .693** | .761** | .250* | 1 | .240* |
| | Sig. (2-tailed) | .000 | .018 | .000 | .000 | .000 | .014 | | .018 |
| | N | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 |
| Customersatisfaction | Pearson Correlation | .863** | 1.000** | .863** | .760** | .710** | .798** | .240* | 1 |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | .000 | .000 | .018 | |
| | N | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 |

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

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Survey Data, SPSS Output 2025.

**Table 4.11: Correlation Result.**

The Pearson correlation coefficient (r) is used to measure the strength and direction of a linear relationship between two variables (Cronk, 2008). The value of the coefficient ranges from –1 to +1. A positive correlation indicates that as one variable increases, the other also increases, while a negative correlation suggests an inverse relationship. The closer the absolute value of r is to 1, the stronger the relationship between the two variables (Pallant, 2005).

The Pearson correlation analysis shows that there are substantial and statistically significant correlations between each of the independent components and the dependent variable in this study, customer satisfaction. Improvements in system availability are precisely aligned with higher customer satisfaction in e-banking, according to the analysis, which shows a perfect and significant positive connection between system availability and customer satisfaction ($r = 1.000$, $p < 0.01$). With r values of.863 ($p < 0.01$), efficiency and fulfillment also exhibit very strong and statistically significant correlations with customer satisfaction, indicating that customers' opinions of the system's effectiveness and the bank's ability to meet their needs are critical to their level of satisfaction. In a similar vein, Customer Satisfaction also exhibits strong and significant positive relationships with Compensation ($r =.798$, $p < 0.01$), Privacy ($r =.760$, $p < 0.01$), and Responsiveness ($r =.710$, $p < 0.01$). These relationships suggest that prompt error recovery, personal information protection, and prompt issue resolution are important components of a positive E-Banking experience. Despite having the poorest connection with customer happiness ($r =.240$, $p < 0.05$), the Contact variable is nevertheless statistically significant, showing that customer satisfaction is marginally increased by easily accessible communication and support services.

High inter-correlations across a number of independent variables are also shown by the study, indicating internal consistency across the service dimensions. Efficiency and fulfillment have a perfect correlation ($r = 1.000$), and efficiency and privacy have a very good association ($r =.922$). Responsiveness and Contact ($r =.761$), System Availability and Compensation ($r =.798$), and Responsiveness and Privacy ($r =.808$) are other high inter-correlations. These connections show that these aspects of the service are not only significant on their own for customer satisfaction but also have a direct impact on how consumers view and use e-banking services.

In conclusion, by verifying that each of the independent service quality variables has a significant and positive association with customer satisfaction, the Pearson correlation analysis confirms the importance and influence of these parameters in the context of e-banking. The internal consistency of the variables and the absence of any evidently significant multicollinearity problems further reinforce the study model's reliability. These results provide significant support for the study's theoretical framework and identify key predictors of customer satisfaction with online banking services, such as system availability, efficiency, fulfillment, and compensation.

### 4.3.2. Regression Coefficients Result Analysis

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Correlations | | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Zero-order | Partial | Part | Tolerance | VIF |
| 1 | (Constant) | 5.319 | 1.321 | | 4.025 | .000 | | | | | |
| | Efficiency | -.157 | .123 | -.205 | -1.278 | .204 | .624 | -.134 | -.085 | .174 | 5.750 |
| | System Availability | .437 | .117 | .398 | 3.736 | .000 | .619 | .368 | .250 | .394 | 2.539 |
| | Fulfillment | -.046 | .124 | -.057 | -.374 | .709 | .571 | -.040 | -.025 | .192 | 5.198 |
| | Privacy | .342 | .144 | .405 | 2.368 | .020 | .492 | .243 | .158 | .153 | 6.534 |
| | Compensation | .608 | .120 | .525 | 5.050 | .000 | .662 | .472 | .338 | .413 | 2.422 |
| | Contact | -.420 | .129 | -.323 | -3.261 | .002 | .095 | -.327 | -.218 | .456 | 2.192 |

a. Dependent Variable: CustomerSatisfaction

Source: Survey Data, SPSS Output 2025.

**Table 4.12: Regression Coefficients Result**

The regression model investigates the connection between the dependent variable, customer satisfaction, and a number of independent variables, including efficiency, system availability, fulfillment, privacy, compensation, and contact. The model's constant (intercept) is 5.319, indicating that the predicted customer satisfaction score is 5.319 when all predictor variables are zero. This constant indicates a trustworthy baseline level of satisfaction and is statistically significant ($p = 0.000$).

System Availability is one of the independent variables that positively and statistically significantly affects customer satisfaction ($B = 0.437$, $p = 0.000$). This indicates that increased system availability has a significant positive impact on user satisfaction. Similarly, Privacy also

exhibits a significant positive connection with satisfaction (B = 0.342, p = 0.020), showing that customers value the security of their personal information. With the greatest coefficient (B = 0.608, p = 0.000), compensation seems to be the most important component. This suggests that paying consumers for problems they encounter has a significant positive effect on their level of satisfaction overall.

Conversely, Contact exhibits a substantial negative effect (B = -0.420, p = 0.002), indicating that customer satisfaction is decreased by inadequate communication or trouble reaching the service provider. Efficiency and fulfillment, on the other hand, have little to no impact on satisfaction in this model, as evidenced by their lack of statistically significant impacts (p = 0.204 and p = 0.709, respectively).

All variables fall within acceptable ranges, according to collinearity statistics; however, Privacy's Variance Inflation Factor (VIF = 6.534) is marginally higher, suggesting a modest association with other predictors. However, multicollinearity is not a significant issue in this model because none of the VIF values surpass the crucial threshold of 10.

Overall, the findings imply that system availability, privacy protection, and equitable pay have the greatest positive effects on consumer satisfaction. While efficiency and fulfillment seem to have less of an impact in this particular situation, removing obstacles to communication and enhancing consumer interaction channels are equally crucial.

### 4.3.3. Multicollinearity Test Analysis

| Model | | Correlations | | | Collinearity Statistics | |
|---|---|---|---|---|---|---|
| | | Zero-order | Partial | Part | Tolerance | VIF |
| 1 | (Constant) | | | | | |
| | Efficiency | .624 | -.134 | -.085 | .174 | 5.750 |
| | SystemAvailability | .619 | .368 | .250 | .394 | 2.539 |
| | Fulfillment | .571 | -.040 | -.025 | .192 | 5.198 |
| | Privacy | .492 | .243 | .158 | .153 | 6.534 |
| | Compensation | .662 | .472 | .338 | .413 | 2.422 |
| | Contact | .095 | -.327 | -.218 | .456 | 2.192 |

Source: Survey Data, SPSS Output 2025.

**Table 4.13: Multicollinearity Test**

Without adjusting for other variables, the zero-order correlation shows the straightforward relationship between each independent variable and customer satisfaction. Compensation has the highest positive correlation (r = 0.662) among the predictors, followed by Efficiency (r = 0.624) and System Availability (r = 0.619), indicating that these factors are, at least on the surface, favorably related to customer satisfaction. While contact has a very poor association (r = 0.095), suggesting a limited direct connection with pleasure before taking other variables into account, fulfillment (r = 0.571) and privacy (r = 0.492) also exhibit moderately favorable connections.

When all other factors in the model are controlled for, the partial correlation illustrates how strongly each predictor and the dependent variable (consumer happiness) are related. In this case, system availability (0.368) and compensation (0.472) continue to have large partial correlations, indicating that they significantly influence satisfaction prediction even after controlling for other variables. While Efficiency, Fulfillment, and Contact all exhibit negative partial correlations, with Contact showing the most noticeable negative influence (-0.327), Privacy also continues to be significant (0.243). This implies that contact and customer satisfaction have an inverse relationship after other factors are taken into account.

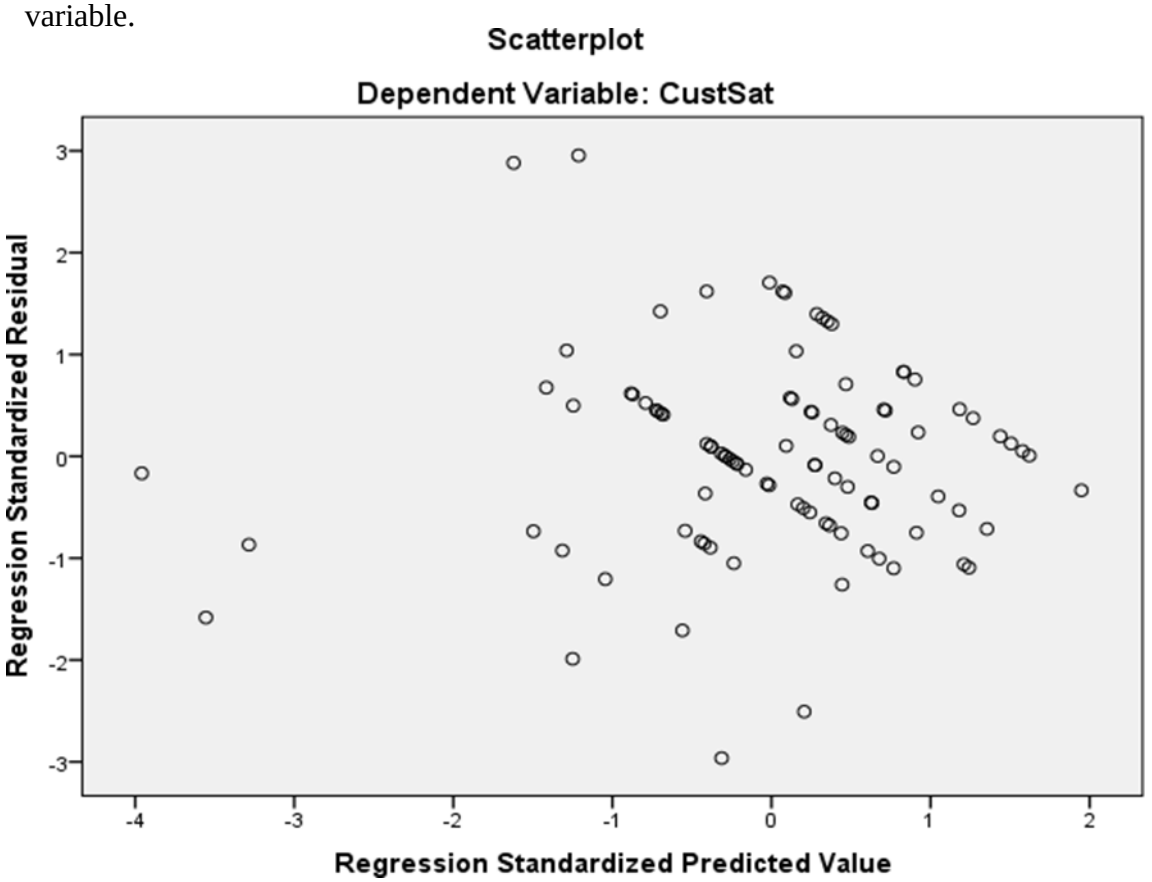
The distinct role that each variable plays in predicting customer satisfaction is shown by the part (semi-partial) correlation. Once more, compensation has the highest score (0.338), followed by privacy (0.158), and system availability (0.250). These figures demonstrate how these three factors together account for a sizable amount of the variation in customer satisfaction. However, if the effects of Efficiency, Fulfillment, and Contact are isolated from each other, they contribute less or adversely.

When it comes to collinearity statistics, multicollinearity—which happens when predictors have a high degree of correlation with one another—is evaluated using the Tolerance and VIF (Variance Inflation Factor) values. A significant multicollinearity issue is indicated by a tolerance value less than 0.1 or a VIF more than 10. Although it is not yet essential, Privacy has the highest VIF in this model at 6.534, which is moderately high and indicates the need to monitor potential multicollinearity. The remaining VIFs show appropriate levels, ranging from 2.192 to 5.750. Multicollinearity is evident overall, yet it is interpretable within reasonable bounds.

After adjusting for other factors, the results indicate that Compensation, System Availability, and Privacy are the most significant and trustworthy indicators of customer happiness, but Efficiency, Fulfillment, and particularly Contact have little or unfavorable distinctive contributions.

### 4.3.4. Heteroscedasticity Test

An important assumption of the classical linear regression model is homoscedasticity**,** which means that the error terms (disturbances) in the population regression function have constant variance across all levels of the independent variables (Gujarati, 2004). To test for the presence of heteroscedasticity the researcher employed a scatter plot test to examine whether the residuals exhibit a constant spread. As shown in Figure 4.1, the residuals appear to be evenly dispersed, indicating no evidence of heteroscedasticity between the predictor variables and the dependent variable.

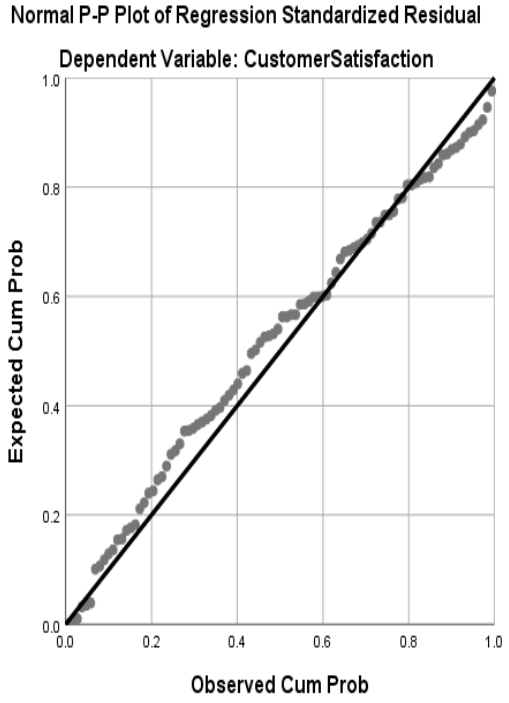



Source: Survey Data, 2025 SPSS Output.

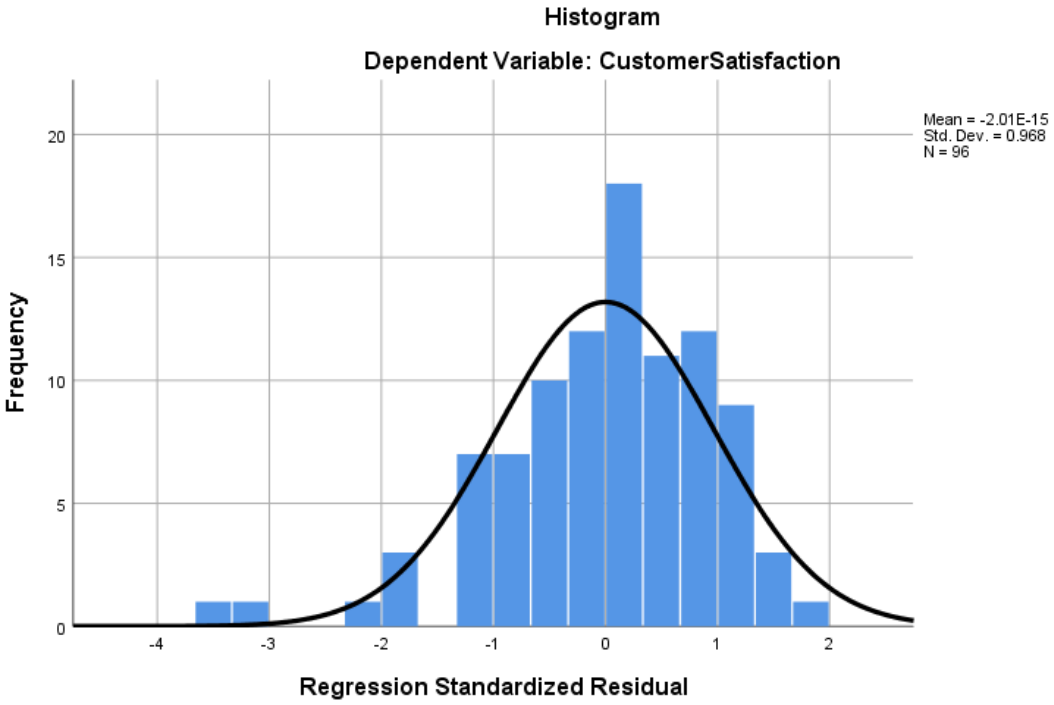
**Figure 4.1 Heteroscedasticity Test**

### 4.3.5. Normality Test

The normality of residuals was assessed using two standard methods: the Normal P-P Plot and the Histogram of Standardized Residuals. In the P-P Plot, the residuals closely followed the diagonal line with only minor deviations at the tails, suggesting no major skewness or outliers and thus supporting the normality assumption. Similarly, the histogram displayed a symmetric, bell-shaped distribution centered around zero, with residuals clustering near the mean (Mean = 0, Std. Dev. = 1), which aligns with expectations for standardized residuals. As such both visual tools confirm that the residuals are approximately normally distributed, validating the normality assumption of linear regression and supporting the reliability of the model's results.




**Source: Survey Data, 2025 SPSS Output.**
Fig. 4.2 Normal P-P Plot of the regression.




Source: Survey Data, 2025 SPSS Output.

**Fig. 4.3 Histogram of the regression.**

### 4.3.6. ANOVATEST Analysis

| ANOVA[a] | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 144.181 | 6 | 24.030 | 22.477 | .000[b] |
| | Residual | 95.152 | 89 | 1.069 | | |
| | Total | 239.333 | 95 | | | |
| a. Dependent Variable: CustomerSatisfaction | | | | | | |
| b. Predictors: (Constant), Contact, Compensation, SystemAvailability, Fulfillment, Efficiency, Privacy | | | | | | |

Source: Survey Data, 2025 SPSS Output.

**Table 4.14: ANOVATEST**

According to the ANOVA table, the regression model that uses the six variables of contact, compensation, system availability, fulfillment, efficiency, and privacy to predict customer satisfaction is statistically significant ($F = 22.477$, $p < .001$). The regression sum of squares (144.181) is much greater than the residual sum of squares (95.152), indicating that the model accounts for a significant amount of the variance in customer satisfaction. This implies that all of the independent variables work together to predict consumer happiness in a significant way, confirming the model's overall efficacy.

### 4.3.7. Model summary Analysis

| Model Summary[b] | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Change Statistics | | | | |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | .776[a] | .602 | .576 | 1.034 | .602 | 22.477 | 6 | 89 | .000 |
| a. Predictors: (Constant), Contact, Compensation, SystemAvailability, Fulfillment, Efficiency, Privacy | | | | | | | | | |
| b. Dependent Variable: CustomerSatisfaction | | | | | | | | | |

Source: Survey Data, 2025 SPSS Output.

**Table 4.15: Model Summary**

With a R value of.776 and a R Square of.602, the model summary demonstrates that the regression model accounts for a substantial amount of the variance in customer satisfaction. This means that the six predictors—Contact, Compensation, System Availability, Fulfillment, Efficiency, and Privacy—account for 60.2% of the variability in customer satisfaction. Despite accounting for the

number of variables, the Adjusted R Square of.576 indicates a strong fit. The average difference between observed and anticipated values is represented by the estimate's standard error, which is 1.034. The model's statistical significance is confirmed by the F-change value of 22.477 and the p-value of.000, indicating that the predictors taken together offer a trustworthy explanation for variations in customer satisfaction.

### 4.4 Hypothesis Test

The regression analysis of results presented in the above tables was more comprehensive and accurate examination of the research hypothesis. Therefore, the regression results obtained from the model were utilized to test these hypotheses. This table summarizes the results of a multiple linear regression analysis where the dependent variable is Customer Satisfaction, and the independent variables are Efficiency, System Availability, Fulfillment, Privacy, Compensation, and Contact which got a direct effect of Customer satisfaction which was measured in terms of Electronic Banking System and its contributions to the Selected Dashen banks under Addis Ababa city Branches.

In the regression model assessing the impact of various factors on Customer Satisfaction, several variables show statistically significant relationships, while others do not. Compensation emerges as the most influential positive predictor, with a high standardized coefficient (Beta = 0.525) and a very significant p-value (p = .000), indicating that when customers feel fairly compensated, their satisfaction increases markedly. Similarly, System Availability is a strong and significant predictor (Beta = 0.398, p = .000), suggesting that reliable and accessible systems greatly enhance customer satisfaction. Privacy also plays a notable role (Beta = 0.405, p = .020), reflecting that customers value the protection of their personal information and that strong privacy measures contribute positively to their overall satisfaction.

Conversely, Contact shows a statistically significant *negative* relationship with customer satisfaction (Beta = -0.323, p = .002). This indicates that poor or frustrating contact experiences—such as difficult customer service interactions—can detract from customer satisfaction, potentially more than other service aspects. On the other hand, Efficiency and Fulfilment do not show statistically significant impacts on satisfaction (p = .204 and p = .709, respectively). Although Efficiency has a negative coefficient, it is not significant, implying that while efficiency might

intuitively seem important, it does not independently predict satisfaction within this model. Similarly, Fulfilment, which incorporates order accuracy or delivery, does not show a meaningful relationship with satisfaction here.

Overall, the findings suggest that while operational factors like availability and compensation are critical, interpersonal experiences (such as customer contact) and data protection also substantially shape customer perceptions. Efforts to enhance these key areas may yield the most significant improvements in satisfaction.

The following hypotheses test were conducted based on the regression results of the study obtained from the regression output for each hypothesis.

**H1: Efficient e-banking operation has statistically significant effect on customer satisfaction.**

Efficiency has a negative unstandardized coefficient (B = -0.157) and a standardized Beta of -0.205, indicating a weak inverse relationship with customer satisfaction. However, this relationship is not statistically significant (p = .204). This suggests that in this model, variations in efficiency do not meaningfully impact customer satisfaction. Customers may expect a baseline level of efficiency, and only extreme inefficiencies might affect their satisfaction.

The results show that efficiency does not have a statistically significant effect on customer satisfaction (p = .204). The weak negative relationship (B = -0.157, Beta = -0.205) suggests that efficiency, as measured in this model, may not influence satisfaction unless it severely declines. Customers likely consider a basic level of efficiency as standard and are more influenced by other service quality factors.

**H2: System availability has statistically significant effect on customer satisfaction.**

The Second hypothesis of this research proposed that System Availability has a positive coefficient (B = 0.437) and a strong standardized Beta of 0.398, with a highly significant p-value (p = .000). This means that better system uptime and accessibility are strong, reliable predictors of higher customer satisfaction. Customers appreciate systems that are consistently available and functional, and this aspect directly contributes to their overall satisfaction.

The findings confirm that system availability significantly and positively affects customer satisfaction. A high beta value (0.398) and strong significance (p = .000) indicate that consistent uptime is a key satisfaction driver. Customers value reliable access, making system functionality essential to e-banking success.

**H3: Fulfillment has statistically significant effect on customer satisfaction.**

Fulfillment shows a small negative coefficient (B = -0.046) and a very low standardized Beta (-0.057), with a non-significant p-value (p = .709). This indicates that fulfillment—involving order completion or service delivery—does not have a measurable impact on customer satisfaction in this analysis. It's possible that customers either take fulfillment for granted or other factors (like compensation or availability) overshadow its role.

The regression results indicate that fulfillment has no significant impact on customer satisfaction (B = -0.046, Beta = -0.057, p = .709). Its weak and negative coefficient suggests it neither strongly contributes to nor detracts from satisfaction. Customers may assume fulfillment as a basic expectation, or its effect may be diluted by stronger predictors like compensation or system availability.

**H4: Privacy contains statistically significant effect on customer satisfaction.**

The regression result shows there is strongly correlated relationship between the privacy and customer satisfaction in E-Banking. Privacy has a positive unstandardized coefficient (B = 0.342) and a relatively high standardized Beta (0.405), with a statistically significant p-value (p = .020). This shows that customers who feel their privacy is respected and protected tend to report higher satisfaction. Privacy is becoming an increasingly important factor in customer experiences, and this result reflects its growing weight in satisfaction outcomes.

The regression results show that privacy has a strong and statistically significant positive effect on customer satisfaction in e-banking (B = 0.342, Beta = 0.405, p = .020). This means customers who

believe their personal information is secure are more likely to be satisfied. As data protection concerns grow, privacy becomes a key driver of trust and satisfaction.

**H5 - Responsiveness has statistically significant effect on customer satisfaction.**

The responsiveness variable demonstrated by the VIF =.000 and Tolerance =.000, which challenge regression assumptions, responsiveness was eliminated by SPSS because of perfect multicollinearity or redundancy with other predictors in the model. Since the model already incorporates highly correlated factors (such System Availability and Privacy) that capture comparable explanatory power, this exclusion is not a significant concern. Moreover, responsiveness was eliminated because it was statistically insignificant in previous models ($p > 0.05$). Without this variable, the model is still statistically sound and robust.

The responsiveness variable was excluded from the regression model due to perfect multicollinearity (VIF = 0.000, Tolerance = 0.000), indicating it was redundant with other predictors like system availability and privacy. Its removal is not problematic since it previously showed no statistical significance ($p > 0.05$). The model remains valid and reliable without it, as the excluded variable's effect is likely captured by the remaining predictors.

**H6: Compensation has statistically significant effect on customer satisfaction.**

The regression result show that there was a positive correlation relationship between the compensation and customer satisfaction. Compensation is the strongest positive predictor of customer satisfaction in this model, with the highest Beta (0.525) and a highly significant p-value ($p = .000$). This suggests that when customers feel fairly compensated—whether through refunds, discounts, or fair pricing—their satisfaction increases substantially. Effective compensation practices can greatly enhance the customer experience and foster loyalty.

The findings reveal that compensation has the strongest positive effect on customer satisfaction, with the highest Beta value (0.525) and strong significance ($p = .000$). This indicates that fair and timely compensation boosts customer satisfaction considerably. Practices like refunds, discounts, or fair pricing enhance trust and loyalty**.**

**H7: Contact possesses statistically significant effect on customer satisfaction.**

Under this Hypothesis Contact has a significant negative impact on customer satisfaction (B = -0.420, Beta = -0.323, p = .002). This implies that negative experiences with customer contact—such as poor communication, delayed responses, or unhelpful service can significantly decrease satisfaction. Improving contact quality (e.g., customer support, responsiveness) could reduce this negative influence and enhance overall satisfaction.

The hypothesis testing confirms that contact significantly affects customer satisfaction, but negatively. The negative coefficient (B = -0.420) and strong significance (p = .002) indicate that poor customer support and communication reduce satisfaction. This suggests that enhancing responsiveness and helpfulness in contact channels is crucial. Addressing this gap could improve overall user experience.

The hypothesis testing results reveal both positive and negative effects among the examined variables. Specifically**,** System Availability**,** Privacy, and Compensation exhibit statistically significant positive effects on customer satisfaction. In contrast, Contact demonstrates a significant negative effect, suggesting that current communication channels may hinder satisfaction. Meanwhile, Efficiency and Fulfillment are not statistically significant predictors, indicating that they do not have a measurable impact on customer satisfaction within this model.

# CHAPTER FIVE
# FINDINGS, CONCLUSION AND RECOMMENDATION

## 5.1 Findings

This study examined the relationship between various dimensions and predictors of customer satisfaction in Dashen Bank's e-banking services across selected Addis Ababa branches. Using data collected from 96 valid respondents, the main findings, driven by both correlation and regression analysis, are as follows:

The demographic profile of the respondents reveals a fairly well-balanced gender mix, with young adults making up most of the population, predominantly aged from 27 to 35 years. Respondents were generally well-educated, economically active, and were largely employees of the public and business sectors. A large percentage earned mid to high range monthly incomes, indicating that they should be familiar with e-banking. Given this profile, the panelists offer credible feedback into electronic banking services.

The findings revealed that system availability, privacy, and compensation are the most significant positive predictors of customer satisfaction. Specifically, system availability ($B = 0.437$, $p < 0.001$) and compensation ($B = 0.608$, $p < 0.001$) showed strong and statistically significant effects, highlighting their critical role in shaping customer perceptions of e-banking services. Privacy also contributed positively to satisfaction ($B = 0.249$, $p < 0.05$), emphasizing the importance of safeguarding customer data in digital banking environments.

Conversely, the dimension of contact demonstrated a significant negative effect ($B = -0.420$, $p < 0.01$), suggesting that challenges in customer communication or support channels adversely affect satisfaction levels.

While efficiency and fulfillment displayed strong positive correlations with customer satisfaction in the Pearson analysis ($r = .863$), they did not retain statistical significance in the regression model due to multicollinearity and low p-values (efficiency, $p = 0.204$; fulfillment, $p = 0.709$). Additionally, responsiveness was excluded from the regression due to perfect multicollinearity (VIF = 0.000).

The overall regression model was statistically significant (ANOVA $F = 22.477$, $p < 0.001$) and explained approximately 60.2% of the variance in customer satisfaction ($R^2 = 0.602$). These results underscore the central role of technological reliability, customer compensation mechanisms, and data privacy in enhance ng satisfaction with e-banking services.

### 5.2 Conclusions

The study concludes that several service quality dimensions significantly influence customer satisfaction in Dashen Bank's e-banking platform. Key contributors include system availability, compensation, and privacy, highlighting that technical reliability, user protection, and corrective mechanisms are of paramount importance to customer perception and loyalty. While efficiency and fulfillment were positively correlated with satisfaction, their impact was diminished in the multivariate model, due to multicollinearity. Contact showed a negative effect, suggesting dissatisfaction with communication channels. Responsiveness, though intuitively important, did not significantly impact customer satisfaction in this model.

The conclusions of the study justify that e-banking plays a vital role in shaping customer satisfaction in the selected Dashen Bank branches. Key service quality dimensions—system availability, privacy, and compensation—demonstrate that customers prioritize reliability, data security, and fair treatment when issues arise. The negative impact of contact highlights weaknesses in customer support systems, suggesting a need for improved communication and responsiveness. Though efficiency and fulfillment matter to customers, their limited statistical significance implies overlapping effects with stronger variables. The findings reinforce the importance of continuously enhancing technological infrastructure and customer engagement strategies. Overall, the study offers clear direction for service improvement in e-banking.

### 5.3 Recommendations

Based on these findings, the following recommendations are made for Dashen Bank:

- Improve system availability by implementing real-time monitoring tools, scheduling regular preventive maintenance, and establishing a rapid-response technical support team to reduce downtime. Prioritize critical system components for redundancy and ensure timely updates to minimize disruptions and maintain consistent service delivery. This is based on system availability's significant positive effect in the regression model. Since system reliability directly contributes to customer trust and satisfaction, Dashen Bank is advised to invest in upgrading its technological infrastructure and ensuring consistent uptime for e-banking services.

- Strengthen compensation mechanisms through developing transparent, automated systems for compensating users when errors or delays occur to reinforce trust and fairness. The recommendation reveals the need to enhance customer trust and satisfaction by improving compensation systems. Transparent, automated processes can ensure timely and fair redress for service failures. This approach reinforces accountability and builds user confidence in the e-banking system.
- Improve privacy measures via continues investigation in cybersecurity and educate customers about privacy protections to increase confidence in digital platforms. Strengthening privacy and data protection mechanisms is recommended because privacy emerged as a significant predictor of satisfaction. This underscores the importance of robust cybersecurity measures and customer education on safe digital banking practices.
- Reevaluate contact channels and conduct a service audit to identify issues in phone or online support systems and implement improvements to ensure timely, human-centered resolution of problems. This is because contact demonstrated a significant negative relationship with satisfaction. This calls for redesigning customer service channels, offering more responsive and user-friendly assistance mechanisms, and training staff to handle customer inquiries effectively.
- Consider consolidating overlapping functions such as efficiency and fulfillment to streamline user experience and improve feature clarity. The recommendation is based on

the statistical finding that efficiency and fulfillment, while positively correlated with satisfaction, showed weak independent influence due to multicollinearity. Consolidating them can reduce redundancy and simplify the service interface. This aims to enhance usability and improve customer experience.

By implementing these recommendations, Dashen Bank can enhance customer satisfaction, improve service quality, and strengthen its competitive position in Ethiopia’s growing digital banking sector.

# REFERENCES


Abebe, Z. (2016). *Opportunities and challenges in the adoption of e-banking services: The case of Dashen Bank S.C.* (MBA thesis, Addis Ababa University).

Abid, H., & Noreen, U. (2006). Ready to e-bank: Exploratory research on adoption of e-banking and e-reading. *Spider, 31*(2), 1–31.

Ahmed, R. R., Streimikiene, D., Channar, Z. A., Soomro, R. H., & Streimikis, J. (2022). *E-banking customer satisfaction and loyalty: Evidence from serial mediation through modified E-S-QUAL model and second-order PLS-SEM.* In *Proceedings of the International Conference on Business and Information (ICBI 2022)* (pp.574–591). Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka.

Aladwani, A. M. (2001). Online banking: A field study of drivers, development, challenges and expectations. *International Journal of Information Management, 21*, 213–225.

Alagheband, P. (2006). *Adoption of electronic banking services by Iranian customers* (MA thesis, Lulea University of Technology).

Amith, K., & Megharaja, B. (2021). Impact of e-banking on customer satisfaction. *PalArch's Journal of Archaeology of Egypt/Egyptology, 18*(8).

Ayana, G. (2012). *Adoption of electronic banking system in Ethiopian banking industry: Barriers and drivers* (MS thesis, Addis Ababa University).

Ayinaddis, S. G., Taye, B. A., & Yirsaw, B. G. (2023). *Examining the effect of electronic banking service quality on customer satisfaction and loyalty: An implication for technological innovation*. *Journal of Innovation and Entrepreneurship, 12*(22).

Bantyergu, E. (2022). Effect of electronic banking services on performance of Ethiopian banks. *Journal of Innovations, 70*, 276–284.

Basavaraju, A., Meghana, C., Rashmi, S., Kumar, S. L., Kumar, V. R. R., & Vinay, M. (2024). Measuring of digital banking service quality on customer satisfaction with reference to Bengaluru. *International Research Journal on Advanced Engineering and Management*, 2(8), 2630–2637.

Beshir, E. S., & Zelalem, B. A. (2020). *The effect of e-banking service quality on customers' satisfaction and loyalty*. *The Strategic Journal of Business & Change Management*, *7*(3), 818–832.

Birhanu, T. (2021). *The impact of electronic banking on customer satisfaction: In commercial banks of Ethiopia* (MBA thesis, Addis Ababa University).

Chang, Y. T. (2003). Dynamics of banking technology adoption: An application to internet banking. *Department of Economics Workshop Presentation, University of Warwick.*

Daniel, E. (1999). Provision of electronic banking in the UK and the Republic of Ireland. *International Journal of Bank Marketing, 17*(2), 72–82.

Das, S. A., & Ravi, N. (2021). A study on the impact of e-banking service quality on customer satisfaction. *Asian Journal of Economics, Finance and Management*, 48–56.

Endalkachew, A. (2013). *Assessing the impact of core banking and service quality on customer satisfaction in Commercial Bank of Ethiopia* (MBA research, Hawassa University).

Ethio Telecom. (2023). Annual Report 2023. Addis Ababa.

Fornell, C., Johnson, D. M., Anderson, W. E., Cha, J., & Bryant, B. E. (1996). The American customer satisfaction index: Nature, purpose, and findings. *Journal of Marketing*.

Gardachew, W. (2010). Electronic banking in Ethiopia: Practices, opportunities and challenges. *Journal of Internet Banking and Commerce, 15*.

Hailemicheal, B. (2020). *Determinants of adopting e-banking service: The case of South Addis Ababa District, Awash Bank customers* (Master's thesis, St. Mary's University).

Hailu, M. (2019). *An assessment on benefits and risks of e-banking on customer saving: The case of CBE under North Addis Ababa District* (Master's thesis, St. Mary's University).

Illuminatus, M. (2014). *Factors affecting the adoption of e-banking in Tanzania banking industry: A case of banks in Dares Salaam region* (MA thesis, Open University of Tanzania).

IMF. (2023). Ethiopia: Financial Sector Review. Washington, DC.

Jack, W., & Suri, T. (2011). Mobile Money: The Economics of M-Pesa. NBER.

Kabu Khadka, & Maharjan, S. (2017). *Customer satisfaction and customer loyalty* (Thesis, Centria University of Applied Sciences).

Krishna, R., & Sudhi, R. (2015). A study on customer's perception and satisfaction towards electronic banking in Khammam District. *Journal of Business and Management, 17*(12), 20–27.

Maheshwari, R. K. (n.d.). *E-banking*. Retrieved December 20, 2024, from https://www.lkouniv.ac.in/site/writereaddata/siteContent/20200416062602362 4Rajiv_mahshwari_app_E_Banking.PDF

Martin, A., & Kwaku, D. (2016). The contribution of electronic banking to customer satisfaction: A case of Gcbb Bank Limited - Koforidua. *International Journal of Managing Information Technology, 8*(1).

Meuter, A. (2000). An empirical investigation of the determinants of user acceptance of internet banking. *Journal of Organizational Computing and Electronic Commerce, 13*(2).

Mohamud, S. S., Gamal, S. A. K., Abuelhassan, E. A., & Sivakumar, K. (2017). Investigating the antecedents of coffee shop customers' behavioral intentions in Kuala Lumpur. *International Journal on Recent Trends in Business and Tourism, 1*(4), 1–14.

Mohsan, F., Nawaz, M. M., Khan, M. S., Shaukat, Z., & Aslam, N. (2011). Impact of customer satisfaction on customer loyalty and intentions to switch. *International Journal of Business and Social Science, 2*.

Muthiora, B. (2015). Enabling Mobile Money Policies in Kenya. GSMA.

Mwiya, B. M., Katai, M., Bwalya, J., Kayekesi, M., Kaonga, S., Kasanda, E., Munyonzwe, C., Kaulungombe, B., Sakala, E., Muyenga, A., & Mwenya, D. (2022). *Examining the effects of electronic service quality on online banking customer satisfaction: Evidence from Zambia*. *Cogent Business & Management, 9*(1), Article 2143017.

National Bank of Ethiopia (NBE). (2022). Digital Payment Trends. Addis Ababa.

Nitsure, R. R. (2003). E-banking challenges and opportunities. *Economic and Political Weekly, 38*, 5377–5381.

Ojokuku, R. M., & Sajiyube, A. M. (2012). The impact of electronic banking on human resource performance in the Nigerian banking industry. *International Journal of Economic Development Research and Investment, 16*(9), 61–69.

Philips, D., & Burbules, N. (2000). *Post-positivism and educational research*. Rowman & Littlefield.

Pikkarainen, T., Pikkarainen, K., Karjaluoto, H., & Pahnila, S. (2004). Consumer acceptance of online banking: An extension of TAM. *Internet Research, 14*(3).

Raza, S. A., Qureshi, M. A., Umer, A., & Samad, D. (2020). Internet banking service quality, e-customer satisfaction and loyalty: The modified e-SERVQUAL model. *The TQM Journal*, 32(4), 1443–1466.

Safaricom. (2023). M-Pesa Performance Report. Nairobi.

Shamil, M. M., Herath, H. M. T. S., & Sumatiratne, W. M. O. (n.d.). *The influence of e-banking service quality on e-customer satisfaction and loyalty: A Sri Lankan study*.

Shimeles, A. (2021). *Effect of electronics banking service quality on customer satisfaction: The case of Dashen Bank Share Company* (MBA thesis, St. Mary's University).

Shittu, O. (2010). *The impact of electronic banking in Nigeria banking system*.

Simpson, J. (2002). The impact of the internet in banking: Observations and evidence from developed and emerging markets. *Telematics and Informatics, 19*(4), 315–330.

Suri, T., & Jack, W. (2016). The Long-Run Poverty Impacts of M-Pesa. Science, 354 (6317).

Tigist, S. A. (2020). *The effect of electronic banking service qualities on customer satisfaction: The case of Dashen Bank S.Co* (MBA thesis, St. Mary's University).

Timothy, A. T. (2012). Electronic banking service and customer satisfaction in the Nigerian banking industry. *International Journal of Business and Management Tomorrow*.

Tiwari, R. (2007). *The mobile commerce prospects: A strategic analysis of opportunities in the banking sector* (PhD dissertation, Hamburg University).

Wiki for banking agent. (2015). *[Online article or web entry]*.

Wondwossen, H., & Tsegai, J. (2005). Information technology in Saudi Arabia: Culture and the acceptance and use of IT. *Journal of Information and Management, 44*(8).

Worku, G., Tilahun, A., & Tafa, M. A. (2016). The impact of electronic banking on customers' satisfaction in Ethiopian banking industry: The case of customers of Dashen and Wogagen Banks in Gondar City. *Journal of Business and Finance Affairs, 5*(174).

World Bank. (2023). *Ethiopia's Digital Financial Inclusion Progress. Washington, DC.

Zeithaml, V., Parasuraman, A., & Malhotra, A. (2002). Service quality delivery through websites: A critical review of extant knowledge. *Journal of the Academy of Marketing Science, 30*, 362–375.

## Appendix Questionnaire

**Dear Respondent,**

I am conducting a study titled "The Effects of E-Banking on Customer Satisfaction: A Case Study of Selected Dashen Bank Branches in Addis Ababa" as part of the partial fulfillment of my MBA degree. Your participation in this questionnaire will provide valuable insights for my research.

I would sincerely appreciate your cooperation in completing this questionnaire. Please rest assured that all responses will be kept strictly confidential and used solely for academic purposes. No information will be shared with third parties.

Important Notes:

- To maintain confidentiality, please **do not include your name or any identifying information** in your responses.
- For open-ended questions, kindly provide clear and relevant answers in the space provided.
- Your honest and accurate responses will be highly valuable to this research, and I assure you that participating will not affect your job, business activities, or personal identity in any way.

Thank you in advance for your time and cooperation.

Best regards,

**Abreham Woldu**

Telephone: +251932279447 or +251912688976

e-mail: abrehamwoldu27@gmail.com

**Section I. Demographic Profile of Respondents**

1. Gender
    a. Male ☐
    b. Female ☐
2. Age
    a. 18-16 ☐
    b. 27-35 ☐
    c. 36-43 ☐
    d. Above 44 ☐
3. Marital Status
    a. Married ☐
    b. Unmarried ☐
    c. Widowed ☐
    d. Divorced ☐
4. Current Level of Education
    a. Diploma ☐
    b. BSc/Ba ☐
    c. MSc/Ma ☐
    d. PhD ☐
    e. Other _____
5. Monthly Income
    a. Below 1000 ☐
    b. 1001-3000 ☐
    c. 4001-6000 ☐
    ☐

d. 6001-9000

e. Above 9001 ☐

6. Occupation

a. Public Sector Employee ☐ B. Business Person ☐ C. Self-Employed ☐

d. Private Sector Employee. ☐ E. Other_____

.

Please rate your level of agreement with the bank's e-banking services and overall service environment using a scale of **1 to 5**.

**Instructions:**

- Mark "√ " under the number that best reflects your opinion.
- The rating scale is as follows:
  **1 = Strongly Disagree**
  **2 = Disagree**
  **3 = Neutral**
  **4 = Agree**
  **5 = Strongly Agree**

| **Items** | **Strongly Disagree** | **Disagree** | **Neutral** | **Agree** | **Strongly Agree** |
|---|---|---|---|---|---|
| **Efficiency** | | | | | |
| E-banking makes it easy to find the services I need | | | | | |
| E-banking makes getting services anywhere easier | | | | | |
| E-banking enables me to conduct transactions quickly | | | | | |
| E-banking enables a wide service delivery process at once. | | | | | |
| E-banking is fast to get service. | | | | | |
| **System Availability** | | | | | |
| E-banking system is always available for service | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| E-banking system delivers service appropriately | | | | | |
| The system doesn't fail to deliver what Promised/ordered. | | | | | |
| **Fulfillment** | | | | | |
| E-banking assists in delivering service according to my order. | | | | | |
| E-banking makes service available for delivery within a suitable time frame | | | | | |
| E-banking allows sending and receiving service order from any branch | | | | | |
| E-banking is truthful about its service offerings | | | | | |
| E-banking delivers accurate transaction services as I desire | | | | | |
| **Privacy** | | | | | |
| E-banking provides protection for my personal bank account information | | | | | |
| E-banking does not share my personal transaction with others | | | | | |
| E-banking protects information about my financial transactions securely | | | | | |
| E-banking allows me to control my account balance | | | | | |
| E-banking provides safety and security | | | | | |
| **Responsiveness** | | | | | |
| E-banking system allows correction of transaction errors | | | | | |
| E-banking system handles problems well | | | | | |
| E-banking offers a meaningful guarantee | | | | | |
| E-banking is responsive to confirm me transaction through SMS Notifications. | | | | | |
| The bank takes care of problems through e-banking. | | | | | |
| **Compensation** | | | | | |
| The bank compensates me for problems it creates | | | | | |
| The bank compensates me if what I ordered doesn't arrive on time | | | | | |
| The bank recovers error and corrects the transaction. | | | | | |
| **Contact** | | | | | |
| E-banking provides a telephone number for contact support to get information. | | | | | |
| The bank has customer service representative available online/on | | | | | |

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|---|---|---|---|---|---|
| telephone | | | | | |
| The bank offers the ability to speak to assistance person if a problem occurs. | | | | | |
| **Customer Satisfaction** | | | | | |
| I am satisfied by the application of e-banking | | | | | |
| I am satisfied with E-banking's notifications via SMS | | | | | |
| I am satisfied by e-banking 24 HR on including holiday via ATM, POS, Mobile Banking and Internet Banking. | | | | | |
| I can rely on e-banking in urgent case rather than personal service. | | | | | |