



ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES, MBA PROGRAM

**Effect of Electronic Banking Service Quality on Customer Satisfaction: The
Case of Hibret Bank S.C.**

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*July 2021
Addis Ababa, Ethiopia*

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FACULTY OF BUSINESS

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DECLARATION

I the undersigned, declare that this thesis is my original work which was prepared under the guidance of Getie Andualem (PhD). All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

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Acronyms

ANOVA	Analysis of Variance
ATM	Automated Teller Machine
CBE	Commercial bank of Ethiopia
E-Banking	Electronics Banking
EFT	Electronic Fund Transfer
FFIEC	Federal Financial Institution Examination Council
ICT	Information communication technology
IT	Information Technology
NBE	National Bank of Ethiopia
PDA	Personal Digital Assistance
PIN	Personal Identification Number
POA	Point of Purchase
POS	Point of Sale
SERVQUAL	Service Quality
SMS	Short Message Service
SPSS	Statistical Packages for Social Science

ABSTRACT

E-banking is a product designed for the purposes of online banking that enables the customer to have easy, safe and efficient electronic access and service that enables the customer to access their bank account and to carry out online banking services, 24 hours a day, and 7 days a week. Providing high quality service is the key to attain customer satisfaction. The main purpose of this study is to assess the effect of E-banking service quality on customer satisfaction of Hibret Bank. The study used quantitative research approach and employed linear regressions models for the Customers Satisfaction on Electronic Banking and regression were used to see the relationship between independent variables reliability, transaction efficiency, service security, user-friendliness, service performance and customer control on transaction/ customer control on transaction/ personalization with satisfaction of e-banking users. Primary data were collected by using 5-point Likert-scale questionnaire and the study participants were selected using a convenient sampling technique. From 396 questionnaires, 363 of them were properly filled and returned. The mean result revealed that customers satisfaction with the service dimensions of user-friendliness and service security is good and their satisfaction on service reliability, transaction efficiency, service performance and customer control on transaction/ personalization are moderate. The finding from the correlation between dependent and independent variables along with the casual effect result revealed that there is a positive and significant relationship between the service quality dimensions and customer satisfaction. Reliability, Transaction efficiency, User-friendliness/ease of use, service security and Customer control on transaction/ personalization are found to have a moderate correlation with customer satisfaction. While the service dimension service Performance, has a weak correlation with customer satisfaction. The finding from the regression result also indicates service reliability, transaction efficiency, service security, user-friendliness, service performance and customer control on transaction/ personalization have a statistical significance on customer satisfaction. Thus, management bodies of Hibret bank should strive to strengthen these service dimensions.

Key words: Reliability, transaction efficiency, service security, user-friendliness, service performance, Customer control on transaction, E-banking, customer satisfaction.

1 Introduction

1.1 Background of the study

In the current globalization era, information technology is becoming the important factor in the development of financial services industry, especially the banking sector, which is based on sharing information which heavily relies on information and communication technology (ICT) in order to acquire, analyze and deliver data to all relevant users. Information technology is one of the most important facilitators for the transformation of the banking industry in terms of its transactions processing as well as for various other internal systems and processes. Hence ICT is crucial not only for information analysis purpose, but also enables the banking sector to differentiate its service from competitors and thereby make it a market leader (Maureen Nekesa Wasike, 2016; Kwashie, 2012).

The banking sector, which is a financial institution that provides banking and other financial services to their customers and which provides fundamental banking services such as accepting deposits and providing loans, is obliged to continuously innovate and update its service dimension in order to meet the demands and requirements of the individual customer as well as to make the service fast, efficient and profitable (Kapila, 2001). Hence the development of the concept of electronic financial services more commonly known as “E-banking” is essential for the day-to-day transactions to meet the expectations of customers (flexibility of financial services without paying more and make transaction wherever, whenever and however the customer wants) and internal users (employees) through facilitated workflow (Habibur Rahman, 2012)

Electronic banking (e-banking) is the newest delivery channel for banking services which make Competition between banks and forced them to find new market to expand (Daniel, 1999). E-banking is a product designed for the purposes of online banking that enables the customer to have easy, safe and efficient electronic access and service that enables the customer to access their bank account and to carry out online banking services, 24 hours a day, and 7 days a week. With this service, the customer can carry out banking transactions at any place and at any time all they need is network access (Al-Smadi, 2012; Maureen Nekesa Wasike, 2016). E-banking enables the customer to get accurate statement, cash transfers, utility bill payments, carrying out customs payments, Electronic confirmation for all transactions executed by E-banking and Management of your credit cards. Hence, banks have begun to offer electronic banking services

to improve the effectiveness of distribution channels through reducing the transaction cost and increasing the speed of services, and the way for the development of banking system (Al-Smadi, 2012; Maureen Nekesa Wasike, 2016).

Following a strong demand for better and quality service and new banking products from all directions and a ground-breaking development in information technology, Hibret Bank is driven to acquire the state-of-the-art technology called Flexcube Core Banking System as a solution to cope-up with this dynamic change and increasing competition in the industry and winning the customers expectation on service excellence. Service quality and customer satisfaction are very important concepts, which must understand by companies that want to grow while keeping their competitive edge. In the modern competitive environments, delivering high service quality is the key for a sustainable competitive advantage. Customer satisfaction has a positive effect on the organization profitability. Satisfied customers of any business repeat purchase, show brand loyalty, and give positive word of mouth.

1.2 Background of the organization

Hibret bank was incorporated as a share company on 10 September 1998 in accordance with the Commercial Code of Ethiopia of 1960 and the Licensing and supervision of Banking Business Proclamation No. 84/1994 with paid up capital of birr 24.8 million by 335 shareholders (nbebank.com, 2021). Hibret Bank has been the pioneer bank in launching internet banking service in the country. Subsequent with this custom it has again succeeded in upgrading the brands of service to a new world class online banking system with the commencement state of the art Hibir Mobile and Hibir Online Banking services with 24 hours link to account information with view of all banking transactions that enables the customers to access details on dealings regarding current saving and overdraft accounts, loan particulars, Letter of Credit, Check book status, utility payments, Branch or ATM location information, exchange rate value of foreign currencies, PIN management and authorization, Account alerts, security alerts and reminders, Balance and Transaction notifications and many other relevant details to keep the customer abreast of all their financial demands they have with 24/7 (unitedbank.com.et, 2021).

Moreover, using the new upgraded Online Banking Services customers can transfer funds from one of their account to another or to other Hibret Bank customer's account, effect local remittances, set standing instructions on certain recurrent transactions and upload bulk

payments such as salary of employees. The online Banking Service will enable the customer to access and print a bank statement free of charge (real time) without coming to any of the Hibret bank branches. The system holds all standard features and high security mechanisms to ensure banking details are secured from all form of frauds at all times. Moreover, as an additional security measure the system allows to its corporate customers to set multiple signatories to approve transaction amounts, this is vital to strengthen the security in uploading bulk payment (unitedbank.com.et, 2021).

The major types of electronic banking (e-banking) services available in Hibret Bank are:

Internet banking (Hibir Online): - It is an internet banking which is a process in which one can access and manipulate accounts and perform transactions via the internet using personal computers, mobile devices and other web-based applications. It helps the bank customers to conduct their transactions online without any physical presence in the bank branches/premises (unitedbank.com.et, 2021).

Mobile banking (Hibir Mobile): - It is a mobile banking (SMS banking or USSD mobile banking), which was introduced in 2008, is a term used for performing balance checks, account transactions, payments etc. using a mobile phone. Hibir mobile banking is most often performed via SMS or Mobile Internet (unitedbank.com.et, 2021).

Card Banking Services (ATM and POS services): - It is a service provided using ATM card on ATM and POS machines. ATM is an electronic banking outlet, which allows customers to complete basic transactions without the aid of a branch representative or teller. Anyone with a credit card or debit card can access most ATMs. There are two primary types of ATMs; basic units allow customers to withdraw cash and receive reports of their account balances only. The more complex machines accept deposits, facilitate line of credit payments and report account information. To access the advanced features of the complex units, a user must be an account holder at the bank that operates the machine (unitedbank.com.et, 2021).

Agent Banking (Hibir Agent Banking): Agent banking is the conduct of banking business on behalf of a financial institution through an agent using various service delivery channels. In 2015 Hibret bank succeeded to start a new service known as Hibir Agent Banking to its existing service line, following an official approval from the National Bank of Ethiopia to render the service, subsequent to a successful piloting phase. The service enables the Bank to

use Banking agents that double as a kind of branch to process basic banking services including opening M-wallet account, making deposits and withdrawals, transferring funds as well as sending and receiving money. In its Agent Banking Services, Hibret bank will provide branchless banking services especially for the unbanked society. Hibret Bank will provide the following banking service packages using agents. These are Cash Deposit and Withdrawal, Money Transfer and Bulk payment dispatch (Bank payment dispatch to customers) – B2P like case of salary, remittance, etc (unitedbank.com.et, 2021).

1.3 Banking industry in Ethiopia

The history of banking in Ethiopia dates back to 1905 when agreement was done between emperor Menilik II and Mr. McGillivray, representative of the British owned National Bank of Egypt marked the introduction of modern banking in Ethiopia (Charles, ND). Following this agreement, the first bank called “Bank of Abyssinia” inaugurated on February 16, 1906 by the emperor. Within the first 15 years of operation Bank of Abyssinia opened a branch in different parts of the country, in this regard; Harar branch was opened at the same time with inauguration of the Bank at Addis Ababa. Two years later another branch at Dire-Dawa, Gore, Dessie and transition office in Djibouti in 1920 was opened (Megersa, 2010; Worku, 2010).

Emperor Hailesilassie, in 1930 continued the Menilik’s policy aiming at independence, modernization and progress of the country. The Imperial ruling issued on August 29, 1931 and chartered the new bank as Bank of Ethiopia and also represented the first banking law ever passed in the country. Following this, the Bank of Ethiopia started operation in November 1931 with the same governor (C.S.Collier) premises of the ceased Bank of Abyssinia. Bank of Ethiopia was purely Ethiopian institution and was the first indigenous Bank in Africa. During the invasion, the Italians established the branch of their main Banks, such as Banca d’Italia, Banco Di Roma, Banco Di Napoli, and Banca Nazionale Del Lavoro and started operation in the main towns of Ethiopia. Another foreign Bank, Barclay Bank, came to Ethiopia with the British troops and organized Banking services in Addis Ababa until its withdrawal in 1943 (Megersa, 2010).

During the Derg regime, following the declaration of socialism in 1974, the government extended its control over the whole economy and nationalized all corporations. The three Private Banks, Addis Ababa Bank S.C, Roma and Napoli merged after nationalization in 1976 to form the second largest Bank called Addis Bank. By August 2, 1980 Addis Bank and

Commercial Bank of Ethiopia merged to form the sole commercial bank in the country, Commercial Bank of Ethiopia (CBE) (Worku G, 2016).

After the downfall of Derg and raise of EPRDF, the economic policy was changed in 1991, financial sector reform has also taken place. The Monetary and Banking proclamation No. 83/1994 and the licensing and supervision of banking business No. 84/1994 laid down the legal basis for investment in the banking sector. Consequently, after the proclamation, Awash International Bank the first private bank was established in 1994, then Dashen Bank, Bank of Abyssinia, Wegagen Bank, United Bank and Nib International Bank were established from 1994 to 1999 which forms a group of six private banks as the first batch of private banks establishment period (Charles, ND) (Worku, 2010).

Certainly, the banking industry in Ethiopia is underdeveloped and therefore there is an all immediate need to embark on capacity building arrangements and modernize the banking system by employing the state-of-the-art technology being used anywhere in the world. With a growing number of import-export businesses, and increased international trades and international relations, the current banking system is short of providing efficient and dependable services and therefore all banks operating in Ethiopia should recognize the need for introducing electronic banking system to satisfy their customers and meet the requirements of rapidly expanding domestic and international trades, and increasing international banking services (Worku, 2010).

Undeniably the largest state-owned bank, Commercial Bank of Ethiopia, introduced ATM service for local users in 2001 with its fleet of eight ATMs located in Addis Ababa. Moreover, CBE has had Visa membership since November 14, 2005. However, due to lack of appropriate infrastructure it failed to reap the fruit of its membership. Despite, being the pioneer in introducing ATM based payment system and acquired Visa membership, CBE lagged behind Dashen Bank, which worked aggressively to maintain its lead in electronic payment systems (Worku, 2010). Dashen bank, a forerunner in introducing e-banking in Ethiopia, has installed ATMs at convenient locations for its own cardholders. Dashen Bank has begun accepting MasterCard in addition to Visa credit cards. United Bank was the first to introduce telephone and Internet banking systems - including text messages (SMS) - by the end of 2008.

1.4 Statement of the problem

Banking system is a system provided by the bank which offers cash management services for customers, reporting the transactions of their accounts and portfolios, throughout the day (Kapila, 2001). The banking system is mainly affected by the use of Information Communication Technology and the introduction of electronic banking system has revolutionized and redefined the way banks operate. In the past, customers demand banking services basically for the safety of their money and interest from their savings (Kwashie, 2012). However, today customers' demand has shifted from just safety of money to how banks deliver their services. Now a day's customers of financial institutions, especially bank customers, prefer to use a bank by the quality and variety of services delivered by the bank (Kwashie, 2012; Maureen Nekesa Wasike, 2016).

Electronic Banking has been widely used in developed countries and is rapidly expanding in developing countries. In Ethiopia, however, cash is still the most dominant medium of exchange, and electronic payment systems are at an infant stage, which needs to be adapted and adopted by the banking sector from other developed countries (Worku, 2010). In the face of rapid expansion of electronic banking systems throughout the developed and the developing world, Ethiopia's financial sector cannot remain an exception in expanding the use of the system (Fetu, 2019; Worku, 2010).

The introduction of electronic banking into the banking sector helps to bring customer satisfaction and service quality to enhance the banks' profitability, which has a major significance in improving the efficiency and effectiveness of the operations (Olanipekun, 2013; Shannak, 2013). It also enhanced customer services, effective distribution, improved operations, faster access to information and improved internal processes, which implies that the customers will be benefited by reducing the frequency of visiting the banking halls and handling cash (Olanipekun, 2013). As a result, the electronic banking services became a fact of life and even a survival issue for the banks (Shannak, 2013). Despite the importance of e-banking, problems related to network failure and inadequate awareness of the customers on the available e-banking services determines the customers satisfaction on the services (Nimako SG, 2013).

Now a days the Ethiopian banking sectors are aggressively competing each other to satisfy their customers more through the technological advancement. Some of the electronic banking services offered by the bank does not meet customers' need with quality (Worku G, 2016).

Currently there are some factors which affect customer satisfaction and service quality in electronic banking service in most banks in general and in Hibret bank in particular. Some of the factors which mostly affect the customers satisfaction in electronic banking service are machine out of service and run out of cash, failure to provide printing statement, card get blocked, frequent failure of ATM service and lack of sufficient technician for maintenance, lack of sufficient alternative system which substitute ATM service for the customer when temporary problem happen in the machine, interruption of network, lack of mobile banking service, under-development of technological infrastructure, low level awareness creation, lack of suitable and regulatory framework for e-commerce, resistance to changes in technology among customers and service providers as result of fear of risk and reversing a transaction and refund is not possible and hardly do people talk about problems of these services (Buta, 2019; Fenuga, 2010).

Many researches were conducted in Ethiopia by focusing on the effect of E-banking service quality on customers satisfaction. However, these studies were identified the possible factors that affect customers satisfaction like convenience, reasonable and fair fees (charges) during transaction, efficient service of e-banking, privacy, security, reliability, and responsiveness of employees to solve e-banking service failure on selected e-banking services mainly ATM and Mobile E-banking service (Bambore, 2013). As a result, this paper will comprehensively assess the effect of E-banking service quality dimensions on customers satisfaction and their level of satisfaction. And this research differs from other researches done so far by the components of the independent variables (service reliability, transaction efficiency, service performance, user-friendliness, service security and customer control on transaction/ personalization).

1.5 Research Question

The study sought to offer answers to the following research questions:

- How does service reliability of e-banking affect customer satisfaction at Hibret bank?
- How does transaction efficiency of e-banking affect customer satisfaction at Hibret bank?
- How does the service performance of e-banking affect customer satisfaction at Hibret bank?
- How does user-friendliness of e-banking affect customer satisfaction at Hibret bank?
- How does service security of e-banking affect customer satisfaction at Hibret bank?
- How Does customer control on transaction/ personalization of e-banking service affect customers' satisfaction at Hibret bank?

1.6 Objective of the study

1.6.1 General Objective

- To assess the effect of E-banking service quality on customers' satisfaction at Hibret bank

1.6.2 Specific Objective

- To examine the effect service reliability of e-banking service on customers' satisfaction at Hibret bank
- To find out the influence of transaction efficiency of e-banking on customer satisfaction at Hibret bank
- To determine the effect of service security of e-banking on customer satisfaction at Hibret bank
- To determine the effect of service performance of e-banking on customer satisfaction at Hibret bank
- To examine the effect of ease of usage of e-banking on customer satisfaction at Hibret bank
- To assess the effect of customer control on transaction/ personalization of e-banking service on customers' satisfaction at Hibret bank

1.7 Research Hypothesis

Based on the research objectives and questions of the study the following alternative (H1) hypotheses were developed and tested in this study.

H1₁: Service reliability has positive significant effect on customer satisfaction

H2₁: Service efficiency has positive significant effect on customer satisfaction

H3₁: Service security/Privacy has positive significant effect on customer satisfaction

H4₁: Service performance has positive significant effect on customer satisfaction

H5₁: Service ease of usage has positive significant effect on customer satisfaction

H6₁: Service customer control on transaction/ personalization has a positive significant effect on customers satisfaction

1.8 Definition of Terms

Agent banking: Providing of limited scale banking and financial service to the underserved population through engaged agents under a valid agency agreement rather than a teller (G/Mariam, 2020).

Automated Teller Machine (ATM): is an electronic banking outlet/machine that allows customers to complete basic transactions like cash withdrawal, balance enquiry and other services without the aid of a branch representative or teller (Fetu, 2019).

Cashier: The conduct of banking business on behalf of a financial institution using various service delivery channels (G/Mariam, 2020).

Customer satisfaction: a state of mind that customers have about a company when their expectations have been met or exceeded over the lifetime of the product or service (G/Mariam, 2020).

Customer: the user of the service or product of a company or organization (G/Mariam, 2020).

Electronic banking/E-banking: is the provision of financial banking service through an exchange of electronic signals rather than through an exchange of cash, checks, or other types of paper documents (Fetu, 2019).

Information and Communication Technology (ICT): Convergence of telecommunications and computer technology is generally defined as information and communication technology (G/Mariam, 2020).

Internet Banking/Hibir Online: is a remote delivery of banking service through a secure website operated by the bank using access devices, including personal computers, laptop and other intelligent devices (Fetu, 2019).

Mobile Banking: is a term used for performing balance checks, account transaction, payments, credit applications and other banking transactions through a mobile device such as a mobile phone (Fetu, 2019).

Point-of-Sale Terminal (POS): is an electronic device equipped with appropriate software and used for authorizing and processing bankcard transactions at point-of-sale (Al-Smadi, 2012).

Reliability: the ability to carry out the promised service dependably and accurately (G/Mariam, 2020).

Service quality- service quality is described as a result of the comparison that customers make between their expectations about a service and their perception of the way the service has been performed (G/Mariam, 2020).

Service: is any activity or benefit that one party can offer to another that is essentially intangible and does not result in the ownership of anything (G/Mariam, 2020).

Service Security: is a personal and possessions safety of the customers and includes confidentiality maintained by service providers (Johnston, 1997).

User friendliness/Ease of Use: It is considered as the factor influencing the adoption of e-banking, and related to an easy-to-remember pin codes and URL address, well-organized and usable software, easy of site navigability, concise and understandable contents, terms and conditions (Alagheband, 2006).

1.9 Significance of the study

This study will have significance to the management of the bank by giving insights on the effect of the e-banking service quality that the Bank provides on ensuring customer satisfaction. It will give sufficient information on the e-banking service that the bank is currently providing and help it to know areas which need improvement and plan towards it so that its customers enjoy quality service. It will also allow the stake holders to have knowledge on where the bank stands in the eyes of its customer. Moreover, the finding will have important inputs for Hibret bank staffs to delivery on quality service by using e-banking services and to examine how e-banking increase customer satisfaction. It will also help other financial institution engaged in the banking sector but who are not giving E-banking services. The research will contribute as a reference to other researchers who want to conduct further study on the concept of the effect of e-banking service quality attributes on customer satisfaction and other related area of study.

1.10 Delimitation/Scope of the study

This research is assessed the effect of e-banking services quality provided by Hibret bank and its impact on customer satisfaction in Addis Ababa and its level of significance that each e-banking service quality dimension have impact on customers' satisfaction. The study was confined only to customers' perspectives e-banking services and considered reliability,

transaction efficiency, service security, user-friendliness, service performance and customer control on transaction/ personalization of E-banking service quality of the Hibir online, ATM, POS and Hibir Mobile banking service of Hibret bank. The study focused on selected branches of Hibret Bank that were located in the East south and North districts.

1.11 Organization of the study

This thesis is organized into five chapters. In the first chapter, the introduction including background of the study and the organization, statement of the problem, significance of the study, scope of the study, objective of the study, and research questions are included. The second chapter addressed review of related literature the third chapter addressed the research design and methodology part including the research design, the study area, the sampling techniques, data gathering technique and instruments and data analysis techniques. In the fourth chapter the result & discussion was addressed and in the fifth chapter conclusion & recommendations of the study were included.

2 Literature Review

2.1 Introduction

This chapter presents a review of previous studies related to the present study from related literatures like reference books, magazines, journals and other publications. Potential theories that state about different factors which believed to affect customer satisfaction in using e-banking are also discussed. The chapter is arranged under four sections that include the theoretical review, empirical review, research gap and conceptual framework. The theoretical review focused on the term E-banking, its evolution, features, types, its benefit, and challenges of E-banking. Beside this, in this section services, service quality, measuring of quality service and the relationship between customer satisfaction and service quality is also addressed. In the second section empirical review of related literatures is addressed. In the third section, the research gap is identified and in the fourth section conceptual framework is addressed.

2.2 Theoretical Review

2.2.1 Concept and definition of Electronic Banking

As long ago as 1918, payments between banks were used to be settled electronically over the Telegraph and in 1970s, electronic communication in finance were used. This use of electronic communications in payments systems has steadily increased over time. Now virtually all large payments between banks and corporations are done electronically. Financial services industry has removed the boundaries between different financial institutions, enabling new financial products and services to appear and making the existing ones available in different packages (Rangsan, 2013).

The definition of Electronic banking (E-banking) varies amongst researchers partially because Electronic banking refers to several types of services through which bank customers can request information and carry out most retail banking services via computer, television or mobile phone (Daniel, 1999; Sathye, 1999). Different authors have defined it in different ways based on their understanding of the application of electronic banking. Based on the definition given on Encyclopedia, E-banking is a form of banking in which funds are transferred among financial institutions through an exchange of electronic signals rather than through an exchange of cash, checks, or other types of paper documents. E-banking is an umbrella term and an automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels (Al-Smadi, 2012; Daniel, 1999).

According to Daniel (1999), electronic banking is electronic connection between the bank and customer in order to prepare, manage and control financial transactions (Daniel, 1999). Turban (2002) describes it as an electronic connection between bank and customer in order to prepare, manage and control financial transactions (Turban, 2008). Electronic banking can also be defined as a variety of platforms such as internet banking (or online banking), telephone banking, TV-based banking, PC based banking (or offline banking) and mobile phone banking. In the opinion of Daniel (1999), E-banking is online banking (or Internet banking) which allows customers to conduct financial transactions on a secure website operated by their retail or virtual bank, credit union or building society (Daniel, 1999). This implies that E-banking is a service that allows an account holder to obtain account information and manage certain banking transactions through a personal computer via the financial institution web site on the internet. According to Zairi A (2003), electronic banking refers to the use of the Internet as a remote delivery channel for providing services, such as opening a deposit account, transferring funds among different accounts and electronic bill presentment and payment. This can be offered in two main ways. First, an existing bank with physical offices can establish a website and offer these services to its customers in addition to its traditional delivery channels. Second, is to establish a virtual bank, where the computer server is housed in an office that serves as the legal address of such a bank. Virtual banks offer their customers the ability to make deposits and withdraw funds via ATMs (Automated Teller Machines) or other remote delivery channels owned by other institutions, for which a service fee is incurred (Zairi, 2003).

E-banking includes systems that enable financial institutions, customers, individuals and businesses, to access accounts, transact business, or obtain information on financial products and services through public or private networks, including the internet. Customers access e-banking services using an intelligent electronic device, such as a personal computer (PC), personal digital assistant (PDA), automated teller machine (ATM). Private networks "closed" restrict access to participant (financial institutions, customers, merchants, and third-party service providers) bound by agreement on the terms of membership. Public networks "open" have no such membership requirements (Husni, 2011). The Federal Financial Institutions Examination Council as cited in Turban (2002) provided an exhaustive definition which incorporates the concepts of all definitions mentioned above. In this regard FFIEC defined electronic banking as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels (Turban, 2008).

2.2.2 Evolution of Electronic Banking

In a world moving at an overwhelming pace, technology has become the essential key driver in all aspects of our life. Now that Information Technology has been heartily accepted at home as well as at work, handling activities electronically can be imagined, and internet is the catalyst and a key driving force behind the change in the banking industry. Like any other speedy services in different sectors, the evolution of electronic banking is closely linked with the developments and innovations in information technology (IT). Developments in IT have introduced new business dimensions and are playing a significant role in changing the face of the banking industry (Maduku, 2014). As digital identity technologies have developed, the financial sector has taken steps to incorporate them into core services that safeguard security and make banking easier. According to Alter (2002), the evolution of electronic banking started with Automatic teller machines (ATMs) and has passed through telephone banking, direct bill payment, electronic fund transfer and the revolutionary online banking, which has been selected to be the future of financial electronic transactions (Alter, 2002).

In the 1950s the Bank of America was one of the first institutions to develop the idea that electronic computers could take over the banking tasks of handling checks and balancing accounts, which was, at that time, extremely labor-intensive. Other institutions gradually joined the effort and progressed away from using paper checks and toward all-electronic banking. Data-processing machines, robotic document sorting, and the invention of optical character recognition (a computer application that translates handwritten or typewritten words into text that can be machine-edited) were a few of the developments which allowed this evolution (Encyclopedia, 2021).

In banking industry electronic innovation was traced back to 1970 when the computerization of financial institutions gained momentum. However, a visible presence of this was evident to the customer since 1980 with the introduction of ATM (Automated Teller Machine). As Bultum (2014) states, the innovation of banking is continuing and backed by technological advancement in telecommunications and information technology industry (Bultum, 2014). With continuous technological development enable banks to provide service through PC which was accessible to customers via the use of internet. The beginning of electronic banking era was to be considered as the basic conversion ever faced by the banking industry. Since the late 1990s, E-banking has developed from virtual insignificance to tens of millions of users worldwide. However, E-Banking is the product of different generations of electronic transactions (Alter, 2002; Bultum, 2014).

The current web-based internet or E-Banking is the latest of several generations of systems: Automated Teller machine (ATMs), Phone Banking, PC or House Banking. Automated teller machines (ATMs) were the first well-known machines to provide electronic access to customers whereas in phone banking, users call their bank's computer system on their ordinary phone and use the phone keypad to perform banking transactions. PC banking superseded phone banking and allowed users to interact with their bank by means of a computer with a dial-up modem connection to the phone network. Phone and PC banking entailed maintenance costs associated with keeping up to date with diverse modems and with avoiding prohibitively complex installation procedures (investopedia, 2021).

After those generations, Deutsche Bank launched the very first Internet banking project in Latin America in 1996 and Citibank has developed a special "e-toolkit" across all its branches worldwide (UNCTAD, 2002). At this time, E-banking uses the web browser for the user interface and the Internet for data transfer and download of software, and so has a potential for reducing maintenance costs. For users, E-banking provides current information, 24-hours-a-day access to banking services. E-banking is widely used in, among other places, the Nordic countries. In 2001, E-banking was used by more than 25% of the population in Norway, Sweden, and Finland, and by 15% of the population in Denmark (OECD, 2016). In 2004, E-banking usage in Denmark had grown to 45%. With rigid controls giving way to deregulation, banks are gearing up their communications infrastructure to obtain a competitive edge from E-banking, which is fast becoming a reality in India. Buse and Tiwari (2007) points out that E-banking is fast becoming a strategic necessity for most commercial banks, as competition increases from private banks (Buse, 2007). In Ethiopia, Commercial Bank of Ethiopia, introduced the first electronic banking system through ATM service for local users in 2001 with its fleet of eight ATMs located in Addis Ababa. Moreover, CBE has had Visa membership since November 14, 2005. Through these development, Hibret Bank was the first to introduce telephone and Internet banking systems - including text messages (SMS) - by the end of 2008 (Worku, 2010).

2.2.3 Features of E-Banking

E-banking includes the systems that enable bank customers to access accounts, transact business, or obtain information on financial products and services through a public or private network, including the Internet. Customers access E-banking services using an intelligent electronic device, such as a Personal Computer (PC), Personal Digital Assistant (PDA),

Automated Teller Machine (ATM), telephone (Ibrahim, 2006). Therefore, the most important features of E-banking are as follows.

- **Faster transaction:** It saves the time of customers as funds are transferred very fast from one account to another, since the system is automated and works over the internet (Ibrahim, 2006).
- **Lower transaction costs:** E-banking reduces the cost involved in doing financial transactions. Electronic transactions are termed as the cheapest medium of doing transactions by reducing the manpower and paperwork requirements (Ibrahim, 2006).
- **Provides 24* 7 service:** This is the most important feature of E-banking. E-banking provides customers with all-time access facility to their accounts. Customers can easily access their accounts any time and from anywhere with no limitation. It provides convenience to the customer as they can perform transactions as per their wish (Ibrahim, 2006).
- **Reduces the chance of error:** E-banking has reduced the chance of human error since it works fully automated over the internet. All transactions are recorded and stored digitally. There is no need to manually maintain each and every record in books of account (Ibrahim, 2006).
- **Developed loyalty in customers:** E-banking helps the banks to develop a large number of loyal customers. They are able to provide fast and better services to customers and the customers are able to get a user-friendly interface from the banking website (Ibrahim, 2006).
- **Removes geographical barriers:** E-banking has removed all distance barriers for performing transactions. E-banking provides the facility of instant transfer of funds both nationally and internationally (Ibrahim, 2006).
- **Provides better productivity:** It has an efficient role in increasing the productivity of the business. The whole financial transaction system is supported by an automated software system. These systems are specially designed for doing transactions of funds. It reduces the time required for doing transactions and also reduces the workload of business organizations (Ibrahim, 2006).
- **Reduce frauds in transactions:** E-banking helps in continuously monitoring of accounts and easily track each and every transaction of the account owner, which enables to track any fraud done by anyone in financial transactions. It provides a complete digital footprint of all those who can modify the banking activities and commit fraud. It thereby adds

transparency to the account owners which reduces the overall chances of round (Ibrahim, 2006).

2.2.4 Types of E-banking services

There are many electronic banking delivery channels to provide banking service to customers. The most important electronic channels in e-banking services are the internet banking, mobile banking, Automatic Teller Machines (ATMs), mobile banking and Point of Sales (POS) Electronic fund transfer. The following are some of the major types of services provided by E-banking (Onodugo, 2015).

2.2.4.1 Internet Banking

Internet banking refers to the use of the internet as a delivery channel for banking services and involves conducting banking transactions such as account enquiry, printing of statement of account; funds transfer payments for goods and services, etc on the internet (World Wide Web) using electronic tools such as computer without visiting the banking hall. Internet Banking lets clients handle many banking transactions via their personal computer. For instance, one may use his/her computer/laptop/smart phone to view his/her account balance, request transfer between accounts and pay bills electronically (Onodugo, 2015).

2.2.4.2 Mobile Banking

Mobile banking (also known as M-Banking, mbanking) 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 earliest mobile banking services were offered over SMS, a service known as SMS banking. Mobile banking is used in many parts of the world with little or no infrastructure, especially remote and rural areas. This aspect of mobile commerce is also popular in countries where most of their population is un-banked. In most of these places, banks can only be found in big cities, and customers have to travel hundreds of miles to the nearest bank. The scope of offered services may include facilities to conduct bank and stock market transactions, to administer accounts and to access customized information (Buse, 2007).

2.2.4.3 ATM

An automated teller machine (ATM) is an electronic computerized device that allows banks customers to directly use a secured method of communication to access their bank accounts. Entry of Automated teller machines (ATM's) has changed the office atmosphere of the branches of banks. There is no need for a customer to visit branches for their day to day banking

transaction like cash deposits, cash withdrawals, balance enquiry, dropping cheque. With the use of ATMs, the banks are providing “Any Where and Any Time Banking” to their customers. The customer can be served by himself by using his/her unique ATM card and a personal identification number (PIN) that given by the bank (Okechi, 2013). That is the customer can have access to ATMs at anywhere within the country or throughout the world at any time. It also reduces the transactions time. The banks can use these ATMs as media for publicity by displaying products on the screen. And the cost of setting up ATMs is much lesser than the branch (Sumra, 2011).

2.2.4.4 POS

A Point-of-Sale service also sometimes referred to as point of purchase (POP) or checkout is an electronic payment type that allows credit/debit cardholders make payments at sales/purchase outlets. It allows customers to perform the following services: Retail Payments, Cashless Payments, Cash Back Balance Inquiry, Airtime Transaction, Printing mini statement etc. (Sumra, 2011).

2.2.4.5 Electronic Fund Transfer (EFT)

EFT system permits transfer of funds from any account at any branch of any member bank in any city to any other account at any branch of any member bank in any other city. This system utilizes the Service Branches of the member banks. It facilitates the transfer of funds from one place to another place within the country quickly and safely. Banks collect service charges from the customers (Chavan, 2013).

2.2.5 Benefits of E banking

Different authors identifying the advantages of e-banking by relating different perspective of. E banking has benefit for customer perspective, for banks etc. Banking industry is fundamental role for sustainable economic development because they are the backbone of economic growth. E-banking creates efficiency and effective environment in the industry. E-banking helps the customers as well as banks by overcoming the drawbacks of manual system as computers are capable of storing, analyzing, consolidating, searching, and presenting the data as per the requirement of customers and banks with a lot of speed and accuracy (Chavan, 2013).

2.2.5.1 Benefit of E-banking on the bank point of view

A bulk of literature states that the bank benefits by adopting E-banking in its operation. The main benefits to banks are cost savings, reaching new segments of the population, efficiency,

enhancement of the bank's reputation and better customer service and satisfaction. The idea is the more transactions can be converted online, the more money will be saved (Chavan, 2013).

A reduction in the percentage of customers visiting banks with an increase in alternative channels of distribution will also minimize the queues in the branches and also increased availability and accessibility of more self-service distribution channels help bank administration in reducing the expensive branch network and its associate staff overheads. Bank employees and office space that are released in this way may be used for some other profitable ventures. Shifu (2014) in his study concluded the following as major benefits of e bank for the bank (Shifu., 2018):

- E-banking helps in reducing the cost of delivering the services to the customers.
- It provides banks with competitive advantage among their peers.
- It reduces the use of paper money that helps the central bank in printing less paper notes.
- Through websites, banks can earn revenue by promotional activities.
- FAQ's uploaded over the banks' website will reduce the workload on employees.

2.2.5.2 Benefit from customers point of View

The main benefit of e banking from the bank customers' point of view is significant saving of time by the automation of banking services processing and also enabling the customers to access the banking service any time at anywhere. According to Gurau (2002) the major benefits of e banking from customer's point of view is summarized as follows (Gurau, 2002).

- Reduced costs in accessing and using the banking services.
- Increased comfort and timesaving -transactions can be made 7x24, without requiring the physical interaction with the bank.
- Quick and continuous access to information
- Better cash management and Convenience

Generally, e banking as already stated has greatly serviced both the public and the banking industry. This has resulted in creation of a better enabling environment that supports growth, productivity, and prosperity.

2.2.6 Challenges of E-Banking

The implementation of E-banking has faced many challenges the following are some of the problems.

- Implementation of global technology: There is a necessity to have a quite level of infrastructure and good human capacity building prior the developing countries may adopt global technology for their local needs. In developing countries, many clients either do not trust or do not access to the needful infrastructure that is to be able to process electronic payments (Kaur, 2014).
- Security Issue: is one of the important issues for E-banking. In the case of any monetary damages to the clients, the bank's reputation is spoiled. The security risk is the main threat from the hackers, who can use several types of information of public peoples for reason of criminal activity. While Sometimes hackers hike the passwords of the clients cause to theft their money or some hidden or secret information (Kazm, 2015).
- Strengthening the public support: In developing countries, in the previous year's most e-finance initiatives have been the result of joint efforts between the non-public and public sectors. If the public sector does not have the necessary resources to implement the projects it is important that joint efforts between public and non-public sectors along with the multilateral agencies like the World Bank, be developed to enable public support for e-finance related initiatives (Kaur, 2014).
- Trust Issue: Trust plays a key role for e-banking, but the lack of trust is the main issue in the growth and development of electronic banking (Choudhary, 2015).
- Illegal modification of payment information: It may result in loss of money and loss of customer confidence. Alterations could be made to the transaction account numbers resulting in misdirected payments, to the payment amounts or to electronic balances on electronic. Another challenge in e-payment includes usage of a fraudulent web site by an attacker to collect credit card number and other personal and/or financial information (Taddesse, 2005)
- Infrastructure: It is the other obstacle to implement E-banking in the banking industry. For the effective deployment of e-banking, it is necessary to have a reliable, sustainable and cost-effective infrastructure that can be accessible to the majority of the population (Taddesse, 2005)
- Regulatory and Legal Issues: National, regional or international set of laws, rules, and other regulations are important prerequisites for successful implementation of E-banking services. Some of the main elements include rules on money laundering, supervision of commercial banks and financial institutions by supervisory authorities,

payment system oversight by central banks, consumer and data protection, cooperation and competition issues (Taddesse, 2005)

2.2.7 E-banking challenge in Ethiopia

Banking in Ethiopia faces numerous challenges to fully adopt and adapt E-Banking applications and seize the opportunities presented by ICT applications in general. According to Garedeu worku Key Challenges for E-Banking applications are (Worku, 2010):

- Low level of internet penetration and poorly developed telecommunication infrastructure: Most rural areas of the country, where the majority of small and medium businesses are concentrated, have no Internet facilities and thus are unable to engage in e-banking activities.
- Lack of suitable legal and regulatory framework for e-commerce and e-payment: Ethiopian current laws do not accommodate electronic contracts and signatures. Ethiopia has not yet enacted legislation that deals with e-commerce concerns including enforceability of the validity of electronic contracts, digital signatures and intellectual copyright and restrict the use of encryption technologies.
- Political instabilities in neighboring countries: Political and economic instabilities in Somalia, Southern Sudan, and Eritrea are threatening traits that do not provide a very conducive environment for e-banking in Ethiopia.
- High rates of illiteracy: Low literacy rate is a serious impediment for the adoption of E-Banking in Ethiopia as it hinders the accessibility of banking services.
- High cost of Internet: Compared to the developed countries, there are higher costs of entry into the e-commerce market in Ethiopia. These include high start-up investment costs, high costs of computers and telecommunication and licensing requirements.
- Absence of financial networks that links different banks (Banks are not yet automated): Most of the banking-transactions currently taking place use credit and debit cards supplied by Visa and MasterCard.
- Frequent power interruption: lack of reliable power supply is a key challenges for smoothly running e-banking in Ethiopia.
- 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 organizations, Tendency to be content with the existing structures, People may be resistant to new payment mechanisms and Cyber security issues.

2.2.8 Service

A lot of definitions have been given to service by different scholars. Based on Oxford dictionary, service is described as “the action of serving, helping, or benefiting; conduct tending to the welfare or advantage of another; condition or employment of a public servant; friendly or professional assistance.” According to Webster (Reprinted 1983) service is defined as "Anything provided by a dealer or manufacturer, that is helpful for people who have bought things from him like maintenance, supplies installation, assemblies, repairs, etc, ". But now, this definition is not sufficient to explain what service means. Currently, many scholars are modifying the definition of service which makes it compatible with today’s business world. Phillip Kotler et al (1999) also defined service as any activity or benefit that one party can offer to another that is essentially intangible and may not result in the ownership of anything (Kotler, 1999).

Services are Intangible products such as accounting, banking, cleaning, consultancy, education, insurance, expertise, medical treatment, or transportation. Services deal with processes rather than with thing are experienced rather than consumed. Services are any intangible act or performance that one party offers to another that does not result in the ownership of anything (Kotler P. & Keller K, 2009). Since a service process leads to an outcome resulting in the customer being either satisfied or dissatisfied with the service experience (Mayer, 2003), it is of paramount importance that service organizations pay attention to designing the system by which service concepts are produced and delivered to customers (Brown, 1994).

2.2.8.1 Service Quality

Service quality has been defined as a breach between the customer’s prospect of a service and the customer’s perception of the service providers (Parasuraman, 1985). Now, there is no practical, worldwide, or all-inclusive definition of service quality. Grooroo (2007) defines it as “the result of an evaluation process where the user compares his expectations with the service, he perceived he has consumed” (Grönroos, 2007). Definitions of quality incorporated: (a) satisfying the customer or exceeding expectations; (b) product of service features that please declared needs; (c) conformance to obviously specific necessities; and (d) robustness for use, whereby the product meets the customers’ needs and is free of deficiency (Toyin, 2008).

2.2.8.2 Service quality Models

Service quality model describes how to achieve desired quality in services. Achievement of desired quality in services differs from tangible products because the evaluation is based on

expectations and attitudes more than data about reliability. There have been a variety of service quality models. From them, SERVQUAL was one of the widely used model, which was developed by Parasuraman, Berry, & Zeithaml (1988). The model proposed that service quality is measured by five dimensions: assurance, reliability, empathy, tangibles and responsiveness. Each dimension is measured with four to five items which consists of 22 pairs of items (Parasuraman, 1988).

2.2.8.3 *The Five Service Quality Dimensions*

Parasuraman et al. (1985) first identified ten overlapping dimensions of service quality which consumers use to assess the quality of a service. These dimensions were responsiveness, reliability, competence, courtesy, communication, access, credibility, understanding, security and tangibles. In their 1988 work, the ten dimensions were reduced to five: reliability, tangibles, responsiveness, remained the same, but the other seven components merged into two aggregate dimensions called empathy and assurance, which are abbreviated as RATER and are discussed briefly below (Parasuraman, 1988).

Reliability: Delivering on promises. Reliability is described as the ability to deliver on the company's promises dependently and accurately with matters of service provision, problem solving strategies and pricing. Firms that fail to deliver on their reliability promises do actually fail customers in the most direct way and according to Zeithaml; customer expectations for service are likely to go up when service delivery is underperformed. When service failures occur, customers' tolerance zones are likely to shrink and their adequate desired service levels are likely to rise (Zeithaml, 1996).

Responsiveness: Willingness to help. Responsiveness is the willingness to assist and provide prompt customer service whenever required. The emphasis is mainly on the attentiveness and promptness of customer services rendered such as questions, problems and complaints that customers would need to be dealt with. Responsiveness is determined by the length of time that customers have to wait for assistance and the flexibility of service providers to customize their service in order to meet customers' needs. Responsiveness perceptions do shrink when customers are made to wait too long to get assistance (Zeithaml, 1996).

Assurance: Inspiring trust and confidence. Assurance is the knowledge and courtesy of employees as well as the ability of a firm to inspire trust and confidence in customers. This assurance is mostly required in services that involve risks such as insurance, banking or brokerage services. Trust and confidence is normally embodied in the person that connects a

firm with its customers for instance brokerage agent's link their firm to customers. It would be important for such agents to inspire trust and confidence in order to build loyalty and assurance in their customers (Zeithaml, 1996).

Empathy: treating customers as individuals. According to Zeithaml, empathy is the caring and individualized attention given to customers. Normally empathy is conveyed when customers get personalized or customized services and are made to feel unique and special. Knowing customers by name and building personal relationships with them create empathy in firm reflecting personal knowledge preferences of customers' wants. Customers like to feel understood and special. With personal knowledge of customers' wants, firms are able to customize their services to meet these needs (Zeithaml, 1996).

Tangibility: Representing the service physically. Tangibles are the physical appearances of physical facilities, equipment, personnel and communication materials. These tangibles represent images of the services that customers expect to get. In most cases new customers use these tangibles to evaluate the service quality so it is of great importance that firms enhance their image to reflect quality as well as provide continuity in their "service quality image" (Zeithaml, 1996).

2.2.9 Customer Satisfaction

Customer satisfaction is a measure of how products and services supplied by a company meet or surpass customer expectation. Customer satisfaction is also defined as "the number of customers, or percentage of total customers, whose reported experience with a firm, its products or its services (ratings) exceeds specified satisfaction goals (Farris, et al., 2010). And yet another definition of customer satisfaction is it refers to the extent to which customers are happy with the products and/or services provided by a business. Furthermore, it is defined as a term generally used to measure a customer's perception of a company's products and/or services. It's not a straightforward science however, as customer satisfaction will vary from person to person, depending on a whole host of variables which may be both psychological and physical. The usual measures of customer satisfaction involve a survey with a set of statements using a Likert Technique or scale (Westbrook, 1981).

2.2.9.1 Customer Satisfaction in Banking

Customer satisfaction is a key determining factor why customers leave or stay with a bank. However, keeping customers is also dependent on a number of other factors. These include a wider range of service choices, greater convenience, better prices, and enhanced income

(Thakur, 2011). Service quality is a crucial element which impact customers' satisfaction level in the banking industry. Generally, in banking, quality is a multivariable concept, which includes differing types of convenience, reliability, services portfolio, and critically, the staff delivering the service (Thakur, 2011).

Minimum price with maximum usage and profit always breeds higher level of satisfaction (Jemal, 2004). When pricing is not suited to the needs of the customers, dissatisfaction usually occurs. In banking industry also, the interest rates on loans and charges on the usage of online services such as ATM machines and the processing fee is a major source of conflict between the bank and its customers. If customers think that the charges are more than it should become paring to their needs, they switch. Competition is now fierce in banking industry as it has become too easy to open an account in any other bank that results switching cost to be very minimal. But if a customer is satisfied, the loyalty injects automatically and the customer remains with the current banker for a longer and longer period of time (Thakur, 2011).

2.2.9.2 Measuring Customer Satisfaction

Customer satisfaction is measured at the individual level, but it is almost always reported at an aggregate level. The state of satisfaction depends on a number of both psychological and physical variables which correlate with satisfaction behaviors such as return and recommend rate. The level of satisfaction can also vary depending on other options the customer may have and other products against which the customer can compare the organization's products (David, 2010). The main characteristics of services in general and banking services in particular are: It's intangible, services are not material and cannot be touched, the production and consumption of service happens at the same time, which means that it is produced upon request and Service cannot be stored (Parasuraman, 1988). Quality customer service and satisfaction are recognized as the most important factors for bank customer acquisition and retention (Jemal, 2004). To encourage internet banking adoption, banks need to develop strategies that improve the customer's trust in the underlying technology. The other factors include quick response, assurance, follow-up and empathy. Security, correct transaction, customer control on transaction (customer control on transaction/ personalization), order tracking facilities and privacy are other important factors in the online service that affect the customer satisfaction (Joseph, 1999).

2.3 Empirical Review

A lot of studies had been conducted by various scholars on e-banking service quality and also customer satisfaction. Against this background, several contributions have sought to delineate

the domain of e-banking service quality and identify its dimensions and adopt service quality model as a basis to conceptualize e-banking service quality (Collier, 2008; Al-Smadi, 2012; Al-Jabri, 2012; Onodugo, 2015).

In the study conducted on e-banking and customer satisfaction in Bangladesh by adopting SERVQUAL method to collect necessary data and found that the five service quality dimensions (reliability, responsiveness, assurance, empathy, and tangibles) have more contribution to satisfy the customers of e-banking in Bangladesh (Nupur, 2010). Another study conducted in Iran investigated the realization of electronic banking in improving Banks' customer and their findings revealed that E-services which are provided via various ways such as ATM, sale terminals, telephone banking, Internet and mobile, are among the customer needs and this means that the relationship between their development and customer satisfaction degree is a direct-linear relationship (Olanipekun, 2013).

In Africa, Oduro (2013) investigated factors that determine customer satisfaction level in banking institutions from Ghanaian Banking Industry. His study used factor analysis and found that three factors influence consumers' satisfaction level of the banks. These factors were found to be customer relation and service, staff competency and responsive and convenient banking (Oduro, 2013). A research done by Simon & Thomas (2016) was targeted to determine the effect of E-banking on customer satisfaction in selected commercial banks in Kenya. The finding shows flexibility and easy to use internet banking; convenience of mobile banking has great effect, but usefulness and friendliness has low effect on customer satisfaction. Further user friendly, ease of access, privacy and affordability of ATM affects customer satisfaction (Simon, 2016).

Nevertheless, there are limited numbers of studies were conducted in Ethiopia on the impact of E-banking services on customer satisfaction. Some of the studies are empirically reviewed below.

Kibrom (2010) studied on the relationship among service quality, corporate image, price, customer satisfaction, and service loyalty. The study found that Service quality, corporate image, and price were found to be determining customer satisfaction and service loyalty at the bank. The independent variables explained the dependent variable in 45.7%. Service quality has positive and significant effect on customers' satisfaction judgments (65.5%). As to the overall level of satisfaction of customers, majority of the customers (84%) are satisfied with the service delivery (Kibrom, 2010).

A research conducted by Milion (2013) on the impact of E-Banking on Customers Satisfaction in two private banks in Gonder city. His study revealed that majority of users of e-banking are the young, the educated, salaried and students but businessmen and women are not actively using the service. The finding also shows e-banking has impact in improving customer satisfaction by reducing waiting time for customers to get bank service and enable them to control their account movements (Milion, 2013). Ayana (2014) identified factors that affect satisfaction of customers of E-banking in the Ethiopian banking industry. The result of the study indicated that, the major barriers Ethiopian banking industry faces in the adoption of Electronic banking are: security risk, lack of privacy and security, lack of legal and regulatory frame work, Lack of ICT infrastructure and absence of competition between local and foreign banks (Gemechu, 2012).

In addition, A research conducted by Sintayehu (2015) on the title impact of E-Banking on customer satisfaction on CBE, Dashen and Wogagen bank in Ethiopia. The study found that education level and age have statistically significant relation with customer satisfaction in E-banking. In addition, reliability, efficiency and user-friendliness have great contribution for the improvement of e banking satisfaction in Ethiopia (Sintayehu, 2015). Worku (2016) found out that perceived usefulness and perceived user-friendliness have positive relationship with the satisfaction of customers for new banks' products especially mobile banking whereas perceived risk has negative relationship with the satisfaction of customers (Worku G, 2016).

A study conducted by Habte, et al (2015) revealed that the overall level of customer's satisfaction in the study area is low (38.85%) as compared those who were not satisfied (61.15%). The result of study showed that all most all factors included in the study were significantly associated with customer's satisfaction. The result of the study also revealed the predictor variables availability of connection service, attractiveness of bank facility, number of front desk(channels), managing waiting line, complain handling process, speed of service, waiting time, customers caring manner, giving improved and consistent service for their customers, employees handling customers with best interest and at heart, employees give promoting service for their customers, employees inspire confidence and trust, availability of modern equipment, engagement in occupation and distance were significantly associated with customers satisfaction. Despite of this sex, marital status, age, educational level, family size, monthly income, monthly expenditure and religion were not significantly associated with customer's satisfaction (Habte, 2015).

According to the study conducted by Dawit and Adem (2018) on the effect of perceived service quality on customer satisfaction in private commercial banks of Ethiopia, the customers were agreed and satisfied on service quality dimensioned delivered by their respective banks. Multiple regression result showed that Empathy, Reliability and Responsiveness predicted 61.2% of variation on customer satisfaction (Dawit JB, 2018).

2.4 Research Gap

A number of valuable studies in the area of E-banking had been conducted over the years back in North America, Europe, Asia and some from African countries such as Kenya, Ghana, Nigeria and Zimbabwe (Masinge, 2010; Al-Jabri, 2012; Dineshwar, 2013). There were some studies conducted in our countries by focusing on the extent of the adoption of e banking (Girma, 2016; Chernet, 2015; Bultum, 2014). But very little is known about effect of e banking on customer satisfaction in Ethiopia (Tsegaye, 2017; Sintayehu, 2015). Despite various studies conducted in different countries on the title “effect of e banking on customer satisfaction” it may not be appropriate to consider the findings for our countries. Understanding the scenario in other country may throw some light on the topic however it cannot be applicable fully. This is due to the fact that customer preferences and satisfaction level based on the demography, culture, affordability, IT penetration varies from country to country. Thus, there is a significant gap relating to research as to impact of e banking on customer satisfaction. Therefore, the proposed study aims to fill this research gap by studying the impact of e banking on customer satisfaction in the case of Hibret bank.

2.5 Conceptual framework

The conceptual framework of factors affecting customer satisfaction is established based on the literature review. The conceptual framework was developed by principal investigator after a thoroughly reviewing the literature related to the subject under study. The arrows indicate the proximity of the independent variables to the dependent variable. The dependent variable is customer satisfaction and the independent variables are service Reliability, Transaction efficiency, Service performance, User-friendliness, Service Security, Customer control on transaction/ personalization and also socio-demographic factors and corporate image and price factors.

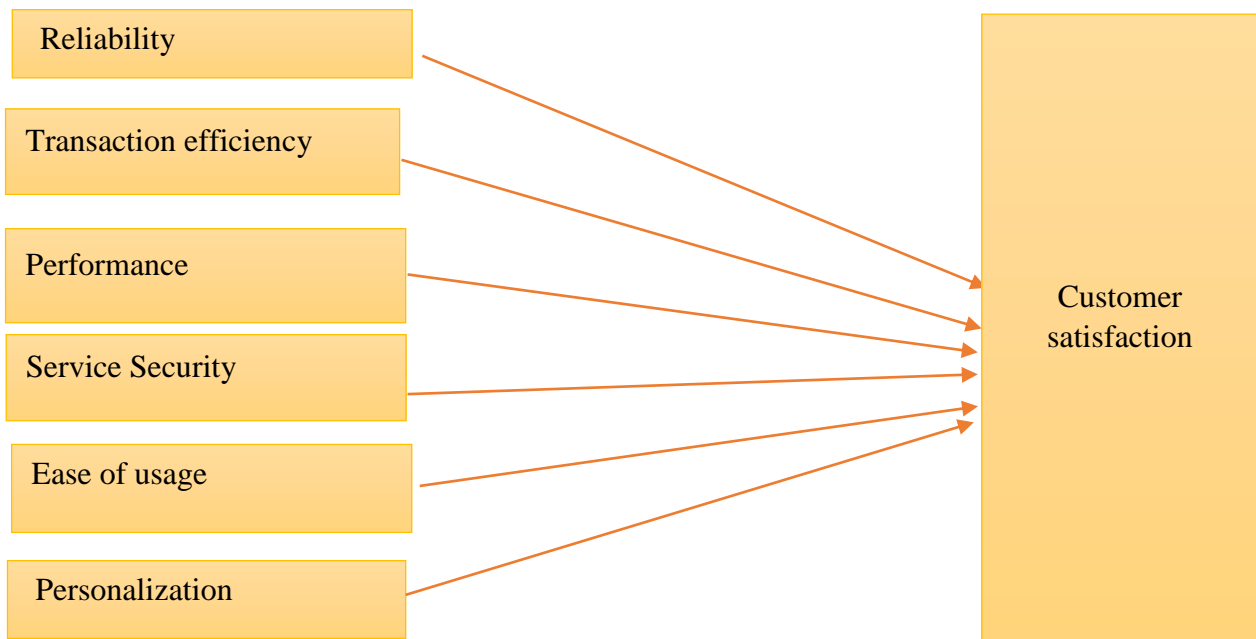


Figure 1 Conceptual framework of the factors affecting customer satisfaction

(Parasuraman, 1988; Zeithaml, 1996)

3 Research Design and Methodology

3.1 Introduction

This chapter deals with research design and methodology that was used to carry out the research. The chapter is organized in the following subsection: Research approach, Research design, sampling design, sources of data, data collection methodology and collection instrument, data analysis methods and validity and reliability.

3.2 Research approach

The research approach in this study is chosen based on the purpose and the research questions set out to be addressed. Accordingly, to achieve the objective of this study and answer the research questions, the researcher adopts quantitative research approach. Quantitative research is a structured way of collecting and analyzing data obtained from different sources. It involves the use of computational, statistical and mathematical tools to drive results. Because this study was deductive which intended to test hypothesis formulated based on the literature, quantitative research approach was used.

3.3 Research design

To examine the e-banking service quality dimensions which have effect on customer satisfaction, explanatory research design will be used. This design helps the researcher to identify the nature of the relationship between the E-banking service quality (independent variables) and customer satisfaction (dependent variables).

3.4 Sampling design

3.4.1 Target Population

The target population of this study were active user of e-banking customers of Hibret bank and who have been using the service for at least the last one year. According to the annual report of Hibret bank, there are 119 ATM machines and 323 (148 branches and 175 merchants POS) POS machines. According to the bank report, the number of ATM card holders of the Bank reached 293,856, Hibir Mobile Banking customers reached 272,265 and Hibir Online users reached 23,584 (Hibret, 2020). For the purpose of this study, selected grade A and grade B branches located in Addis Ababa, which are under the East South and North Addis Ababa districts, were included in the study. These areas are selected due to the large number of customers that are served. Based on the size of the branches and the transaction carried out in the area the branches were selected. The types of customers targeted for this study were customers of Hibret bank E-banking service above the age of 18 years. The e-banking services targeted by the study will be ATM, mobile banking and internet banking.

3.4.2 Sampling Frame

Sampling frame is the source material or device from which a sample is drawn. For this study, the sampling frame was E-banking customers of selected grade A and grade B branches of South East and North Addis Ababa districts. The e-banking services targeted by the study were ATM, mobile banking and internet banking. However, it is difficult to list the sampling frame due to the bank security issue to keep the confidentiality of its customers.

3.4.3 Sampling technique

The researcher didn't have access to the sampling frame (list of customers) because of the security inferences of the bank to keep the confidentiality of its customers. Due to it, the sampling technique for this study, was a purposive sampling technique which is a non-probability sampling technique. Non-probability sampling may be defined as any sampling method where some elements of the population have no chance of selection, or where the probability of selection cannot be accurately determined. From the non-probable sampling technique, convenience sampling technique, which the study participants/respondents were selected because of their convenient accessibility and proximity to the researcher (Black, 1999). For the purpose of this study, 4 branches from each grade (grade A and grade B) were selected using a systematic random sampling. To find the sample size, a two-stage clustered sampling technique was used, the first is to select the branches and then to select the study participants. The study participants were allocated to each bank proportionally. Finally, convenience sampling technique was used to contact each customer to get the questionnaire filled up.

3.4.4 Sample size

As stated above, the expected number of active customers served at Hibret bank at the eight specified branches are 14,863 mobile banking users, 21,592 ATM card holders and 266 Hibir online users. Totally there are 36,721 E-banking users, which were used as a sampling frame. Based on it, the sample size was calculated using the finite population sampling formula by only using the total population size and the precision (level of error) value of $e=0.05$. As a result, the researcher applied a formula to determine the sample size for those samples under simple random sampling method (Yamane, 1967). So that, the researcher used the following formula to determine the sample size from the population:

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

Where: N= is the population size (36,721)

n= is the sample size

e= is level of precision or sampling error (0.05) by assuming 95% confidence interval

based on it:
$$n = \frac{36,721}{1 + 36,721(0.05)^2} = 395.7 = 396$$

The total sample size is 396

Thus, the total sample size is 396. Since the number of people in each sampled bank were not the same, there was a need to proportionate this for each bank and calculated using the following formula:

$$n = \frac{nN1}{N}$$

Where; n= total number of samples

N= total number of populations

N1= total number of populations in each bank

Table 1 Lists of selected Banks and sample appropriation

District	Grade	Selected Branch	Population size	Percentage of population	Total number of sample
South East AA	A	Bole Medhaniale	9,394	26%	101
		Wello Sefer	3,339	9%	36
	B	African Venue	2,801	8%	30
		Millinum	4,356	12%	47
North AA	A	Meskel Flower	2,619	7%	28
		Legehar	4,053	11%	44
	B	Sidist Kilo	4,011	11%	43
		Megenagna	6,148	17%	66
Total		8	36,721	100%	396

3.4.5 Sampling procedure

After the sample size in each bank is determined, the researcher used a convenience sampling method to select the sample from the available population. The rationale behind employing convenience sampling method was because there is no point in time during which all clients

are available due to different reasons, and it is not possible to contact everyone who may be sampled.

3.5 Sources of Data

The study was conducted by collecting data from primary data source related to the impact of E-banking on customer satisfaction. The primary data was collected from selected E-banking service users or customers of Hibret bank who reside in Addis Ababa.

3.6 Data Collection technique

The data collection instrument that was used for this study was questionnaires, which was the best method to gather information without complexity. Then the researcher distributed the questionnaires for customer of E-banking users of Hibret bank in Addis Ababa. The questionnaire was prepared to get information about E-Banking services and its impact on customer satisfaction. The questionnaire consisted three parts. Part one to assess some demographic information of the customers or general information about the respondents like gender, age, educational level, occupation, Part two was prepared to collect information from the customers about e-banking service quality dimensions and part three to assess the level of customer satisfaction. The second part was structured in close-ended questions by which the respondents was asked to indicate their level of agreement using a five scale Likert rating scale measurement where: Strongly Disagree (SDA)=1; Disagree(D)=2; Neutral (N)=3; Agree (A) = 4; and Strongly Agree (SA) = 5. The use of Likert scale is to make it easier for respondents to answer questions in a simple way, which assists in identifying the perception of the customers towards the e-banking service of the bank. For part three the customer satisfactions part was rated there agreement/disagreement with the following measurement HD = Highly Dissatisfied, D = Dissatisfied, M = Moderate, S = Satisfied, HS = Highly Satisfied).

3.7 Data analysis methods

This study used descriptive statistics. The data collected via the questionnaire was recorded, encoded and analyzed using a Statistical Package for Social Sciences (SPSS version 26, 2019). In this study, the descriptive statistics such as percentages and frequency distribution were used to analyze the general profile of the participants. And the study used Mean values to interpret data on the key research questions. To test the relationship between dependent and independent variables, linear regression analysis was employed and applied to evaluate the level of impact of the independent variables on the dependent variable. And the analysis was done according to the respective objectives, and research questions. The following Mean ranges were used to interpret the research findings:

Table 2 Interpretation of Responses

Rating scale	Mean Range	Interpretation Response Made
1.0 - 1.7	strongly disagree	Very low
1.8 - 2.5	Disagree	Low
2.6 - 3.3	Not Sure	Neutral
3.4 - 4.1	Agree	High
4.2 - 5.0	Strongly Agree	Very High

Source: (Andrich, 1978)

3.8 Validity and reliability

3.8.1 Reliability analysis

To check the reliability of the questionnaire initially a pilot sample of 39 respondents where except one, 5 from each branch selected and Cronbach alpha was computed to measure the internal consistency of the set of items. The result of Cronbach alpha for the sample pilot test has been presented as follows.

Table 3 Cronbach Alpha Test

	N	Coefficient	No items
Reliability	39	0.787	4
Transaction efficiency	39	0.718	3
Service performance	39	0.723	4
User-friendliness	39	0.756	4
Service Security	39	0.937	4
Customer control on transaction/ personalization	39	0.777	3

Source: SPSS out put

The alpha coefficient for the pilot samples ranges from 0.718-0.937, which is between the value 0.7-0.95. These value suggested that the items have relatively high internal consistency since it is above 0.70 (Note that a reliability coefficient of 0.70 or higher is considered as “acceptable” in most social science research situations.) as stated by George & Mallery (2003).

3.8.2 Validity Analysis

Validity is the most critical criterion and indicates the degree to which an instrument measures what it is supposed to measure. In order to ensure the quality of the research design content and construct validity of the research was checked. According to Kothari (2004) Content validity is the extent to which a measuring instrument provides adequate coverage of the topic under study. If the instrument contains a representative sample of the universe, the content validity is good. Its determination is primarily judgmental and intuitive. It can also be determined by using a panel of persons who shall judge how well the measuring instrument meets the standards, but there is no numerical way to express it. Based on this the content validity was verified by the professionals.

3.9 Research Ethics

This study was conducted in professional manner by keeping the basic research ethics. The research asked all the respondents to give their written consent, which ensure their right to participate or not. On the written consent form, the purpose of the survey and the confidentiality of their response will be stated and ensured. Respondents were informed about their full right to fill the questions or to withdraw from the study at any time without any unfavorable consequences, and they are not harmed as a result of their participation or non-participation. In order to collect primary data, structured questionnaires were distributed. The confidentiality of the respondents was protected, and respondents' identities were not disclosed. Finally, all research finding has not been obscured and is free from any plagiarism by acknowledging every reference used. In addition to this, the study was done in an open-minded manner and attitudes were expressed as they are, and nothing was modified or changed. Hence information going to be collected is presented as they are, and all the literatures gathered for the purpose of this study were appreciated in the reference.

4 RESULT AND DISCUSSION

4.1 Introduction

This chapter is highlighted the analysis of data and discussed the major findings of the study in relation to the effects of service quality dimensions on customer satisfaction. The findings of the study are analyzed based on the specific objectives and hypotheses of the study. In this chapter respondent's profile, descriptive analysis, correlation analysis and regression analysis are discussed.

A total of 396 questionnaires were distributed to the respondents with close follow up and guide in filling the questionnaire and 363 respondents were correctly filled and returned the questionnaire with a response rate of 92%. The remaining 14 respondents didn't respond and never returned the questionnaire and 19 respondents were returned the questionnaire but not responded adequately. Several questions that measure customers' satisfaction on the e-banking services provided by Hibret bank are included in the questionnaire. The questionnaires distributed to customers of eight selected branch that are located in East South Addis Ababa and North Addis Ababa districts. The basic assumptions are e-banking selected service quality attributes namely reliability, transaction efficiency, service security, user-friendliness, service performance and customer control on transaction/personalization influence on customer satisfaction.

The statistical analysis of this study was done by SPSS software version 26, the result of the study shown in inference and descriptive section. In descriptive section tables, charts used and in inference section the result of multiple linear regressions was analyzed.

4.2 Socio demographic profile of respondents

The questionnaire's part I includes a section, which assesses some demographic information/profile of the respondents and other factors that likely to influence the degree of customer satisfaction with respect to the e-banking services offered by Hibret bank. Demographic profiles of the respondents were analyzed using descriptive analysis with the help of SPSS. The result of the survey is shown in Table 4 as follows.

Table 4 Socio Demographic Characteristic of the study participants, 2021

No	Demographics	Frequency	Percentage	
1.	Gender	Male	199	54.8
		Female	164	45.2
	Total		363	100
2.	Age of respondents	Less than 20	13	3.6
		20-30 years	159	43.8
		30-40 years	125	34.4
		40-50 years	54	14.9
		50-60 years	12	3.3
		Above 60 years	0	0
	Total		363	100
3.	Level of education	Below grade 12	22	6.1
		12 th Grade complete	37	10.2
		Diploma/level IV	59	16.3
		First Degree	179	49.3
		Master's Degree	66	18.2
		Third Degree (PhD)	0	0
	Total		363	100
4.	Employment status	Government	71	19.6
		Private Organization	192	52.9
		Student	24	6.6
		Self-employed	58	16.0
		Not employed	18	5.0
	Total		363	100
5.	Types of e-banking used by respondents	ATM	326	90.1
		POS	220	60.8
		Mobile Banking	107	29.6
		Internet Banking	95	26.2
		All	69	19.1
	Total		363	

6.	E-banking service usage time (in years)	Less than one year	54	14.9
		1-2 years	87	24.0
		3-4 years	123	33.9
		5 years or more	99	27.3
	Total		363	100
7.	Service quality E-banking	Excellent	80	22.0
		Very Good	111	30.6
		Good	108	29.8
		Fair	40	11.0
		Poor	24	6.6
	Total		363	100
8.	Trust in E-banking service	Yes	270	74.4
		No	80	22.0
		I don't know	13	3.6
	Total		363	100

Source: SPSS study output

As shown in the table above (Table 4) concerning the gender of respondents, 54.8% of them are male and the rest 45.2% are females, which shows that the major users of Hibret bank e-banking services are male. Regarding the age group of the respondents, 43.8% (159/363) and 34.4% (125/363) of the respondents are in the age group of 20-30 years and 30-40 years respectively. The remaining 3.6% (13/363), 14.9% (54/363) and 3.3% (12/363) are in the age group of less than 20, 40-50 years and 50-60 years respectively. This shows that the majority of Hibret bank E-banking customers are between the age of 20-40 years. It implies that the service users are dominated by the young age groups and the finding suggest that most of the customers were found in the working age.

Regarding the respondent's level of education, nearly half of the respondents were first degree holders and followed by master's degree holders with 49.3% and 18.2%, respectively. The remaining 6.1%, 10.2% and 16.3% of the respondents were below grade 12, grade 12th completed, and diploma/level IV education level. This shows that, majority of the respondents had high literacy levels.

As far as occupation is concerned, the respondents were a mix of employee at government (19.6%), private organization (52.9%), Students (6.6%) and self-employed (16%). 5% of the

respondents were not employed. This implies that most of e-banking customers are employees of private organization, followed by government and self-employed.

Regarding the types of e-banking service used by the respondents, 90.1%, 60.8%, 29.6%, and 26.2% of them used ATM, POS, Mobile banking and internet banking respectively. Most of the respondents used more than E-banking services as a result 19.1% of the respondents used all the above E-banking services. This may be as a result of the fact that the ATM plays a vital role in the banking process since its accessibility increases from time to time and different bank ATM machines accepts another bank ATM cards. Bank customers can easily obtain cash from their banks without physically present at the bank premises. Apart from benefit of convenience, the ATM innovation is one of the most secure means for customers to access their cash. The ATMs innovation gives banking customers greater access to their money by taking banking to their doorsteps.

From the respondents, 14.9%, 24%, 33.9% and 27.3% of them are using the E-banking services for less than one year, 1-2 years, 3-4 years and greater than 5 years. Based on the finding, majority of the respondents were the customers of the E-banking service for more than 3 years.

Majority of the respondents perceived that the quality of E-banking services is very good (30.6%), good (29.6%) and excellent (22%). But, 11% and 6.6% of the respondents believed that the E-banking service provided by Hibret bank was fair and poor respectively. The result showed that, more than 82.4% of the respondents were satisfied with the quality of E-banking services. Besides this, 74.4% of the respondents trust the E-banking service while the remaining 22% didn't trust the service and 3.6% were neutral.

4.3 Mean and standard deviation

The descriptive analysis was done using descriptive statistics by computing mean score to get the average response of the respondents for each question. For discussion purpose the mean scores are interpreted as follows.

Table 5 Mean score interpretation

Mean score	Interpretation
4.51 – 5	Very good/excellent
3.51 – 4.50	Good

2.51 – 3.50	Average/moderate
1.51 – 2.50	Poor
1 – 1.50	Very poor

Sauce: Norasmah and Sabariah (2011)

In order to compare the different factors that affect the level of customer satisfaction, mean and standard deviation of the respondents have been computed. Descriptive statistics (mean and standard deviations) of the respondent scores were computed to compare the different factors that affect the level of customer satisfaction by using the means and standard deviations values. As shown in the table below (Table 6), the mean value depicting the overall customer's satisfaction on e-banking is above average level with a mean value of 3.44 on a 5-point Likert scale. This implies that reliability, transaction efficiency, service performance, user-friendliness, Service security and customer control on transaction/ personalization have an effect on the customer satisfaction.

Table 6 Mean & Standard Deviation of service quality dimensions, 2021

	No of items	N	Mean	Standard deviation
Service Reliability	4	363	3.13	0.743
Transaction efficiency	3	363	3.49	0.866
Service performance	4	363	3.35	0.636
User-friendliness/ease of use	4	363	3.72	0.751
Service security	4	363	3.65	0.829
Customer control on transaction/ personalization	3	363	3.30	0.821
E-banking satisfaction	7	363	3.55	0.688

Source: SPSS output

As shown in the table above, the mean value of satisfaction on the overall E-banking is 3.55, which shows customers satisfaction is good with the present service of Hibret bank and Standard deviation was also found less than 1 (0.688). Hence, the information provided by customer is above the average. The finding differs from other similar studies (Sintayehu, 2015), which was found a mean of 3.3. This could be due to the fact that there is an improvement in the network access, improvements in the access of E-banking and expansion of ATM machines.

The table also suggests that all e-banking service quality dimensions rated as above satisfactory. As far as the mean values are concerned, out of the e-banking service quality dimensions User-friendliness (mean of 3.72) and service security (mean of 3.65) have relatively good roles on e-banking service quality and in turn overall e-banking customer satisfaction. This means the respondents agreed that E-banking is easier to use and secure and they are more comfortable using the services without fear. Therefore, the variable has relatively major role in E-banking service quality and in turn over all customer satisfaction. Furthermore, the finding is similar with other studies (Ongori, 2013, Sintayehu 2015). This is because the bank put several controlling methods such as pin (password) to log in and limiting on volume of transaction for the security. Similarly, the physical access of ATM machines, the service expansion of mobile banking and technology advancement like introduction of smart phones allows the user to use the service easier.

Furthermore, the service quality dimensions analysis, service reliability has a mean score of 3.13 with the standard deviation of 0.743. Still the customer rates the variable above satisfactory level. Moreover, the finding is consistent with other researchers conducted by Meron (2015), Ongori (2013) and Zhou (2004). This indicates, the customers acknowledge Hibret bank E-banking services are relatively performs the right service on the first time, provides speedy and quick E-banking service, provides the service as promised and also maintains error free records. With this perception it is clear that this dimension will significantly influence the levels of customers' satisfaction. This may be achieved since the bank is aggressively working on branch expansion, deploying ATM machine and POS machines, giving due attention for marketing tasks and also expansion of mobile and internet banking services.

The table also shows that the transaction efficiency has a mean of 3.49 with standard deviation of 0.866. The result indicates the customers are satisfying on the dimension of transaction efficiency as far as the mean value is concerned. The finding is consistent with other similar studies conducted by Ongori,(2013), Sintayehu (2015) and Simon (2016). This level of comfort on virtually in the aspects of efficiency translates to increase the level of satisfaction amongst the users of Hibret bank E-banking services and they agreed that the bank provides complete help function, transaction process is easy and fast and also the cheapest way for making transaction.

Service performance (mean of 3.35) and service customer control on transaction/ personalization (mean of 3.30) have relatively moderate/average role on customer satisfaction. From this finding, we can generalize that all explanatory variables play a fundamental role in the customer satisfaction of E-banking services provided by Hibret bank. Empirical evidence in this research also suggests that E-banking service dimensions have influence on customer satisfaction.

4.4 Regression Analysis

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

4.4.1 Diagnosis Test

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

Correlation Test between Study Variables: Correlation analysis is conducted to analyze the strength of correlation between electronic banking service quality dimensions and customer satisfaction. Spearman correlation coefficient enables to investigate the relationship between electronic banking service quality dimensions and customer satisfaction. In this section the correlation between customer satisfaction in E-banking and explanatory variables; reliability, transaction efficiency, service security, user-friendliness, service performance and customer control on transaction/ personalization has been presented and analyzed as follows.

Table 7 Correlation table

Correlations									
			Service reliability	Transaction	Performance	User-friendliness	Security	Customer control on transaction/ personalization	Satisfaction
Spearman's rho	Service reliability	Correlation Coefficient	1.000						
		Sig. (2-tailed)	.						
		N	363						
	Transaction	Correlation Coefficient	.623**	1.000					
		Sig. (2-tailed)	.000	.					
		N	363	363					

Performance	Correlation Coefficient	.404**	.371**	1.000				
	Sig. (2-tailed)	.000	.000	.				
	N	363	363	363				
User-friendliness	Correlation Coefficient	.573**	.558**	.448**	1.000			
	Sig. (2-tailed)	.000	.000	.000	.			
	N	363	363	363	363			
Security	Correlation Coefficient	.267**	.337**	.232**	.449**	1.000		
	Sig. (2-tailed)	.000	.000	.000	.000	.		
	N	363	363	363	363	363		
Customer control on transaction/personalization	Correlation Coefficient	.357**	.441**	.258**	.358**	.437**	1.000	
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.	
	N	362	362	362	362	362	362	
Satisfaction	Correlation Coefficient	.447**	.470**	.292**	.475**	.511**	.452**	1.000
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.
	N	363	363	363	363	363	362	363

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

The correlation between dependent and independent variables along with the casual effect was analyzed using SPSS. The above correlation matrix provides the correlation between variables with spearman correlation coefficient to show the strength of relationship among the independent & dependent variables. A correlation matrix is used to ensure the correlation between explanatory variables. This coefficient can take on any value between 1 and -1. A value of 1 represents a perfect positive correlation whereas a value of -1 represents a perfect negative correlation (Saunders, Lewis and Thornhill, 2009). According to Rubin (1994) Correlation coefficient value between:

- 0.00 - 0.19 – very weakly correlated
- 0.20 - 0.39 – weakly correlated
- 0.40 - 0.69 - moderately correlated

- 0.70 - 0.89 – strongly correlated
- 0.90 - 1.00 - very strongly correlated
- 1.00 is perfectly and positive correlated

Correlation between dependent and independent variable: As shown in the table above (table 7), the result of correlation coefficient between dependent variable (customer satisfaction) and independent variables (reliability, transaction efficiency, service security, user-friendliness, service performance and customer control on transaction/ personalization). As it can see from the above table, the result of correlation between customer satisfaction and reliability showed a positive coefficient of relation of 0.447. This result shows that service reliability is moderately correlated with customer satisfaction. Similarly, the correlation coefficient between customer satisfaction and transaction efficiency is positive with a value of 0.470. This implies that there is a moderate positive correlation between customer satisfaction and transaction efficiency, as the customer have more efficient transaction efficiency services the satisfaction will be increase.

The correlation coefficient between customer satisfaction and service performance has positive value of 0.292, which has weak correlation. Beside this, user-friendliness, service security and customer control on transaction/ personalization have a positive and strong relationship with customer satisfaction with the correlation coefficient of 0.475, 0.511 and 0.452 respectively. These all have a moderate correlation with customer satisfaction

Linearity Test: It refers to the degree to which the change in the dependent variable is related to the change in the independent variables. To determine whether the relationship between the dependent variable (customer satisfaction) and the independent variables (reliability, transaction efficiency, user-friendliness, service performance, service security and customer control on transaction/ personalization) is linear; plots of the regression residuals through SPSS software had been used.

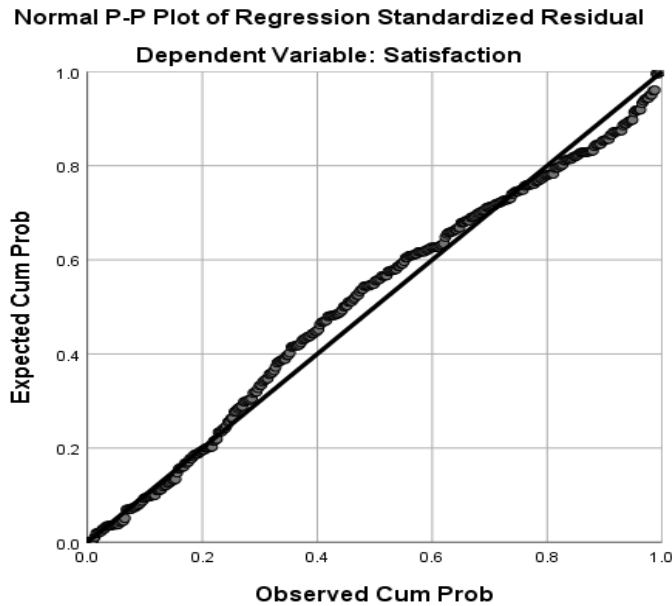


Figure 2 The scatter plot of residuals

Source: SPSS output

The scatter plot of residuals shows no large difference in the spread of the residuals as you look from left to right on figure 4.1. This result suggests the relationship we are trying to predict is linear.

Normality Test: As per the Classical Linear Regression Models assumptions, the error term should be normally distributed or expected value of the error terms should be zero ($E(U_t) = 0$).

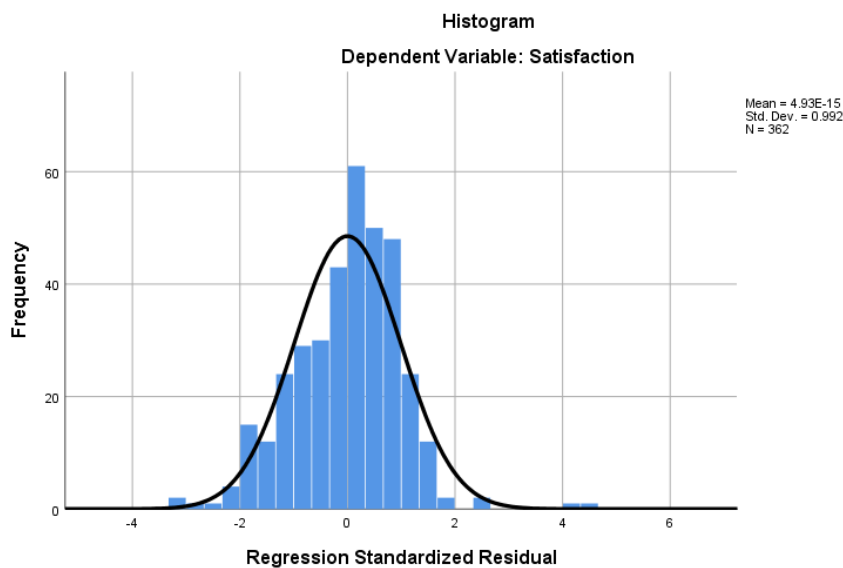


Figure 3 Frequency Distribution of Standardized Residual

As shown in the graph above, although there are some residuals, many of the residuals are fairly close. Moreover, the histogram is bell shaped which lead to infer that the residual (disturbance or errors) are normally distributed. Thus, no violations of the assumption normally distributed error term. Thus, from an examination of the information presented in all the three tests, I conclude that there are no significant data problems that would lead to say the assumptions of multiple regressions have been seriously violated.

4.5 Regression Model Analysis

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

Table 8 Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.680a	.462	.453	.509
a. Predictors: (Constant), Customer control on transaction/ personalization, Performance, Security, Service reliability, Transaction, User-friendliness				

R-Square is the proportion of variance in the dependent variable (customer satisfaction) which can be predicted from the independent variables (Customer control on transaction/ personalization, Performance, Security, Service reliability, Transaction, User-friendliness). It measured the goodness of fit of the explanatory variables in explaining the variations in customers satisfaction measures of explanatory variables (reliability, transaction efficiency, user-friendliness, service security, service performance and customer control on transaction/ personalization). As clearly described in Table 8, the adjusted R-square value for the regression model was 0.453. This indicates the explanatory variables; reliability, transaction efficiency, user-friendliness, service security, service performance and customer control on transaction/ personalization in this study explain about 45.3% of the variation in the level of customer satisfaction. The remaining 54.7% of the variation in the customer satisfaction of Hibret bank are explained by other variables which are not included in the model. Therefore, E-banking service dimensions (reliability, transaction efficiency, user-friendliness, service security, service performance and customer control on transaction/ personalization) are good explanatory variables for customers satisfaction of Hibret bank. But it does not mean that all these factors of e-banking service quality have equally significant correlation with customer satisfaction level.

Table 9 ANOVA result

ANOVAa						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	79.066	6	13.178	50.834	.000b
	Residual	92.027	355	.259		
	Total	171.093	361			
a. Dependent Variable: Satisfaction						
b. Predictors: (Constant), Customer control on transaction/ personalization, Performance, Security, Service reliability, Transaction efficiency, User-friendliness						

From the ANOVA table 9 as the F-value (50.834) that is used to measure the overall test of significance of the model was presented the p-value is 0.000 (lower than the alpha value (0.05) which is significant; therefore the model is well fitted.

The results of the multiple linear regression analysis signal that there is variation in the effect of e-banking service quality dimensions on customer satisfaction. Beside the F statistics which is used to measure the overall test of significance of the model was presented, and null hypothesis can be clearly rejected since the p-value is 0.000 which is sufficiently low, the model is well fitted at 5% level of significance (95% CI).

Table 10 Coefficients

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.008	.174		5.783	.000
	Service reliability	.426	.043	.461	9.861	.000
	Transaction	.364	.037	.458	9.789	.000
	Performance	.315	.054	.291	5.784	.000
	User-friendliness	.417	.043	.456	9.734	.000
	Security	.492	.035	.594	14.023	.000
	Customer control on transaction/ personalization	.415	.038	.495	10.814	.000
a. Dependent Variable: Satisfaction						

From the above table (table 10) looking at the significance levels, the study established that there is a significant relationship between customer satisfaction and all dimensions of E-banking service quality namely, reliability, service security, transaction efficiency, service performance and user-friendliness and customer control on transaction/ personalization. This means that these dimensions account for the greatest contributions on the attainment of the customers' satisfaction.

As stated earlier, this study aims to identify the most contributing independent variable in the prediction of the dependent variable. Thus, the strength of each predictor (independent) influencing the criterion dependent variable can be investigated via standardized Beta coefficient. The regression coefficient explains the average amount of change in the dependent variable that is caused by a unit change in the independent variable. The larger value of Beta coefficient an independent variable has, bring the more important determinant in predicting the dependent variable.

5 SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary of the findings

The primary objective of this study was to examine the effect of e-banking on customer satisfaction in the case of Hibret bank. In order to do this, six determinants of e banking service quality variables are used. These are reliability, transaction efficiency, service performance, service security, user-friendliness and customer control on transaction/ personalization. Hence, this study has attempted to identify which determinant has the highest influence on the customer satisfaction of E-banking services of Hibret Bank.

Based on the descriptive findings under the demographic variables, from the total 363 respondents most of the respondents were Male (54.8%). Regarding the age group majority of them were under the age group of 20-30 years (43.8%) followed by 30-40 years (34.4%) and the educational status of most respondents are bachelor's degree holders (49.3%) and 52.9% of the respondents were employed in private organizations. 90.1% of the respondents used the ATM services 60.8% of them used POS services, 29.6% used mobile banking and 26.2% used internet banking. 19.1% of the respondents used all the E-banking services.

From the mean result observed, customers satisfaction with the service dimensions of user-friendliness and service security is good and their satisfaction on service reliability, transaction efficiency, service performance and customer control on transaction/ personalization are moderate. The finding from the correlation between dependent and independent variables along

with the casual effect result revealed that there is a positive and significant relationship between the service quality dimensions and customer satisfaction. Reliability, Transaction, User-friendliness, service security and Customer control on transaction/ personalization are found to have a moderate correlation with customer satisfaction. While the service dimension service Performance, has a weak correlation with customer satisfaction.

In addition, the finding from the regression result indicates all service quality dimensions (reliability, transaction efficiency, service performance, service security, user-friendliness and customer control on transaction/ personalization) have a positive impact and statistical significance on customer satisfaction. From the R square value, it is depicted that 45.3% of variation in customer satisfaction is explained by these service quality dimensions. Thus, the findings are important to enable bank to have a better understanding of customers perception of service quality of banking and consequently of how to improve their satisfaction with respect to aspects of service quality. Due to the increasing competition in banking industry, customer service is an important part and should do rethinking on how to improve customer satisfaction with respect to service quality.

5.2 Conclusion

Customer satisfaction is the major factor contributing to the success of service sector. E-banking has become a major service required by the existing and potential customers of Hibret bank. All the service sectors depend on customer and their satisfaction has a vital role for their future use and loyalty. One of the ways for achieving high customer satisfaction and gaining the loyalty of customers is for banks to offer high quality services. In this research the satisfaction of customers with the different service quality dimensions pertaining to the theoretical model was evaluated.

The finding of the study indicates that all the service quality has a positive impact on customer satisfaction. From the Pearson's correlation result it is indicated that there is a positive and significant relationship between the service quality dimensions and customer satisfaction. Accordingly, Reliability, Transaction, User-friendliness, service security and Customer control on transaction/ personalization are found to have a moderate correlation with customer satisfaction. While the service dimension service Performance, has a weak correlation with customer satisfaction.

5.3 Recommendations

The analysis of this work includes implications for Hibret bank as far as the satisfaction level of their customers with different aspects of the e-banking services is concerned. Therefore, based on the study results the following recommendations are forwarded for the concerned bodies.

- The study revealed that majority of the bank E-banking customers were males. As a result, the bank should work to empower the females and become the bank customer and E-banking service users.
- Majority of the E-banking service users are ATM users. This was positive and encouraging. However, relatively mobile banking and internet banking users are lower. The researcher therefore recommends, the bank to advocate and the service and use the opportunities of telecommunication and mobile technology (smart phones) advancement.
- As service reliability, service security and customer control on transaction/ personalization service quality dimensions have a positive impact and statistical significance on customer satisfaction. It is better for the bank to focus on these dimensions to bring higher level of satisfaction to their customers.
- At last, this study investigates the dimensions of E-banking service quality that has major impacts on customer satisfaction in case of Hibret bank. But the variables included in this study was not exhaustive. Future researchers could include other variables which are not included under this study and this thesis only concentrated on Hibret Bank, the researcher recommends future study carried out in other private banks.

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Appendixes

Appendix 1 Questionnaire

St. Marry University

Department of Business Administration

Dear Respondents,

I am attending a post graduate program in Business Administration at St. Marry University. This questionnaire is designed to produce academic study report entitled "*To Assess the Effect of E-Banking Service Quality on Customers Satisfaction*". This questionnaire is intended to gather data on the topic selected for study. The study is purely for academic purpose and thus will not affect you in any way and also information obtained from this questionnaire will be kept confidential and will not be used for any other purposes. Therefore, your genuine, frank and timely response is very important to the outcome of the study and you are kindly requested to complete all questions.

I thank you in advance!

Meron Zewge

Tell: 0910611580

Part I: General Information

Direction: Please select an appropriate option by encircling the appropriate number.

1. Gender

1. Male

2. Female

2. Age

1. Less than 20 years

3. 31 to 40 years

5. 51 to 60 years

2. 20 to 30 years

4. 41 to 50 years

6. Above 60 years

3. Employment

1. Government

4. Self-employed

2. Private Organization

5. Not employed

3. Student

4. Level of Education

1. Below grade 12

4. College Diploma

2. 12th Grade complete

5. First Degree

3. Certificate

6. Second Degree (Master's Degree)
7. Third Degree (PhD)
5. Types of E-banking you used as in Hibret Bank? More than one answer is possible
 - 1.ATM
 - 2.Mobile Banking
 - 3.Internet Banking
 - 4.POS
 - 5.ALL
6. How long did you use E-banking in Hibret bank?
 1. Less than one year
 2. 1-2 years
 3. 3-4 years
 4. 5 years or more
7. How do you see (comment) the quality service of E-banking?
 1. Excellent
 2. Very Good
 3. Good
 4. Fair
 5. Poor
8. Do you trust in E-banking service?
 1. Yes
 2. No
 3. I don't know

Part II: Electronic banking service dimensions

Direction: Please indicate your degree of agreement/disagreement with the following statements related to your perception by encircling the appropriate number. Where, (1=strongly disagree (SDA); 2=Disagree (DA); 3= neutral (neither agree nor disagree (N)); 4=Agree (A); and 5=strongly agree (SA).

E-banking Service quality						
S. No	Hypothetical Statement	SDA	DA	N	A	SA
I. Reliability						
1.	Hibret bank E-banking service performs the services right the first time.	1	2	3	4	5
2.	Hibret bank E-banking service provides services at the promised time (Speedy and Quick E-banking service).	1	2	3	4	5
3.	Hibret bank E-banking service Provides services as promised.	1	2	3	4	5
4.	Hibret bank E-banking service maintains error-free records.	1	2	3	4	5
II. Transaction's efficiency						
5.	E-banking provides complete help function.	1	2	3	4	5
6.	Transaction process is easy and fast.	1	2	3	4	5
7.	E banking is the cheapest way making transaction	1	2	3	4	5

III.	Service Performance					
8.	E-banking is provided in multi-languages.	1	2	3	4	5
9.	E-banking provides 24 hours -7 days service.	1	2	3	4	5
10.	E-banking allows transferring between different banks in Ethiopia.	1	2	3	4	5
11.	Hibret bank staffs can describe step to use and condition to use clearly e-banking services	1	2	3	4	5
IV.	User-friendliness					
12.	The language of the product display is easy to understand.	1	2	3	4	5
13.	The product is easy to access and it provides clear information for the users.	1	2	3	4	5
14.	Information and text, menu items in the product are clear and easy to understand	1	2	3	4	5
15.	It would be easy for me to become skillful at using the E-banking services	1	2	3	4	5
V.	Service security					
16.	E-banking keeps accurate record of transaction.	1	2	3	4	5
17.	The E-banking services keep secrets of information of my transactions	1	2	3	4	5
18.	E-banking provides the customers to feel safe when using e-banking.	1	2	3	4	5
19.	The customer feel safe when they use e-banking service	1	2	3	4	5
VI.	Customer control on transaction/ personalization					
20.	Degree of customization that is available.	1	2	3	4	5
21.	You have the ability to customize your use of the E-banking services.	1	2	3	4	5
22.	The E-banking services designed to make future transactions easier.	1	2	3	4	5

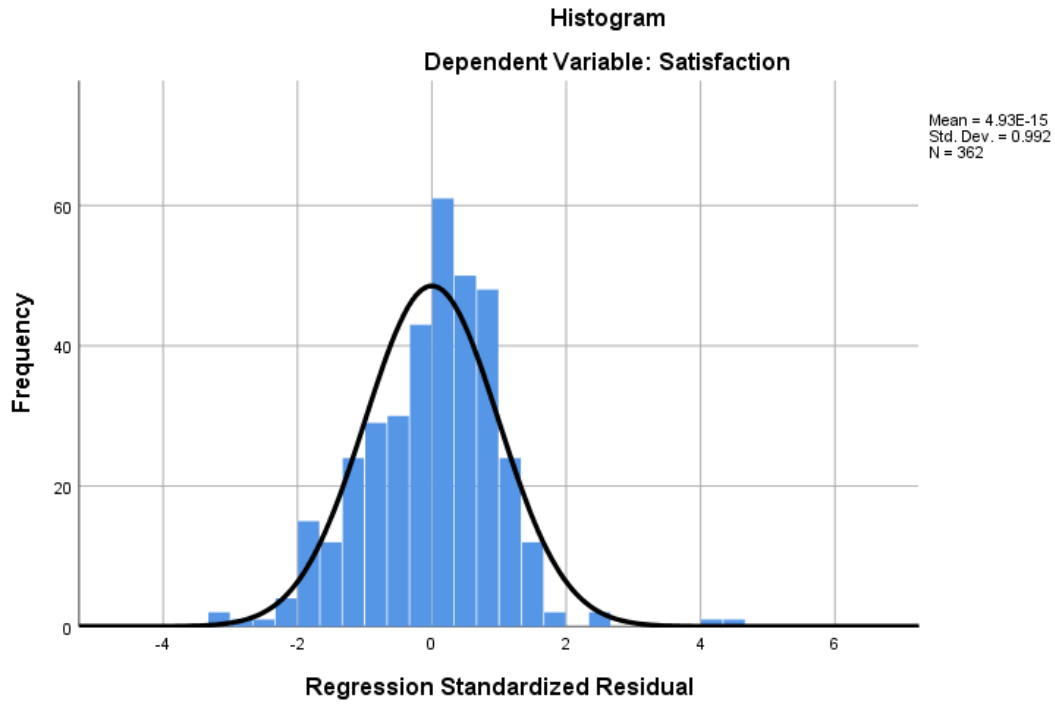
Part III: Customer Satisfaction

Direction: Please indicate your degree of agreement/disagreement with the following statements related to your perception by encircling the appropriate number. (Where HD = Highly Dissatisfied, D = Dissatisfied, M = Moderate, S = Satisfied, HS = Highly Satisfied).

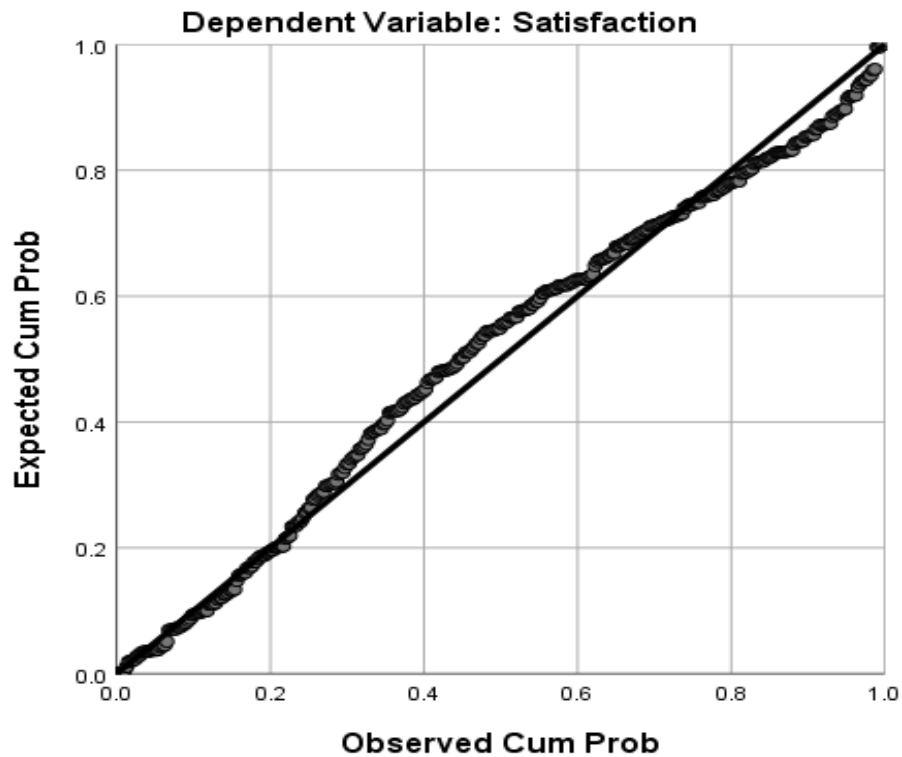
CUSTOMER SATISFACTION						
S. No	Hypothetical Statement	HD	D	M	S	HS
1.	I am satisfied with the e-banking services provided by the bank	1	2	3	4	5
2.	Overall service of e-banking is completely meet my expectation	1	2	3	4	5
3.	I am satisfied with E-banking service of the bank than traditional service	1	2	3	4	5
4.	E-banking service help me in controlling my accounts movement	1	2	3	4	5
5.	I would like to recommend the E-banking services to friends and people you know.	1	2	3	4	5
6.	Based on my previous online experience, I feel the E-banking services quality is good.”	1	2	3	4	5
7.	In my view, the E-banking services are customer-oriented	1	2	3	4	5

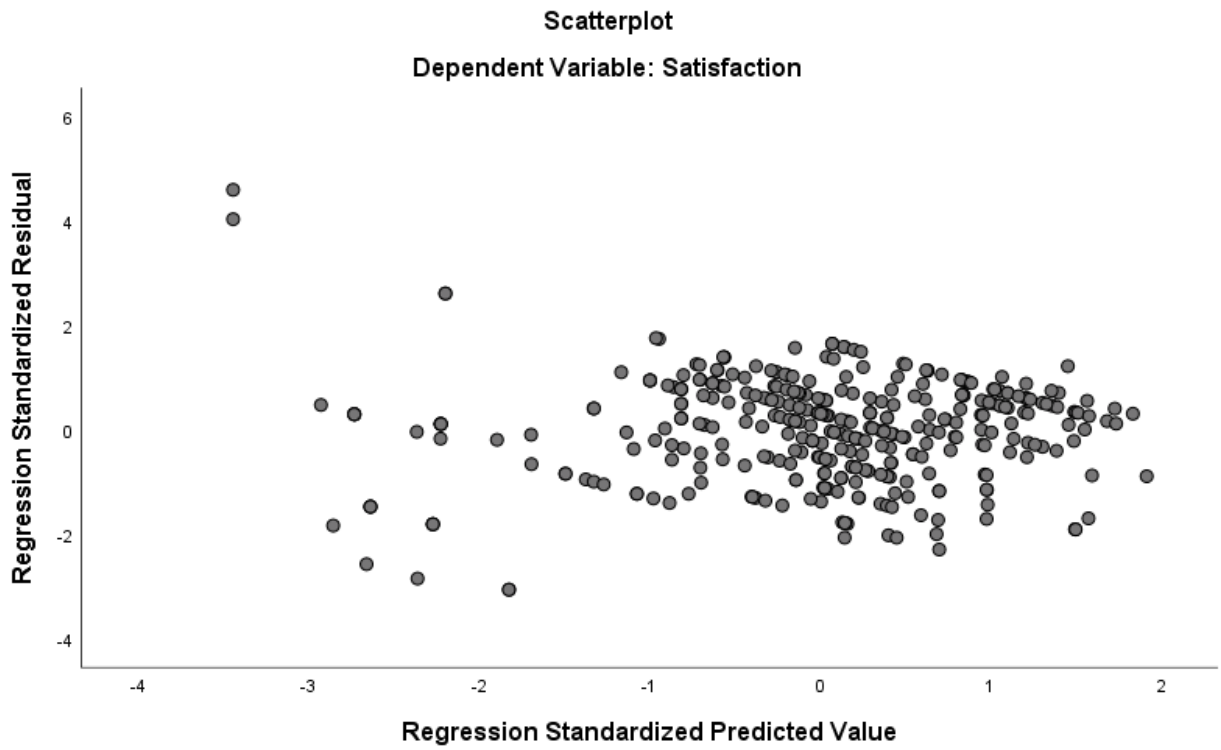
Thank You for filling the questionnaire by taking your spare time.

Appendix 2: Normality test of the Data



Normal P-P Plot of Regression Standardized Residual





Appendix 3: Model Summary

I. Service reliability

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.461 ^a	.212	.210	.611

a. Predictors: (Constant), Service_reliability

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	36.319	1	36.319	97.230	.000 ^b
	Residual	134.847	361	.374		
	Total	171.166	362			

a. Dependent Variable: Satisfaction

b. Predictors: (Constant), Service_reliability

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.222	.139		15.989	.000
	Service_reliability	.426	.043	.461	9.861	.000

a. Dependent Variable: Satisfaction

II. Transaction efficiency

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.458 ^a	.210	.208	.612

a. Predictors: (Constant), Transaction

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	35.906	1	35.906	95.830	.000 ^b
	Residual	135.260	361	.375		
	Total	171.166	362			

a. Dependent Variable: Satisfaction

b. Predictors: (Constant), Transaction

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.285	.134		17.091	.000
	Transaction	.364	.037	.458	9.789	.000

a. Dependent Variable: Satisfaction

III. Service performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.291 ^a	.085	.082	.659

a. Predictors: (Constant), Performance

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.518	1	14.518	33.456	.000 ^b
	Residual	156.648	361	.434		
	Total	171.166	362			

a. Dependent Variable: Satisfaction

b. Predictors: (Constant), Performance

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.501	.185		13.491	.000
	Performance	.315	.054	.291	5.784	.000

a. Dependent Variable: Satisfaction

IV. User friendliness/ ease of use

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.456 ^a	.208	.206	.613

a. Predictors: (Constant), Ease_ofuse

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	35.587	1	35.587	94.757	.000 ^b
	Residual	135.579	361	.376		
	Total	171.166	362			

a. Dependent Variable: Satisfaction

b. Predictors: (Constant), Ease_ofuse

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.001	.163		12.288	.000

Ease_ofuse	.417	.043	.456	9.734	.000
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a. Dependent Variable: Satisfaction

V. Service security

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.594 ^a	.353	.351	.554

a. Predictors: (Constant), Security

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	60.360	1	60.360	196.647	.000 ^b
	Residual	110.807	361	.307		
	Total	171.166	362			

a. Dependent Variable: Satisfaction

b. Predictors: (Constant), Security

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.756	.132		13.344	.000
	Security	.492	.035	.594	14.023	.000

a. Dependent Variable: Satisfaction

VI. Customer control on transaction/ personalization

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.495 ^a	.245	.243	.599

a. Predictors: (Constant), Peronalization

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	41.953	1	41.953	116.951	.000 ^b
	Residual	129.140	360	.359		
	Total	171.093	361			

a. Dependent Variable: Satisfaction

b. Predictors: (Constant), Peronalization

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.185	.131		16.728	.000
	Peronalization	.415	.038	.495	10.814	.000

a. Dependent Variable: Satisfaction