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THE IMPACTS OF E-BANKING SERVICES ON CUSTOMER SATISFACTION: THE CASE OF SELECTED COMMERCIAL BANKS IN ADDIS ABABA

A Thesis Submitted to Addis Ababa University in Partial Fulfillment of the Requirements for the Degree of Masters of Arts in Public Management and Policy Specialization Development Studies

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This is to certify that the thesis prepared by Sintayehu Yitbarek entitled The Impacts of E-banking Services on Customer Satisfaction: the Case of Selected Commercial Banks in Addis Ababa which is submitted in partial fulfillment for the Degree of Master in Public Management and Policy (Development Management Stream) compiles with the regulation of the University and meets the accepted standard with respect to originality and quality.

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Acronyms

ANOVA	Analysis of Variance
ATM	Automated Teller Machine
CSEB	Customer Satisfaction in Electronic Banking
EBSQ	Electronic Banking Service Quality
EFT	Electronic Fund Transfer
ICT	Information and Communication Technology
POS	Point of Sale
SERVQUAL	Service Quality
SMS	Short Message Service
TA	Technology Associate
TOE	Technology- Organization Environment

Abstract

The purpose of this study is to investigate impacts of e-banking services on customer satisfaction, its relation with demographic characteristics, and major challenges in e-banking activities to satisfy the customers of the selected private and public commercial banks in Addis Ababa. The study used quantitative research approach by employed multiple linear regressions models for the Customers Satisfaction in Electronic Banking (CSEB) and chi-square independency test to see the relationship between demographic characteristics and satisfaction of e-banking users. Primary data were collected by using 5-point Likert-scale questionnaire and interview with branch managers and customer service supervisors of the selected commercial banks. A total of 300 questionnaires were properly filled and returned. The empirical result shows that service quality dimensions; reliability, customer support and ease of use have strong influence on e-banking user's satisfaction level in both public and private commercial banks in Addis Ababa. Thus, management bodies of commercial banks should strive to strengthen these service dimensions. There is also a relationship between satisfaction in e-banking and age and educational level of users of e-banking. The major problem faced by commercial banks in relation to e-banking is network failure due to poorly developed telecommunication infrastructure, lack of reliable power supply, and lack of ICT knowledge from customers end. In order to sustain a reliable service for such technology, commercial banks should work with government bodies (Ethio-Telecom and Ethiopian Electric Power). They also need to increase the confidence of their customers as well as developed skills and knowledge of customers in using e-banking services.

Key words: E-banking, Customer Satisfaction

CHAPTER ONE

1. INTRODUCTION

1.1. Background of the Study

Banks play an important function in the economy of any country. They are the main intermediaries between those with excess money (depositors) and those individuals and businesses with viable projects but requiring money for their investment (creditors). Banks have at least the following functions: lending money, depositing others' money, transferring money locally or abroad and working as paying agent (Tefere, 2013).

In the face of rapid expansion of electronic payment systems throughout the world, the Ethiopian financial sector cannot remain an exception in expanding the use of the system (Garedachew, 2010). E-banking plays a crucial role in the banking industry by creating value for banks and customers. E-banking has enabled banking institutions to compete more effectively in the global environment by extending their and services beyond the restriction of time and space (Turban, 2008).

Nowadays, people are so busy in their work lives, that they don't even have time to go to the bank for conducting their banking transactions. Thus, banks provide e-banking facility to their customers as an added advantage. These services enable people to carryout their banking transactions such as – see their account balances, pay bills, view records of transactions, transfer money to linked accounts with in the same bank, transfer money to specially selected unlinked accounts, check interest in accounts, send money overseas, etc.

E-banking is one of the most recent channels of distribution used in the financial services organizations. This method was established in the mid-1990s, thereafter becoming more important

(Allen L. & Rai A., 1996). It has been widely used in developed countries. However, in developing economies, the spread is much limited. As suggested by Classens, Glaessner, & Klingebiet (2002), developing countries in general have an advantage as they can learn from the experience of advanced economies. Today, almost all banks in Ethiopia are adopting electronic banking as a means of enhancing service quality of banking. It also increases customer satisfaction in banking services (Shittu, 2010).

1.2. Statement of the Problem

Banks in Ethiopia are involved in tough competition to attract customers by delivering various services. It is better for customers to have broad choices to select best bank for them to satisfy their needs. For banks as well, they have to find the ways to satisfy customers and keep competitive advantages above other banks. In pursuit of round the clock customer services and keep abreast with the developing global banking technology, almost all banks in Ethiopia are fast moving toward launching new technology based products and services such as internet banking, mobile banking, ATMs, POS etc.

Commercial banks in Ethiopia have launched e-banking services as part of ensuring service excellence by reducing waiting time, errors, costs, and improve customer satisfaction. In order to encourage or discourage further e-banking expansion in Ethiopia, a better understanding of its impact on customer satisfaction is critical. However, despite the importance of e-banking in bringing customer satisfaction limited studies are available in Ethiopia both in terms of number and scope. Therefore, more studies are still required to understand the relevancy of e-banking in the country.

Assefa (2013) conducted a study on the impact of e-banking on customer satisfaction in two branches of private banks in Gondar City. The researcher used qualitative approach in analyzing this study and it was limited to customers of two privet banks only. In addition to this, only ATM

was considered as e-banking because there was no any other form of e-banking in the study area. Bultum (2014) also studied factors that affect adoption of e-banking in the Ethiopian banking industry. Still this study was entirely focused on factors that affect adoption of e-banking. Satisfaction of customers towards e-banking required to be investigated to understand the relevancy of e-banking in the country. Therefore, the present study bridged the gap of methodology by using quantitative approach which employs MLR model. Question of representativeness of the sample also solved by including state owned commercial bank which owned more than half of the total e-banking customers in Ethiopia. E-banking platforms including ATM, POS, mobile banking and internet banking were also considered under this study.

The study is designed to examine the impact of e-banking on the satisfaction of its users. It also assesses whether e-banking customers are constrained by the technology, particularly on the basis of different demographic characteristics, such as different age groups, educational level, employment status and etc.

1.3. Objectives of the Study

1.3.1. General Objective of the Study

The main objective of this study is to find the electronic banking service dimensions that have the impact on customer satisfaction in two private banks Dashen Bank (DB) and Wegagen Bank (WB) and one public bank Commercial Bank of Ethiopia (CBE) in Addis Ababa area.

1.3.2. Specific Objective of the Study

Specifically, this study aspires to achieve the following objectives;

- To identify the major electronic banking service dimensions that have impact on customer satisfaction.
- To analyze the level of customer satisfaction in e-banking in the study area.

- To see the relationship of demographic variables (age, occupation and education) and customers satisfaction in e-banking.
- To find out the problems in e-banking activities to satisfy the customers.

1.4. Research Questions

- What are the major electronic banking service dimensions that have the impact on customer satisfaction among Commercial Bank of Ethiopia, Dashen Bank and Wegagen Bank?
- What is the level of customer satisfaction in e-banking in the three commercial banks?
- Is satisfaction in e-banking services related to age, occupational and educational status in the city?
- What are the major challenges problems in e-banking activities to satisfy customers at the three banks?

1.5. Hypothesis

- **Major Hypothesis**

H_0: E-Banking service quality has no significant positive impact on customer satisfaction

H_1: E-Banking service quality has significant positive impact on customer satisfaction

- **Sub Hypothesis**

H_{01}: Reliability has no significant positive impact on customer satisfaction

H_{11}: Reliability has significant positive impact on customer satisfaction

H_{02}: Transaction efficiency has no significant positive impact on customer satisfaction

H_{12}: Transaction efficiency has significant positive impact on customer satisfaction

H_{03}: Customer support has no significant positive impact on customer satisfaction

H_{13}: Customer support has significant positive impact on customer satisfaction

H_{04}: Service security has no significant positive impact on customer satisfaction

H_{14}: Service security has significant positive impact on customer satisfaction

H_{05}: Ease of use has no significant positive impact on customer satisfaction

H_{15}: Ease of use has significant positive impact on customer satisfaction

H_{06}: Performance has no significant positive impact on customer satisfaction

H_{16}: Performance has significant positive impact on customer satisfaction

H_{07}: Service content has no significant positive impact on customer satisfaction

H_{17}: Service content has significant positive impact on customer satisfaction

1.6. Scope of the Study

First, the study is confined only to customers' perspective of e-banking. Second, it does not include bank customers who are registered and took e-cards and yet never utilize it. Third, it is also limited to banks customers who have been using e-banking up to the maximum of three years in one public bank (Commercial Bank of Ethiopia) and two private banks (Dashen Bank & Wegagen Bank).

1.7. Significance of the Study

The study will help both public and private banks to;

- Understand the impact of variables of e-banking on customer satisfaction.
- Formulate appropriate strategies in building customer satisfaction.
- Realize the existing limitations of e-banking within the sector.
- Add value to the existing knowledge related to electronic banking and customer satisfaction in financial institutions.

1.8. Organization of the Study

The study is organized in to five chapters. The first chapter deals with background of the study, statements of the problem, objective of the study, the research questions, scope of study,

significance of the study, and organization of the research. The second chapter presents previous related research conducted on e-banking and customer satisfaction locally and globally. The third chapter explains types and source of data that are used for the study , sampling techniques used to determine the sample size, data analysis method and collection tools. The fourth chapter discusses the analysis and result of the study. The last chapter presents conclusion and recommendation of the study.

CHAPER TWO

2. LITERATURE REVIEW

2.1. Theoretical Issue

2.1.1. Definition of E-Banking

E-banking has a variety of definitions all of which explains similar concept. The following section shows some of these definitions.

E-banking is a form of banking service where funds are transferred through an exchange of electronic signal between financial institutions, rather than exchange of cash, checks, or other negotiable instruments (Kamrul, 2009). E-banking also known as electronic funds transfer (EFT). It is simply the use of electronic means to transfer funds directly from one account to another rather than by check or cash (Malak, 2007).The term e-banking often refers to online/internet banking which is the use of the internet as a remote delivery channel for banking services (Furst & Nolle, 2002, p.5). E-banking is the use of a computer to retrieve and process banking data (statements, transaction details, etc.) and to initiate transactions (payments, transfers, requests for services, etc.) directly with a bank or with other financial service provider remotely via a telecommunications network (Yang, 1997). It should be noted that electronic banking is a bigger platform than just banking via the internet.

E-banking can be also defined as a variety of platforms such as internet banking or (online banking), TV-based banking, mobile phone banking, and PC (personal computer) banking whereby customers access these services using an intelligent electronic device, like PC, personal digital assistant (PDA), automated teller machine (ATM), point of sale (POS), kiosk, or touch tone telephone (Alagheband, 2006).

2.1.2. Forms of E-Banking

There are many electronic banking delivery channels to provide banking service to customers. Among them ATM, POS, Mobile banking and internet banking are the most widely used and discussed below.

ATM

ATM is an electronic machine in a public place, connected to a data system and related equipment and activated by a bank customer to obtain banking services without going in to the banking hall. It allows customers to access banking services such as withdrawals, transfers, inquiries about account balances, requests for cheque books, account statements, direct deposits, foreign currency exchange etc. (Fenuga, 2010). Using an ATM requires an ATM card and a pass code, often referred to as a PIN (Personal Identification Number).

INTERNET BANKING

Internet banking is conducted by completing bank transactions by directly accessing the bank through the internet. Nowadays, internet banking customers can access many different services online, which makes physical banks open even after office hours. Internet banking allows customers of a financial institution to conduct financial transactions on a secure website operated by the institution. Internet banking can be conducted either by accessing the internet with a computer or by using a phone that has internet features (Alabar & Timothy, 2012).

POS

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

MOBILE BANKING

Mobile banking (also known as M-Banking) is a term used for performing balance checks, account transactions, payments, credit applications and other banking transactions through a mobile device such as a mobile phone or Personal Digital Assistant (PDA). The 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 banks can only be found in big cities, and customers have to travel several 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 (Tiwari & Buse, 2007).

2.1.3. Service Quality

The present business era is now named as "Quality Era" because perceived quality of the product is becoming the most important competition factor in business world (Bedi, 2010). It is now the most powerful competition weapon and organization's life giving blood. Perceived service quality refers to the consumer's global attitude or judgment of the overall excellence or superiority of the service. It is a result from comparisons by consumers of expectations with their perceptions of service (Caruana & Malta, 2002). That means it can be termed as the extent of matching or the degree of discrepancy to which the service delivered matches customer expectations (Parasuraman, Zeithmal, & Berry, 1988). Delivering quality service means conforming to customer expectations on a consistent basis (Thakur, 2011).

Today one of the most dominant topics of research in services is service quality. It is necessary for service providers to understand how customers evaluate the quality of service. When customers consume a product, they compare the quality of experience with their prior expectations, which leads to their satisfaction or dissatisfaction (Thakur, 2011). Therefore

services marketing researchers based their work on developing a service quality concept focused on consumer behavior instead of using manufacturing quality concepts (Dhandabani, 2010). Thus it had been recognized that customers evaluate service quality by comparing the actual performance with service expectations that they held (Thakur, 2011).

2.1.4. 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 whose reported experience with a firm exceeds specified satisfaction goals (Farris, Paul et al., 2010). Another definition of customer satisfaction refers to the extent to which customers are happy with the products and/or services provided by a business. Further definition of customer satisfaction states that it is a term generally used to measure a customer's perception of a company's products and/or services (Ahmed, 2005). It's not a straight forward science. Customer satisfaction will vary from person to person, depending on a whole host of variables which may be both psychological and physical.

According to Saha & Zhao (2005), customer satisfaction is defined as a collection of outcome of perception, evaluation and psychological reactions to the consumption experience with a product/service. In other words, Saha and Zhao further defined customer satisfaction as a result of a cognitive and affective evaluation where some comparison standard is compared to the actually perceived performance. If the performance perceived is less than expected, customers will be dissatisfied. On the other hand, if the perceived performance exceeds expectations, customer will be satisfied.

In a competitive market place where businesses compete for customers, customer satisfaction is seen as a key differentiator and increasingly has become a key element of business strategy (Carl & McDaniel, 2005). It is seen as a key performance indicator within business and is often part of

a Balanced Scorecard. Therefore, it is essential for organizations to effectively manage customer satisfaction. To be able do this, organizations need reliable and representative measures of satisfaction.

In researching satisfaction, firms generally ask customers whether their product or service has met or exceeded expectations. Thus, expectations are a key factor behind satisfaction. When customers have high expectations and the reality falls short, they will be disappointed and will likely rate their experience as less than satisfying (John & Joby, 2003).

2.1.5. Customer Satisfaction in Banking

Customer satisfaction is a key determining factor why customers leave or stay with a bank. Fornell (1992) cited in Thakur (2011) noted that although customer satisfaction and quality appear to be important for all firms, satisfaction is more important for loyalty in service industries like bank. Because even if the customers appear to be satisfied, they may look for other bankers if they believe they might receive better service elsewhere (Reichheld, 1996) cited in Thakur (2011). Thus the banking organizations need to know how to keep their customers. 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).

Ioanna (2002) cited in Thakur (2011) further proposed that differentiation is nearly impossible in a competitive environment like the banking industry. Banks everywhere are delivering nearly same services. Thus, bank management tends to differentiate their firm from competitors through service quality. 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 (Storbacka et al., 1994) cited in Thakur (2011).

Minimum price with maximum usage and profit always breeds higher level of satisfaction (Jamal & Kamal, 2004) cited in Afsar (2010). 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 (Fox & Poje, 2002) cited in Afsar (2010).

2.1.6. The Relationship between Service Quality and Customer Satisfaction

The status or prestige of an organization is determined by the quality of the provided services. Organization of high quality level of its services has a high competitive position. Achieving a high level of services meet the needs of customers. Studies confirmed that service quality and customer satisfaction have strong relationship (Alagheband, 2006; Bedi, 2010; Keiningham, 2005). when the customer receives high quality service his behavior and attitude towards the organization will be positive and that would strengthen the relationship with the organization and vice versa. Customer satisfaction is the most important criteria that enable organizations to ensure the quality of their goods or services (Parasuraman et al., 1985).

In case of the banking sector, recognized standard scales to measure the perceived quality of a bank service is not available. Thus providing high quality service is being taken as an important weapon to survive and to gain and maintain competitive advantage (Bateson, 1985) cited in Thakur (2011).

For commodity like products, quality can be measured easily by its features. But quality of service depends heavily on the quality of the personnel of service provider or the provider himself. Studies on customers' switching from banks have found that they do so because they considered to be poorly serviced. Quality service improved customer satisfaction and reduced customer erosion (Thakur, 2011).service quality is the key to measure e-banking user satisfaction. Researchers have paid much attention to the close relationship between service quality and customer satisfaction (Parasuraman et al., 1985).

2.1.7. Measuring Customer Satisfaction

Customer satisfaction is measured at the individual level, but it is almost always reported at an aggregate level. Customer satisfaction is an ambiguous and abstract concept and the actual manifestation of the state of satisfaction will vary from person to person and product/service to product/service. 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).

It is also well recognized that measuring service quality is more difficult than to measure good's quality because of the unique characteristics of services. The main characteristics of services in general and banking services in particular are the following (Parasuraman, Zeithmal, & Berry, 1988):

- It's intangible, since 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.
- Service cannot be stored

Most researchers found that service quality is the antecedent of customer satisfaction (Bedi, 2010; Kumar et al., 2010; Kumar et al., 2009; Naeem and Saif, 2009; Parasuraman et al., 1988). Quality customer service and satisfaction are recognized as the most important factors for bank customer acquisition and retention (Jamal, 2004; Armstrong and Seng, 2000; Lassar et al., 2000). Service quality is considered as one of the critical success factors that influence the competitiveness of an organization. A bank can differentiate itself from competitors by providing high quality service. Service quality is one of the most attractive areas for researchers over the last decade in the retail banking sector (Avkiran, 1994; Stafford, 1996; Johnston, 1997; Angur et al., 1999; Lassar et al., 2000).

According to Tse & Wilton (1988) customer satisfaction is the consumer's response to the evaluation of the perceived discrepancy between prior expectations and the actual performance of the product. The service quality variables identified by (Parasuraman et al., 1994) are reliability, responsiveness, competence, accessibility, courtesy, communication, credibility, security, understanding and tangibility. Service quality leads to overall customer satisfaction. It is one of the service factors contributing to customers' satisfaction judgments and can be considered in multi-level and multi-dimensional (Caruana & Malta, 2002).

Yang, Jun, & Peterson (2004) identified five online service quality dimensions (responsiveness, reliability, competence, access and security) and their relationships with the customer satisfaction. Wolfinbarger & Gilly (2002) observed that reliability and fulfillment are the strongest predictors for customer satisfaction. Lui & Arnett (2000) identified five critical dimensions of online service quality in relations to customer satisfaction in the website. Among these, the quality of information that is relevant, accurate, timely, customized and complete are given priority for the customer satisfaction in the online service. Johnston (1997) identified attentiveness, responsiveness care and friendliness as the main sources of satisfactions (satisfiers) in banking

services, and integrity, reliability, availability and functionality as the main sources of dissatisfaction. Khalil & Pearson (2007) have found that trust significantly affects attitude towards internet banking acceptance. 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 (personalization), order tracking facilities and privacy are other important factors in the online service that affect the customer satisfaction. Joseph, McClure, & Joseph (1999) investigated the influence of internet on the delivery of banking services. They found six underlying dimensions of e-banking service quality as convenience and accuracy, feedback and complaint management, efficiency, queue management, accessibility and customization. Jun & Cai (2001) identified 17 service quality dimensions of Internet banking service quality. These are reliability, responsiveness, competence, courtesy, credibility, access, communication, understanding the customer, collaboration, continuous improvement, content, accuracy, ease of use, timeliness, aesthetics, security and divers features. They also suggested that some dimensions such as responsiveness, reliability and access are critical for both traditional and internet banks.

Hua (2009) conducted an experiment to investigate how user's perception about online banking is affected by the perceived ease of use of website and the privacy policy provided by the online banking website. In this study, it also investigates the relative importance of perceived ease of use, privacy, and security. Perceived ease of use is of less importance than privacy and security. Security is the most important factor influencing user's adoption.

Jun et al (1999) revealed reliable/prompt responses, attentiveness, and ease of use had considerable impacts on both customers perceived overall service quality and satisfaction. It also indicated that there is a significant positive relationship between overall service quality and

satisfaction. Yang & Jun (2002) redefined the traditional service quality dimensions in the context of online services, and suggested an instrument consisting of seven online service dimensions (reliability, access, ease of use, personalization, security, credibility, and responsiveness). Joseph et al (1999) considered banking service quality with respect to technology use, such as ATMs, telephone, and the internet and identified six dimensions. They were convenience/accuracy, feedback/complaint management, efficiency, queue management, accessibility, and customization.

Zeithaml et al (2000) developed SERVQUAL for measuring e-service quality. They identified 11 dimensions: access, ease of navigation, efficiency, flexibility, reliability, personalization, security/privacy, responsiveness, assurance/trust, site aesthetics, and price knowledge.

Extensive study on service quality conducted by researchers have proposed that service quality can be measured using the SERVQUAL instrument (Parasuraman, Berry & Zeithaml 1985, 1988). The attributes of initial SERVQUAL model were tangibles, reliability, responsiveness, competency, courtesy, assurance, credibility, security, access, and understanding. Later reduced these ten dimensions into five by using a factor analysis (Parasuraman et al, 1988). These five dimensions are tangibles, reliability, responsiveness, and Empathy. The SERVQUAL instrument provides the computed disconfirmation approach whereby the difference between a customer's expectation and the actual performance is calculated (Dhandabani, 2010).

2.1.8. Definition and Features of Independent Variables

- Reliability

Reliability refers to the ability to perform the promised service accurately and consistently. It involves accuracy in billing, keeping records correctly, and performing the service at the designated time. Reliability consists of providing services as promised, dependability in handling customers' service problems, prompt reply to customer enquiries, provide services at the

promised time and maintaining error-free record. Reliability is the most important factor in conventional service (Parasuraman, Zeithaml, & Berry 1988).

- Transactions Efficiency

Transaction efficiency is the ability of the customers to get any of e-banking service, find the desire product and information associated with it, and check out with minimal of effort. Transaction efficiency also can understand as performance of e-banking base on some elements: up to date information, response time, download time, complete product information, tutorial/demonstration, and help function (Leelapongprasut et al, 2005).

- Customer Support

Customer support includes before sell and after sell support. Before customer make decisions, the company should give some support to attract them, let customers feel they are at home. The relationship is like a good friend not like a business. After customers buy the services or products, company should solve the problem that customers met or respond to customers' questions immediately and according to the problems, company can ameliorate them. In the e-banking industries, support is also important. Not everyone is good at different technology so they need guide on how to use the service. Sometimes, after services on the e-banking, customers might have questions waiting to answer, so he or she also needs support. So support is very important for customers (Rangsan & Titida, 2013).

- Service Security

Security is defined as the freedom from danger, risk, or doubt. It involves physical safety, financial security and confidentiality. It consists of employees who instill confidence in customers, making customers feel safe in their transactions, employees who are consistently courteous and employees who have the knowledge to answer customer question (Parasuraman, Zeithaml & Berry, 1985). Moreover, security is defined as personal and possessions safety of the customers. It also includes confidentiality maintained by service providers (Johnston, 1997).

- Ease of Use

Ease of use is important in using e-banking, which related to customer apprehension about the efforts required to learn to use e-banking (David, 2010). 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).

- Performance

Performance is the operating quality of each e-banking service and feature offered by banks. It includes whether e-banking services provide in multi-language or not, e-banking provide 24 houres-7 days service, allow to transfer funds between banks (Garvin, 1987).

- Service Content

Service content is all information that is provided to customers. For electronic banking service, it means the content that banks provide to customers through their website, ATM & POS terminal and Mobile. High value added content is essential.

2.2. Empirical Evidences

Some related studies are conducted by different researchers in different parts of the world. However, there are limited numbers of studies conducted in Ethiopia on e-banking technology. Specifically (Gardachew, 2010) conducted a research on the opportunities and challenges of e-banking in Ethiopia. The study was focused on analyzing the status of electronic banking in Ethiopia and investigates the main challenges and opportunities of implementing e-banking system. The author conducted a survey on the existing operating style of banks and identifies some challenges of using e-banking system, such as, lack of suitable legal and regulatory frame works for e-commerce and e- payments, political instability in neighboring countries, high rates of illiteracy and absence of financial networks that links different banks.

Wondossen & Tsegai (2005) also studied the challenges and opportunities of e-payments in Ethiopia; their objective was studying of e-payment practices in developing countries. The authors employed interview and on site observation to investigate challenges to e-payment in Ethiopia and found that, the main obstacles to the development of e-payments are, lack of customers trust in the initiatives, unavailability of payment laws and regulations particularly for e-payment, lack of skilled manpower and frequent power disruption. According to (Wondwossen & Tsegai, 2005), an adequate legal structure and security framework could foster the use of e-payments, which is contradicting with the finding of the previous study.

The study of (Bultum, 2014) aims to identify factors that affect adoption of e-banking in the Ethiopian banking industry. The study was conducted based on the data gathered from four banks in Ethiopia; three private banks (Dashen bank, Zemen bank and Wegagen bank) and one state owned bank (commercial bank of Ethiopia). A mixed research approach was used to answer the research questions that emerge through the review of existing literature and the experiences of the researcher in respect of the e-banking system in Ethiopia. The study statistically analyzes data obtained from the survey questionnaire. A research framework developed based on technology-organization environment model (TOE) developed by Tornatzky and Fleischer. 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 trust, lack of legal and regulatory frame work, lack of ICT infrastructure and absence of competition between local and foreign banks. The study suggests a series of measures which could be taken by the banking industry and by government to address various challenges identified. These measures include establishing a clear set of legal framework on the use of technology in banking industry, supporting banking industry by investing on ICT infrastructure and banks needs to be focused on technological innovation competition rather than traditional bases of retail bank competition.

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

The study of (AlaEddin & Hasan, 2011) on e-banking functionality and outcomes of customer satisfaction in Jordanian commercial banks, it aims to explore the adoption of e-banking functionality and investigates the impact of e-banking on the outcomes of customer satisfaction. A purposive sampling technique was employed to recruit 179 customers representing the desired range of demographic characteristics (e.g. gender, age, and computer use), previous internet experience levels and product-related knowledge. The research showed that adoption of e-banking (accessibility, convenience, security, privacy, content, design, speed, fees and charges) had a positive effect on Jordanian Commercial Bank customers' satisfaction.

Gerrard et al (2006) in their study in Singapore identify risk to be an important factor for Internet Banking adoption. All respondents who did not use internet banking services had a negative perception of the security in Internet Banking. The respondents perceived that there were many security risks when using the internet. They felt the privacy was a concern, feeling all their financial information could be in jeopardy. Risk was one of the two most frequently mentioned factors in their study, concern about risk was mentioned by all respondents. An empirical investigation conducted by Sathye (1999) on the adoption of Internet Banking by

Australian consumers also identified, security concerns as key factor in internet banking adoption. A report on Internet Banking in Australia finds that, security concerns among banks and customers are keeping both away from Internet Banking (Sathye, 1999).

The study of Kerem (2003) on the adoption of electronic banking: underlying consumer behavior and critical success factors conducted in Estonia, was intended to study the further understanding of, how consumers perceive electronic banking in the heyday of interactive channels in Estonia, as Estonia is internationally renowned for being a pioneer in the acceptance of new technologies. A series of an in depth interviews was conducted with leading industry experts in Estonia. The selection criterion for the respondent was mainly their involvement with the development of Internet banking systems from the early days of its emergence. The survey conducted for this research addressed six different issues influencing the adoption of Internet banking (Better prices, Recommendations, Better service, Marketing efforts, Better access and higher privacy). The most important factors in starting to use Internet banking are first and foremost better access to the services (convenience), better prices and higher privacy. Better service (i. e. preferring self-service over office service) was also of above average importance. Two factors that the respondents did not consider relevant to their adoption decision were banks' marketing activities and personal recommendations from friends and colleagues. Also the survey conducted six main obstacles (computers are difficult, no access to internet, internet banking is expensive, low security, have had no chance to try and I prefer personal contact) in adopting Internet banking (results of a preliminary study, 100 respondents), the most important factors discouraging the use of Internet banking are lack of Internet access and not having a chance to try out Internet banking in a safe environment. Finally the research indicates that banking activities alone may not be sufficient in achieving growth if general infrastructure, economic environment and government initiatives are not supportive. The aim of the study was to collect South African data in order to test out the hypotheses regarding the

factors, which affect adoption of Internet banking and compare these results with those collected in other countries. Online questionnaire was used to collect empirical data and the results of the study shows that intention to adopt Internet banking can be predicted by attitudinal factors, perceived behavioral control factors to a lesser degree, and not by subjective norms. All attitudinal factors except banking needs are found to be significant, with complexity and risk showing a negative relationship.

Jannatul (2009) in his study of e-banking & customer satisfaction which focus on understanding the impact of variables of e-banking, on customer satisfaction in Bangladesh, five service quality dimensions namely reliability, responsiveness, assurance, empathy, and tangibles are established based on the SERVQUAL model and the literature review. These variables are tested in e-banking to explore the relationship between service quality and the customer satisfaction. Data were gathered through survey interview by a structured questionnaire with 250 customers. The study shows that these factors are the core service quality dimensions for customer satisfaction in e-banking. It also explores that reliability, responsiveness, and assurance have more contribution to satisfy the customers of e-banking in Bangladesh.

In general, most of e-banking related studies are too remote for our cases and even the study of Assefa (2013) which is found to be similar to the present topic were done in qualitative approach also ignores state owned e-banking customers. Thus to address the current gap in the literature, methodology and question of representativeness this study is designed to examine the impact of e-banking on the satisfaction of customers in two Private Banks and one public bank in Addis Ababa.

CHAPTER THREE

3. RESEARCH DESIGN AND METHODOLOGY

3.1. Research Purpose

The main objective of this study was to find the electronic banking service dimensions that have the impact on customer satisfaction in two private banks and one state owned bank in Addis Ababa area. The study adopted an explanatory research because it is suitable to explain the relationship between variables as quoted in Mark, Philip & Adrian (2009). In addition to explanatory research, descriptive studies were also used to describe the characteristics of the sample by using means and percentages.

3.2. Research Methodology

To gain a reach understanding of the major impacts of e-banking on the level of customer's satisfaction under different contexts (public and private commercial banks) the case study research methodology was conducted for this study. Moreover, as (Mark, Philip, & Adrian, 2009) stated, case study methodology is most often used in explanatory and exploratory research. For this reasons the case study was selected.

3.3. Data Collection Techniques and Methods of Analysis

The study used two data collection techniques. The techniques were a five-point Likert-scale questionnaire, which was quantitatively analyzed using multiple linear regression model and semi-structured interview, which was qualitatively analyzed and triangulated with the quantitative result. Therefore, the study employed both quantitative and qualitative approach. The researcher found that using multiple methods is better to answer the research questions and the extent to which the findings can be trusted. Tashakkori & Teddlie (2003) cited in Mark, Philip, & Adrian (2009) argues that multiple methods are useful for providing better opportunities to answer

research questions. It also allows to the research findings can be trusted and inferences made from them.

3.4. Data Source

The study is mainly based on the primary data source. A questionnaire was distributed to respondent who have been using e-banking to the maximum of three years in the selected banks. This usage period is planed if users of e-banking enjoy the service for a long time from any bank they may be biased to their current banks. Moreover, most commercial banks in Ethiopia introduced mobile banking & internet banking lately after 2011. The questionnaire was designed based on previous empirical literature and its consistency was pre-tested using Cronbach Alpha. The components of e-banking and outcomes of customer satisfaction items were measured on 5-point Likert- scale ranging from 1 (strongly disagree) to 5 (strongly agree). The research respondents were asked to indicate the degree of agreement or disagreement on e-banking service quality offered by their banks. Some demographic questions were also forwarded. Every questionnaire is personally handed and instructions were given to each customer before completing the questionnaire. Furthermore, for the purpose of triangulation, semi structured interview was conducted to all Customer Service Managers of the selected four branches.

3.5. Population and Sample

The population of this study was active e-banking customers of the three selected commercial banks who have been using the service from 0 to 3 years. Accordingly, the total study population was 954,000 as of September 23, 2014 in the three banks. Sample size of 100 respondents is taken from each selected bank who has been using at list one of the e-banking types. To calculate sample size, simplified formula provided by Taro Yamane (1967) is used i.e.

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

Where, n = number of sample size,

N = Total number of study population,

e = level of confidence to have in the data or degree of freedom which is 90% for this study.

Therefore, number of suitable size of respondents' of each bank were decided using the above formula as depicted in table 3.1.

Table 3.1: Population and Sample Size Determination

Banks	Active No. of E-Banking Users	Sample size
CBE	556,000	100
DB	270,000	100
WB	128,000	100
Total	954,000	300

Source: Annual Reports 2013/14 of each Bank.

The population is geographically disbursed and also the researcher needs face-to-face contact with every respondent to guide them during completing the questionnaires. Therefore, multi-stage sampling technique was used to select the sample. First, simple random sampling to select branches and second, purposive sampling to select the actual cases were used. As Mark, Philip, & Adrian (2009) argue, multi-stage sampling is normally used to overcome problems associated with a geographically dispersed population when face-to-face contact is needed.

Accordingly, the geographic area (Addis Ababa) was split into four sub areas (districts) which include north, south, east and west district. One branch from each district were selected using simple random sampling that means a total of 4 branches from each bank were consisted. Finally, 25 actual cases (e-banking users) were selected from the four branches of each bank using purposive sampling. Table 3.2 portrayed this result:

Table 3.2: Actual Number of Cases and Corresponding Sampled Branches

Districts*	CBE		DB		WBE	
	Branch Name	Cases	Branch Name	Cases	Branch Name	Cases
North A.A	Arat Kilo	25	Piassa	25	Sebara Babur	25
South A.A	Lideta	25	Kera	25	Lafto	25
East A.A	Airport	25	Bole	25	Gerji	25
West A.A	Paulos	25	Tana	25	Merkato	25
Total		**100**		**100**		**100**

*District classification is taken from CBE

3.6. Research Model

The aim of this study is to examine the impact of seven e-banking quality dimensions on customer satisfaction by the banks. The researcher employed the MLR regression model to determine the significance level of the variables for the customer satisfaction in e-banking.

Customer satisfaction in e-banking = f (electronic banking service quality).

Basically, $CSEB = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \varepsilon$

Where, CSEB = Customer Satisfaction in E-Banking

X_1 = Reliability

X_2 = Transaction efficiency

X_3 = Customer Support

X_4 = Service Security

X_5 = Ease of Use

X_6 = Performance

X_7 = Service Content

Here α is constant and β is coefficient of estimate and ε is the error term. Customer satisfaction in e-banking is dependent variable and X_1 to X_7 are independent variables.

The seven service quality dimensions namely reliability, transaction efficiency, customer support, service security, ease of use, performance, service content have been established based on literature review and an exhaustive list of 27 items was also identified.

CHAPTER FOUR

4. RESULT AND DISCUSSION

A total of 300 questionnaires were personally handed to the respondents with close follow up and guide in filling the questioners. All respondents completed the questionnaires in suitable form. Several questions were asked related to the E-banking service and their satisfaction level to the E-banking customers of the selected three commercial banks in Addis Ababa.

The basic assumptions are that e-banking service quality dimensions namely (reliability, transaction efficiency, customer support, service security, ease of use, performance, service content) influence customer satisfaction. A multiple regression modeling approach was proposed as an effective method for studying the relationships. The result of this multiple regression model is analyzed and discussed in this chapter.

The statistical analysis of this study was done by SPSS software, version 20. And the results of the study were shown in inference and descriptive section. In deceptive section, tables, charts and statistics and in inference section, the result of multiple liner regression was analyzed.

To estimate the reliability of the questionnaire a pilot sample of 30 people, 10 from each bank, were selected and Cronbach Alpha was computed by SPSS software. Table 4.1 shows both the total and the pilot sample test result of reliability in the questionnaire.

Table 4.1: Cronbach Alpha Coefficient for each Variable

Items	Crronbach Alpha	
	10% Pilot Sample	Total Sample
Reliability	0.797	0.986
Transaction efficiency	0.779	0.983
Customer support	0.686	0.926
Service security	0.784	0.841
Ease of use	0.720	0.919
Performance	0.553	0.895
Service content	0.669	0.935

Source: SPSS output

All the items in the case of total sample have Cronbach Alpha values of greater than 80% it showed that the high reliability of the questionnaire.

4.1. Descriptive Findings

4.1.1. Demographic Profile

The demographic profile of the customers can be seen in Table 4.2.

Table 4.2: Demographic Profile of E-banking Customers

No.	Demographics		Frequency	Percentage
1.	Age (Years)	18-24	68	22.7
		25-35	217	72.3
		36-50	15	5.0
2.	Marital Status	Single	280	93.3
		Married	20	6.7
3.	Educational Levels	Primary	10	3.3
		TVET	70	23.3
		Degree	220	73.3
4.	Employment Status	Student	12	4.0
		Salaried	268	89.3
		Business Person	20	6.7
Total			300	100

The questionnaire included a segment on customer's profile, as an assortment of demographic and other factors were likely to influence the degree of customer satisfaction with respect to the e-banking service offered by the selected banks.

As can be seen from Table 4.2, the sample customers were mostly in the age group of 25-35 years (72.3%). It is also evident from the table that 22.7% of the respondents were youngsters (between 18 and 24 years). There were no respondents whose age were 51 and above. Majority of the respondents were unmarried (93.3%), while 6.7% were married. The respondents were predominantly degree holders (73.3%) and TVET (23.3%). There were no respondents who were

less than primary education level. This implies that the respondents had high literacy levels. As far as occupation is concerned, the respondents were a mix of salaried (89.3), business person (6.7) and students (4%) and there were no respondents from pensioner and unemployed category in the sample respondents under consideration.

4.1.2. Mean and Standard Deviation

Descriptive statistics (mean and standard deviations) of the respondent scores were computed. Analysis has been done by comparing these mean scores and deviations among respondents. The reason for using descriptive statistics is to compare the different factors that affect the level of customer satisfaction of the selected commercial banks by using the means and standard deviations values. In table 4.3 the respondents perception on the satisfaction of e-banking service offered by their banks and ranking was done on each variable.

Table 4.3 shows the mean value depicting the overall customer's satisfaction. As far as this descriptive statistics is concerned, customer's satisfaction on e–banking is above satisfactory level with a mean value of 3.30 on a 5 point Likert scale.

Table 4.3: Mean & Standard Deviation

	No. of items	N	Mean	Std. Deviation
Reliability	3	300	3.43	1.480
Transaction Efficiency	2	300	3.86	1.267
Customer support	5	300	3.35	1.148
Service security	6	300	3.76	0.696
Ease of use	5	300	3.61	0.728
Performance	3	300	2.71	0.743
Service content	3	300	3.29	0.849
E-banking service quality (EBSQ)	7	300	3.43	0.806
Overall customer satisfaction (CSEB)	1	300	3.30	1.061

Source: SPSS regression results

The standard deviation 1.061 indicates that there was moderate variability in overall customer satisfaction in the data. The table also suggests that all service quality dimensions except performance rated as above satisfactory. As far as the mean values are concerned, out of the e-banking service quality dimensions transaction efficiency (mean of 3.86), service security (mean of 3.76) and ease of use (mean of 3.61) have relatively major roles on e-banking service quality and in turn overall e-banking customer satisfaction.

Except performance (mean of 2.71) all explanatory variables play a fundamental role in the customer satisfaction among CBE, DB, and WB in Addis Ababa. Empirical evidence in this research also suggests that e-banking factors have a significant degree of influence on customer satisfaction. This empirical evidence has provided significant support for the electronic banking literature, which substantively advocates that e-banking factors have an impact on customer satisfaction (Hua, 2009;Wise, Victoria & Ali, & Muhammed, 2009).

4.2. Inference Findings

4.2.1. Chi-Square Test

Here the relationship between demographic characteristics and customer satisfaction on e-banking had been tested using Chi-Square test. The test statistics was chosen because the variable under study was categorical. The result of SPSS statistical package portrayed in table4.4.

Table 4.4 Chi-Square Test for Independence Result

Demographic Character	Value	Df	Sig.(2 sided)
OCCUP	14.137	8	0.078
EDL	125.024	8	0.000
MS	7.575	4	0.108
AGE	40.132	8	0.000

Significant at the 0.05 level of precision (2 tailed)

Source: SPSS analysis result

It can be observed in table 4.4 that the relationship between customer satisfactions in e-banking and the demographic variables educational level and age are statistically significant as their p-value were lower than 0.05. This implies that the relationship between customer satisfaction in e-banking and demographic variables (educational level and age), except occupation and marital status, are not due to chance rather it is systematic. In other words the probability associated with the chi-square statistic of educational level (125.024) is less than 0.01 indicating that there is a strong relationship between customer satisfaction in e-banking and educational level. Customers with higher education such as university graduates are more comfortable in using technology, like the internet and other forms of e- banking. As educational level increases individual's level of IT literacy increases so they tend to use e-banking and gets more satisfaction. About age, chi-square value is 40.132 associated with less than 0.01 level of precision indicating age has a strong relationship with satisfaction in e-banking. To put it best, age and customer satisfaction in e-banking are definitely dependent on one another and this is correct at 99% likelihood.

4.2.2. Regression Analysis

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

4.2.2.1. Diagnosis Test

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

Multicolinearity Test between Study Variables

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

Table 4.5 Correlation Matrix between Explanatory Variables

	X1	X2	X3	X4	X5	X6	X7
X_1	1						
X_2	0.737**	1					
X_3	0.695**	0.119*	1				
X_4	0.819**	0.519**	0.857**	1			
X_5	0.469**	0.692**	0.042	0.171**	1		
X_6	0.617**	0.846**	0.152**	0.409**	0.889**	1	
X_7	0.953**	0.888**	0.530**	0.795**	0.540**	0.727**	1

Source: SPSS output

**Correlation is significant at the 0.01 level

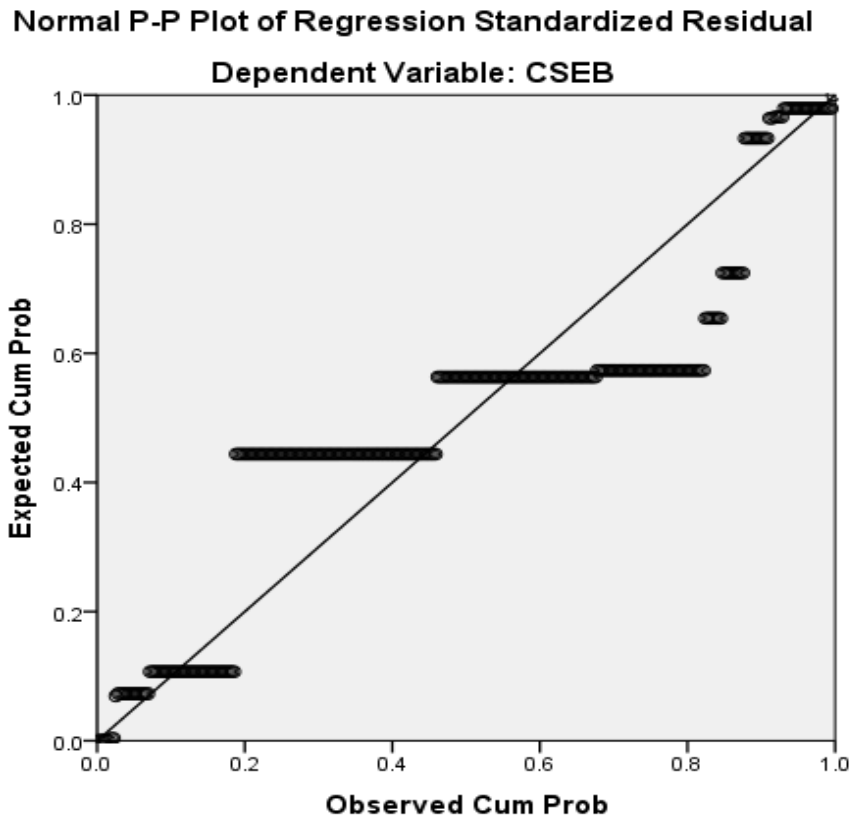
*Correlation is significant at the 0.05 level

Cooper & Schindler (2009) suggested that a correlation coefficient above 0.8 between explanatory variables should be corrected for because it is a sign for multicolinearity problem. Malhotra (2007) argued that the correlation coefficient can be 0.75. Lastly, Hair et al. (2006) argued that correlation coefficient below 0.9 may not cause serious multicolinary problem. Thus, service content has been correlation coefficient of 0.953 with reliability at 0.01 level of significant and correlation coefficient of 0.888 with transaction efficiency at 0.01 level of significant both greater than 0.8. Performance has also been correlation coefficient 0.846 and 0.889 with transaction efficiency and ease of use respectively both greater than 0.8 at 0.01 level of significance. Finally, service security has been correlation coefficient of 0.819 and 0.817 with reliability and customer support respectively at 0.01 level of significant. Therefore, the variables service content, performance, and service security were excluded from the regression model to control multicolinearity problem.

Linearity Test

Linearity refers to the degree to which the change in the dependent variable is related to the change in the independent variables. To determine whether the relationship between the dependent variable CSEB and the independent variables X_1 (reliability), X_2 (transaction efficiency), X_3 (customer support), and X_5 (ease of use) is linear; plots of the regression residuals through SPSS software had been used.

Figure 4.1: Normal Point Plot of Standardized Residual



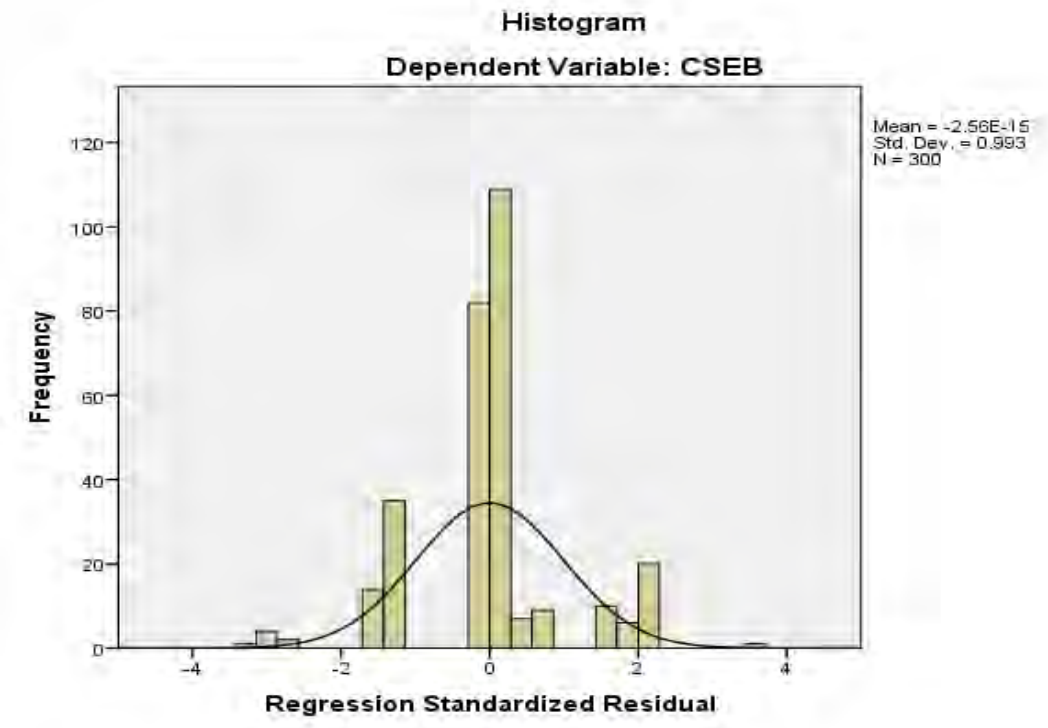
Source: SPSS output

The scatter plot of residuals shows no large difference in the spread of the residuals as you look from left to right on figure 4.1. 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 errors terms should be zero (E(ut)= 0).

Figure 4.2: Frequency Distribution of Standardized Residual



Source: SPSS output

Figure 4.2 shows the frequency distribution of the standardized residuals compared to a normal distribution. As you can see, although there are some residuals (e.g., those occurring around 0) that are relatively far away from the curve, many of the residuals are fairly close. Moreover the histogram is bell shaped which lead to infer that the residual (disturbance or errors) are normally distributed. Thus, no violations of the assumption normally distributed error term.

Thus, from an examination of the information presented in all the three tests I conclude that there are no significant data problems that would lead to say the assumptions of multiple regression have been seriously violated.

4.2.2.2. Correlation Analysis between Customer Satisfaction in E-banking and Explanatory Variables

Table 4.6: Correlation matrix: CSEB

	CSEB	X_1	X_2	X_3	X_5
CSEB	1				
X_1	0.772**	1			
X_2	0.739**	0.737**	1		
X_3	0.379**	0.695**	0.119*	1	
X_5	0.405**	0.469**	0.692**	0.042	1

Source: SPSS output

**Correlation is significant at the 0.01 level

*Correlation is significant at the 0.05 level

Reliability and customer satisfaction has highest correlation coefficient which is 0.772 at 0.01 level of significant. This result shows that reliability of commercial banks in service delivery have significant relationship with the level of satisfaction in e-banking. Transaction efficiency and customer satisfaction has the second highest correlation coefficient (0.739) next to reliability at 0.01 level of significant. Therefore reliability and transaction efficiency tends to be a better predictor of satisfaction level on e-banking. Customer support (0.379) and ease of use (0.405) have also significant correlation with customer satisfaction though their coefficients are relatively smaller.

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

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

Table 4.7: Model Summery

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.821	0.674	0.669	0.610

a. Predictors: (Constant), X_5, X_3, X_2, X_1

R-squared is measured the goodness of fit of the explanatory variables in explaining the variations in customers satisfaction measures of explanatory variables (reliability, transaction efficiency, customer support and ease of use). As clearly described in Table 4.7 adjusted R-square value for the regression model was 0.669. This indicates the explanatory variables; reliability, transaction efficiency, customer support and ease of use in this study explain about 67 percent of the variation in the level of customer satisfaction. The remaining 33 percent of the variation in the level of customer satisfaction of CBE, DB, and WB are explained by other variables which are not included in the model. Therefore, e-banking service dimensions (reliability, transaction efficiency, customer support and ease of use) are good explanatory variables of the satisfaction level of both public and private commercial banks in Ethiopia.

Table 4.8: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	226.839	4	56.710	152.422	.000
	Residual	109.757	295	.372		
	Total	336.597	299			

a. Dependent Variable: CSEB

b. Predictors: (Constant), X_5, X_3, X_2, X_1

From the ANOVA test in table 4.8 it shows the table Sig. value 0.01 is greater than the calculated Sig. value 0.000. It reflects there was a statistically significant correlation between dependent variable and independent variables at 1% significant level. Which means the explanatory variables; reliability, transaction efficiency, customer support and ease of use have great contribution to improve e-banking customer satisfaction level among Commercial Banks of Ethiopia, Dashen Bank and Wegagen Bank. But it does not mean that all these factors of e-banking service quality have equally significant correlation with customer satisfaction level. 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 (152.422) 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 1 percent level of significance.

Table 4.9: Regression Coefficient Analysis of the Model

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.497	.268		5.581	.000
	X_1	.394	.083	.549	4.734	.000
	X_2	.380	.077	.454	4.928	.000
	X_3	-.046	.073	-.050	-.637	.525
	X_5	.239	.067	.164	3.548	.000

a. Dependent Variable: CSEB

From the above finding we can develop the following regression model

$CSEB = 1.497 + 0.549X_1 + 0.454X_2 + 0.164X_5$

Std. Err (0.268) (0.083) (0.007) (0.067)

T values (5.581)* (4.734)* (4.928)* (3.548)*

R square (Adj.) = 0.669, F = 152.422

*= Significant at 99% level

Where, CSEB = customer satisfaction on E-Banking

X_1 = Reliability

X_2 = Transaction Efficiency

X_3 = Customer Support

X_5 = Ease of Use

Coefficient analysis shows the relationship between dependent variable and independent variables. According to Sig. value of X_1 (reliability), X_2 (transaction efficiency) and X_5 (ease of use) are statistically significant at 1 percent significant level in agreement with the hypothesis. Which means; reliability, transaction efficiency and ease of use have great contribution to improve customer satisfaction on e-banking. Whereas the sig. value of X_5 (ease of use) is greater than 0.05 and conclude that the variable has no significant impact on customer satisfaction from using e-banking.

Here, X_1 (reliability) = 0.549 i.e., 100% change in reliability leads to 54.9% change in customer satisfaction level. X_2 (transaction efficiency) = 0.454 i.e., 100% change in transaction efficiency leads to 45.4% change in customer satisfaction level. X_5 (ease of use) = 0.164 i.e., 100% change in ease of use leads to 16.4% change in customer satisfaction level.

All explanatory variables have a positive relationship with customer satisfaction except X_3 (customer support), low coefficient of -0.05 shows that customer support has weak impact on e-banking customer satisfaction of commercial banks. A positive coefficient of reliability (0.549) implies that an increase in reliability leads to increase customer satisfaction. Transaction efficiency has a positive coefficient of 0.454; this means transaction efficiency leads to better satisfaction of customers on e-banking. Similarly, ease of use has a positive coefficient of 0.164. This means any increase in this variable leads to increase in customer satisfaction of commercial banks in Ethiopia.

These findings provide significant support for the reliability, transaction efficiency and ease of use literature which advocates that the variables have an influence upon customer satisfaction in Ethiopian commercial banks. The findings are also consistent with other research findings for example (Jun et al, 1999; Jannatul, 2009; Parsurman et al, 1988; Yang, Jun and Peterson, 2004, Lui & Amett, 2000) found that reliability provide higher degree of satisfaction on e-banking.

Storback cited in (Thahkur, 2011) also empericaly found that e-banking transiaction efficiency and customer satisfaction have positive relationship. Parasurman et al, 1988, (Yang, Jun and Peterson, 2004), (Lui & Amett, 2000), (Storback et al, 1994) cited in (Thahkur, 2011) found ease of use and satisfaction as critical factors on the use of e-banking.

4.3. Interview Responses

Interview was forwarded for the three banks Customer Service Supervisors (for some branches Marketing Officers and other nearly related staff members had been participated in the interview instead of Customer Service Supervisors) concerning age, gender, occupational, marital status and others are presented here to triangulate with customers responses.

Currently CBE offers Automated Teller Machine (ATM), Mobile Banking, Point of Sales (POS) terminals, and internet banking but most of the users of E-banking are E-card users, says Communication Manager at the CBE. It started out e-banking service with eight ATM machines, 11 years ago, and now has 300. There are also an additional 158 under deployment and 200 in the process of procurement. With respect to age, gender, marital status, occupation and educational status of the customers he responds, it is difficult to put in figure but from observation one can conclude the youngster salaried and literate people are majority of the users of e-banking. The bank provide e-banking service both for saving account and checking account but loan accounts have no such services yet. Customers will expect their banks to be responsive to their needs over e-banking therefore we are seeking to address these needs and increase their level of satisfaction. So fare most of our customers are satisfied with the e-banking service. However, despite the bank's effort to improve access for its customers by delivering such services, it is well aware of some problems are encountered by clients which makes them dissatisfied such as network failure, due to service breakdown from the country's sole telecommunications service provider, ethio-telecom, and internal network problems, are the challenges faced by the CBE attributed to the

dissatisfaction of customers. While the majority of the complaints are laid at the feet of ethio-telecom, lack of knowledge from customers end have also a share for the problem of brake dawn in ATM service. Inappropriate use of ATMs and cards such as inserting card upside down into the ATM's card slot, forgetting password which leads to the machine to capture card, transferring cards to a third party are among the problems by customers themselves.

Managers of the selected branches in Dashen Bank responds, though we are providing E-banking services including debit card, mobile banking, internet banking and POS the majority of e-banking customers are users of debit card. Accordingly, to satisfy this demand the bank now days reached its ATM machine network at 130, since the introduction of the service in May 2006. Moreover it has bought 40 additional ATMs that are capable of receiving deposits. Concerning account type ordinary saving account holders are the main users and they are not providing e-banking service for time deposit, over draft account holders and loan account holders. In relation to age, gender, occupational, marital status and others the bank has no official statistics however it is estimated that youngers ranging from 18 to 35 are majority of e-banking users and the bank guessed that 90% of e-banking customers are graduates. In occupational category since most government and private organizations channeling salaries of their employees through the banks salaried takes the lion share of e-banking customers. Most of the problems reported from our clients; frequent service interruption is the main which makes them to lose their trust on the service. The bank work around the challenge to minimize this problem by providing phone support to clients who experience service interruption, so users can get direct assistance. In addition, there is a standby team equipped with a car that can be dispatched to any location where a customer faces an inconvenience. That is why last year (2013) 2.5 billion Br in transactions were handled through our ATMs only. All these evidenced that somewhat our customers are satisfied by the service we offer. We strongly believe that the technology has given more satisfaction and reduced the visit of branch now and then as customer gets it 24 hours per day and

7 days a week, standardized service, and quicker. But due to various reasons, mostly ethio telecom's network failure, customers have faced tragedy because we couldn't deliver the service as exactly as we promise.

Wegagen Bank replied that, we are putting a lead in introducing the state-of-art technology as far as the core banking application is concerned. This centralized banking solution creates conducive environment to introduce e-banking services. Thus, the bank has availed payment card, POS terminals, mobile banking and internet banking. Currently majority of the users are saving account holders but in the future they expect that current account holders (business owners) would be increased if the bank increase limit on one time withdrawal and fund transfer through mobile banking and internet banking which is now only Birr 5000. Despite the Bank's effort to improve access for its customers by expanding this technology, it is well aware of that such technology demands furnished infrastructure in order to sustain a reliable service. From the oral feedback of customers, they routinely complain about frequent problems during transactions. This is mainly because network failure from ethio-telecom, power interruption and low level of basic ICT literacy. To resolve such service interruptions besides working with ethio-telecom, WB uses a wireless EV-DO internet connection, instead of the broadband cable internet to avoid temporary disruptions due to network failure. These may need manual intervention by the Bank's technicians and the Bank has a standby team to deal with these issues.

CHAPTER FIVE

5. CONCLUSION AND RECOMMENDATION

5.1. Conclusion

Customer satisfaction is the major factor contributing to the success of service sector. E-banking has become a major facility sought after by the existing and potential customers. All the service sectors depend on customer and their satisfaction and the banks are no exception. 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 level of satisfaction of customers with the different quality dimensions pertaining to the theoretical model was evaluated. Accordingly, the major findings are presented as follows:

- Descriptive analysis results revealed that the majority of current e-banking users are youth between the age of 18 up to 35, occupationally salaried are the majority users and business men/women are not active participant in using the service, educational wise the respondents were predominantly degree holders and TVET. Customer's satisfaction on E–Banking is above satisfactory level with a mean value of 3.30 on a 5 point Likert scale. Out of the e-banking service quality dimensions transaction efficiency (mean of 3.86), service security (mean of 3.76) and ease of use (mean of 3.61) are the majors to improve e-banking service quality and in turn overall customer satisfaction.
- Reliability, transaction efficiency and ease of use have a positive relationship with customer satisfaction in agreement with the hypothesis.

- Any increase in reliability, transaction efficiency, and ease of use leads to increase in customer satisfaction by 54.9%, 45.4%, 16.4% respectively. These results are significant at 1% level of precision.
- Out of the demographic variables under investigation educational level and age have statistically significant relationship with satisfaction in e-banking. In other words customer satisfaction in e-banking definitely dependent on one another with age and educational level at 0.01 level of precision.
- Both public and private commercial bank e-banking customers suffer from frequent disruption of e-banking services due to poorly developed telecommunication infrastructure, lack of reliable power supply, and lack of knowledge from customers end.

5.2. Recommendation

The analysis of this work includes implications for both private and public banks 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 I would like to forward the following recommendations for the concerned bodies.

- Banks should work much in increasing the number of users from all aspects that is from age, educational status, occupationally and should do great job in making- business men/women to be the users of e-banking.
- As reliability, service content, and transaction efficiency dimensions are highly significant impacts on the level of satisfaction, banks whether they are private sector bank or public sector bank better to focus on this dimensions to bring higher level of satisfaction to their customers.

- Commercial banks should give additional emphasis to reliability and transaction efficiency to increase the satisfaction level of e-banking customers.
- Commercial banks should work with ethio-telecom & Ethiopian Electric Power to resolve service interruptions and minimize the brunt of the consequences of unreliable services.
- Such technology demands well developed ICT infrastructures therefore the respected government bodies should work to develop and expand ICT infrastructures.
- Banks need to increase the confidence of their customers as well as develop their skills and knowledge in using e-banking services. They could also employ the use of video presentations at bank branches and on television to showcase the user friendliness of such services. This will help customers to be more familiar with the e-banking services.

At last, this study investigates the dimensions of e-banking service quality that has major impacts on customer satisfaction both in private and public commercial banks in Ethiopia. But, the variables included in the study were not exhaustive. Future researchers could include other variables which are not included under this study.

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APPENDIX

APPENDIX

Appendix-A Questionnaire for Customers

Addis Ababa University Faculty of Business and Economics

Development Management: Post Graduate Program

This questionnaire is designed specifically to carry out a research on the impacts of E-Banking on customer satisfaction in the banking service in Addis Ababa city specifically and its main purposes are: to find the electronic banking service dimensions that have the impact on customer satisfaction among two privet banks and one public bank: Dashen Bank, Wegagen Bank and Commercial Bank of Ethiopia and as partial fulfillment of the requirements for the degree in Master of Development Management.

Here I kindly request you to attempt all the questions in the questionnaire to meet the aim of the study. Whatever information is provided will be treated with utmost confidentiality and strictly will be used for academic purpose only. There is no need to write your name.

I thank you in advance

SintayehuYitbarek
Tell: 0911943481
Email: seey_2005@yahoo.com

If you have any question with regard to the questionnaire please contact me using the above mentioned address.

Part I

Background Information

Please put right mark (?) in front of your choice box that express yourself

1. Gender: Male☐ Female☐

2. Age: 18-24☐ 25-35☐ 36-50☐ 51-60☐ Above 60☐

3. Marital status: Single☐ Married☐ Separated☐ Divorced☐ Widowed☐

4. Current education level

Illiterate☐ Primary☐ High school☐ TVET☐ University degree☐

Master Degree☐ Doctorate Degree☐ Above Doctorate Degree☐

5. Occupation: Unemployed☐ Student☐ Salaried☐ Business man/woman☐

Pensioner☐ Other ☐

6. Which type of customer you are with the bank?

Depositor☐ Borrower☐ Both depositor& borrower☐ other service seeker ☐

7. If you are depositor, which type of account do you maintain with the bank?

Checking Account☐ Saving Account☐

8. Which type of electronic banking service delivery do you use?

ATM☐ POS☐ Mobile banking☐ Internet banking☐

9. How satisfied are you with the e-banking service provided by your bank?

Very Dissatisfied☐ Somewhat Dissatisfied☐ Neither Satisfied nor Dissatisfied☐

Somewhat Satisfied☐ Very Satisfied☐

Part II

Customer Feelings about Electronic Banking

Please put right mark (?) for response of your feeling about the question provided

No.	Dimensions	Strongly disagree	Disagree	Undecided	Agree	Strongly Agree
		1	2	3	4	5
Reliability						
1.1	E-banking completes a task accurately					
1.2	E-banking deliver the service exactly as promise					
1.3	E-banking perform the service right at the first time					
Transactions efficiency						
2.1	E-banking provide complete help function					
2.2	Transaction process is fast					
Customer support						
3.1	E-banking contains enough services					
3.2	Case of problem happen, can contact staff immediately					
3.3	E-banking contains responsible section to guide for common problem					
3.4	E-banking provide knowledgeable staff to solve problem					

3.5	Staff can describe step to use and condition to use clearly					
Service security						
4.1	E-banking keep accurate record of transaction					
4.2	E-banking provide security for transaction data and privacy					
4.3	No problem during using E-banking service					
4.4	E-banking is secure					
4.5	Feel safe when using E-banking					
4.6	Can check validity and detail of past transaction every time					
Ease of use						
5.1	Easy to find information in the E-banking system					
5.2	E-banking is easy to use					
5.3	The language in e-banking displays is easy to understand.					
5.4	Information and text are clear and easy to understand					
5.5	E-banking system provides clear instruction.					
Performance						
6.1	E-banking is provided in multi-language					
6.2	E-banking provide 24 hours -7 days service					
6.3	E-banking allow to transfer between the same banks					
Service content						
7.1	E-banking provides information that exactly fits needs.					
7.2	E-banking provides accurate information.					
7.3	E-banking provides information that trust.					

*E-Banking refers to variety of platforms such as card banking, mobile phone banking, and internet banking whereby customers access banking services like transfer funds, performing balance checks, pay bills, view record of transactions, check interest in accounts, send money overseas, etc.

Appendix B-Interview questions for Customer Service Managers

Q1. When we see the current users of e-banking what can one say about age, gender, marital status, occupation and educational status of the customers?

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

Q3. What are the types of e-banking delivery channels your bank is providing?

Q4. Does the bank think e-baking has given satisfaction to the users of the service?

Q5. Do you think e-banking is providing the service as expected and available 24/7for customers?

Q6. What can you say about the service quality of e-banking offered by the bank?

Q7. What are the major problems in e-banking activities to satisfy your customers?

Appendix C- Conceptual frame work of the research

Declaration

I, the undersigned, declare that this thesis is my original work and has not been presented for a degree in any other university, and that all source of materials used for the thesis have been duly acknowledged.

Sintayehu Yitbarek Tefera

_____

February 2015

Confirmation

This thesis can be submitted for examination with my approval as a university advisor.

_____

.Degef Duressa (PhD)

February 2015

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