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THE EffECT OF e - BANKING SERVICES ON CUSTOMER SATISFACTION: THE CASE OF SELECTED COMMERCIAL BANKS IN ETHIOPIA

By: Tsiyon Gashaw

Addis Ababa University School of Commerce

Marketing Management Graduate Program

May, 2016

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BY: TSIYON GASHAW ADVISOR: MULUGETA G/MEDHIN (PHD)

A Thesis Submitted to Addis Ababa University School of Commerce Department of Marketing Management, in Partial Fulfillment of The Requirement For The Degree of Master Of Arts in Marketing Management.

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APPROVAL BY BOARD OF EXAMINERS

NAME OF INTERNAL EXAMINER	SIGNATURE
NAME OF EXTERNAL EXAMINER	SIGNATURE

STATEMENT OF CERTIFICATION

This is to certify that Tsiyon Gashaw has carried out her research work on the topic entitled "**Customer Satisfaction on E- Banking Services:** the case of commercial banks in Ethiopia" is her original work in nature and is suitable for submission of the award of Master's Degree in Marketing Management.

Certified by:

Mulugeta G/Medhin (PHD) _____ _____

Signature Date

STATEMENT OF DECLARATION

I hereby declare that "Customer Satisfaction on e- banking Services: The Case Of Commercial Banks In Ethiopia" project is wholly the work of Tsiyon Gashaw. I have carried out the present study independently with the guidance and support of the research advisor Mulugeta G/Medhin (PHD). Also any other contributors or sources have either been referenced in the prescribed manner or are listed in the acknowledgement together with the nature and the scope of their contribution. And the study has not been submitted for award of any Degree or Diploma program in this or any other institution. It is in partial fulfillment of the requirement of the program Master's Degree in Marketing Management

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Tsiyon Gashaw

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ACKNOWLEDEMENTS

First of all I would like to thank the Almighty God. Second I would like to extend my thanks to my advisor Dr. Mulugeta G/Medhin for the guidance and assistance he provided. Third, I would like to thank Commercial Bank of Ethiopia, Dashen Bank, United Bank and Cooperative Bank of Oromia staff members for their assistance in the distribution and collection of questionnaires. Last but not least to be appreciated is the respondents of the survey who willingly devoted their precious time for the survey. Finally, I would like to thank my family and friends for their support and encouragement.

Abstract

Today almost all banks in Ethiopia are adopting e banking service system as a means of enhancing their service quality and customers satisfaction. This time customers are also evaluating their banks in the light of e service era. Therefore Banks should provide the level of e – banking service quality demanded by customers. . This paper examined "The effect of e - banking services on Customer satisfaction: The case of selected commercial banks in Ethiopia". To do so it used the conceptual model that measures the effect of e banking service quality dimensions on customer satisfaction that developed by Rangsan N. & Titida N. (2013) which used six dimensions (reliability, transaction efficiency, customer support, service security, ease of use & performance).The instrument measured e – banking service performance by using thirty one indicators that belong to the six e – banking service quality dimensions. The instrument was tested for reliability and validity before the questionnaire was distributed to 385 customers of the selected commercial banks of Ethiopia (Commercial bank of Ethiopia, Dashen Bank, United Bank & Cooperative Bank of Oromia), in their Addis Ababa branches. In this quantitative survey, Hypothesis was tested to find out whether the e – banking service quality dimensions had a significant effect on customer satisfaction. The results indicated that all the dimensions had a significant effect on customer satisfaction except customer support & performance. Also the regression analysis indicated the two most dominant service quality dimensions from among the six dimensions to be transaction efficiency followed by reliability. The finding of this study is important to help the banks' managers focus their attention on the e - banking service quality dimension that matters most to customers.

List of 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
SMS: Short Message Service

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Chapter One

1. Introduction

1.1 Background of The study

Globally the financial service industry has been changing rapidly from the old ways of doing business. Three or four decades ago, banking was a simple business Timothy, (2012), Qureshi T.(2008), observed this change and noted that many banks have shifted from the traditional arm chair banking to online banking system, where customers can use self service channels such as automated teller machines (ATM) and internet to satisfy their financial needs.

All banks provide online banking facility to their customers as an added advantage. These applications can carry out virtually all banking functions relying heavily on information collection, storage, transferring and processing. Most of the general services are on all banking websites such as view account balances, pay bills, view records of transactions, transfer money to linked accounts with the same bank, transfer money to specially selected unlinked accounts, check interest in accounts, send money overseas, Change your details, etc. however, banks are not limited with only these services, due to their competitive nature they are always offering new features to attract customers. Banks create their banking interfaces and websites in a viewable and user-friendly manner, which enable customers to conduct their financial transactions with ease. All online banking services provided by some banks are free of cost.

The application of electronic banking products/services to banking operations has become a subject of fundamental importance and concerns to all banks operating within a condition for local and global competiveness Ezeoha, (2006), Ikechukwu, (2000). Despite the fact that the world banking industry is entering into new phenomena of unprecedented form of competition supported by modern information and communication infrastructure, Statistics show that Africa is lagging behind in the adoption of e-commerce. According to Jensen, (2003), there is limited e- commerce activity in Africa and most rural areas have no Internet facilities and thus are unable to engage in e-commerce activities. According to Jensen, (2003) most countries in Africa, except South Africa, have Internet infrastructure only in their

major cities, although there are a number of issues for the slow diffusion of e-commerce, some of which may be unique to Africa.

Recently several African countries have already made progress in their e-commerce links to integrate themselves with the global connectivity roadmap Magembe S. and Shemi A. (2002), In Ethiopia however cash is still the most dominant medium of exchange and electronic payment systems are at an embryonic stage. In the face of rapid expansion of electronic payment systems throughout the developed and the developing world, Ethiopia's financial sector cannot remain an exception in expanding the use of the system Garedachew W. (2010). In spite of a rapid expansion in the number of financial institutions since financial liberalization, Ethiopian banking system is still underdeveloped compared to the rest of the world. However, Ethiopian banks should expand the electronic banking services system to bring excellence in their service and excel customers' satisfaction if they have to stay in the global competitive financial industry or to be profitable.

Timothy, (2012), customer's satisfaction holds the potential for increasing an organization's customer base, increase the use of more volatile customer mix and increase the firm's reputation. Consequently, obtaining competitive advantage is secured through intelligent identification and satisfaction of customer's needs better and sooner than competitors and sustenance of customer's satisfaction through better products/services. Customer value is considered central to acquire competitive advantage and long-term success of the company through good service delivery system Yan Ma, Y & Ding, J. (2010) also customer value regulates behavioral intentions of loyalty toward the service provider Sirdeshmukh D. et. al, (2002). Technology is essential in providing faster and more efficient services to customers. Technology acquisition must be based on actual needs and the proven ability to deliver customer – friendly solutions.

Therefore, this research is focused on the effect of e - banking services on Customer satisfaction: The case of selected commercial banks in Ethiopia

1.2 Statement of the Problem

Today almost all banks in Ethiopia are adopting e banking system as a means of enhancing their service quality and customers satisfaction. e - Banking includes a system that enables customers to use self service channel to satisfy their financial desire through public and private networks and internet. This time customers are also evaluating their banks in the light of e service era. Therefore Banks should provide the level of e – banking service quality demanded by customers. However, it is not unusual hearing from customers when they complain on the e banking services rendered by commercial banks in Ethiopia this indicates that as there is a gap between customers' expectation and actual perception of e – banking services quality in commercial banks of Ethiopia, due to such circumstances there has to be examined factors that affect customers' satisfaction in e – banking services that delivered by commercial banks of Ethiopia.

As the researcher tried to get the banks practical evidence from the selected banks, banks in Ethiopia adopt e banking products only to differentiate their services from each other and attract customers but they do nothing to understand as to how the e banking services affect their customer's satisfaction. Customer satisfaction is likely to be even more important online, since it is harder to keep online customers loyal. In banking, which has traditionally been a high contact service, the lack of direct human interaction in e banking service entails the need to examine the role of technology to construct e-CS. Banks must have the knowledge on how to get their customers satisfied, especially in relation to the e-SQ, it shall be prioritized Zavareha, (2012).

Customer satisfaction measurement allows an organization to understand the key factors that affect customer's satisfaction during service experience Ankit, (2011). A research that has been conducted in Thailand on the impact of internet banking service on customer satisfaction identified that reliability, Transactions efficiency, Customer support, service Security, Ease of use and performance have significant impact on customers satisfaction Rangsan.N. & Titida. N. (2013). However, the researcher felt that, there may be a possibility of gap whether or not these factors are applicable within e banking services in our country same industry.

Therefore to examine the gaps, the study tried to measure the effect of e - banking services on Customer satisfaction: The case of selected commercial banks in Ethiopia using e - banking service quality dimensions.

1.3 Research Questions

It has been understood from literature search and other secondary information sources that there are information and knowledge gaps in the area of the effect of e banking services on customers satisfaction in commercial banks of Ethiopia to support commercial banks of Ethiopia that provide e - banking services so as to address the dynamic changes with customers satisfaction. In order to address the identified gaps the following research questions have been developed to undertake the study.

1.3.1 Main research question

How does electronic banking service affect customers' satisfaction in Ethiopia?

1.3.2 Sub-research questions

1 What are factors affecting customers' satisfaction with electronic banking services in Ethiopia?
2 To what extent e-banking influences customers' satisfaction in Ethiopia?
3 What is the relationship between demographic variables and customer's satisfaction in e banking services of commercial banks in Ethiopia?
4 What is the dominant e- banking service quality dimension that has strong effect on customer's satisfaction in Commercial banks of Ethiopia?

1.4 Research Objectives:

1.4.1 General Objective of the Study

The main objective of this study is to examine the effect of e-banking service on customers' satisfaction in Commercial banks of Ethiopia.

1.4.2 Specific Objective of the Study

1 To Identity factors affecting customers' satisfaction with e banking services in Commercial banks of Ethiopia.
2 To examine how e banking service influences customers satisfaction in Commercial banks of Ethiopia.
3 To understand the relationship between demographic variables and customers satisfaction in e – banking services of Commercial banks of Ethiopia.
4 To identify the dominant e banking dimension that has strong effect on customers' satisfaction of Commercial banks of Ethiopia.

1.5 Hypothesis

The aim of this study was to examine customer satisfaction on e-banking services: The case of commercial banks in Ethiopia. Based on this aim some major factors have been explored as to how they affect the customers' satisfaction in e banking services by Commercial banks of Ethiopia grounding the established hypothesis.

The six hypotheses are as follows:
H1: Reliability has significant effect on customer's satisfaction in e banking services of commercial banks of Ethiopia
H2: Transaction efficiency has significant effect on customer's satisfaction in e banking services of commercial banks of Ethiopia
H3: Customer support has significant effect on customer's satisfaction in e banking services of commercial banks of Ethiopia
H4: Service security has significant effect on customer's satisfaction in e banking services of commercial banks of Ethiopia
H5: Ease of use has significant effect on customer's satisfaction in e banking services of commercial banks of Ethiopia
H6: Performance has significant effect on customer's satisfaction in e banking services of commercial banks of Ethiopia

1.6 scope of the study

The study covered one public bank (commercial bank of Ethiopia) and three private banks (Dashen bank, United bank and Cooperative bank of Oromia) in Addis Ababa.

The study looked at electronic banking services like ATM, POS, Mobile banking, internet banking, Credit Card, Debit Card, Prepaid debit card and agent banking and how they are linked to customer's satisfaction variables in the selected Commercial banks of Ethiopia. The study was confined to the customers', who are currently using the system, perspective of e banking services.

This study covered periods from 2013 up to now this is the period in which most customers started using electronic banking services as expected by banks.

1.7. Significant of the study

The findings of this study help all Commercial banks of Ethiopia to

- Understand major factors that affect customers' satisfaction and the level of customers' satisfaction with e banking services.
- Develop the best strategy that enables them to deliver efficient and effective services that excel their customers' satisfaction and make them profitable.
- Recognize the limitation of e - banking within the service sector to make effective decision in service development and marketing strategies for keeping competitive advantage in the industry.

1.8 Organization of the Study

The study has been organized in to five chapters. The first chapter deals with background of the study, statements of the problem, the research questions, objective of the study, the hypothesis, scope of study, significance of the study, and organization of the study. The second chapter presented previous related research conducted on e-banking and customers' satisfaction locally and globally. The third chapter explained types and source of data that were used for the study, sampling techniques used to determine the sample size, collection tools and procedure and data analysis method. The fourth chapter discussed

the analysis and result of the study. The last chapter presented summary of major findings, conclusion and recommendation of the study.

Chapter Two

2. Literature Review

2-1: Concept of E- Banking

E-banking becomes a virtual banking counter that the individual and corporate customers to carry out their regular activities Goi. C.L.(2005).The term electronic banking is used to describe the provision of information or services by a bank to its customers, via a computer or television Daniel, E. (1999), where E-banking includes systems that enable financial institution customers, individuals or businesses, to access accounts, transact business, or obtain information on financial products and services through a public or private network, including the Internet Goi. C.L.(2005). E-banking uses the web browser for the user interface and the Internet for data transfer and download of software, and so has potential for reducing maintenance costs. For users, e banking provides current information, 24-hours-a-day access to banking services – in addition to the familiar browser interface Hertzum, M. et al (2004). Electronic services contribute in reducing costs, increasing profits, activating bank's management, increasing bank's effectiveness and its competitive degree. Almazari A. & Siam A. (2008) since e-banking is a high-risk area with a potential for substantial economic loss, electronic banking must be secured and easy to use Hertzum, M. et al (2004).

2.2 The evolution of E- banking system

Osabuohien E. (2008) stated that technology can be referred to as the application of knowledge for the execution of a given task. It entails skills and processes necessary for carrying out activities (works) in a given context, while ICT encompasses computer systems, telecommunication, networks, and multimedia applications to work Frenzel C. (1996). It came into use in the late 1980's replacing earlier terms like Electronic Data Processing (EDP), Management Information System (MIS), although the latter terms are still in use as noted by Frenzel, C. (1996). Further to this, the adoption of Information and Communication Technology (ICT) in banking sector is generally referred to as electronic banking and application of its concepts, techniques, policies, and implementation strategies to banking services has

become a subject of fundamental importance and concerns to all banks and indeed a pre-requisite for local and global competitiveness in the banking industry as noted by Adewuyi I. (2011).

Electronic innovation in banking industry can be traced back to 1970, when the computerization of financial institutions gained momentum Malak J. (2007), However; a visible presence of this was evident to the customers since 1980, with the introduction of ATM. Innovative banking has grown since then, aided by technological developments in the telecommunications and information technology industry. The early decade of the 1990s witnessed the emergence of automated voice response (AVR) technology. By using the AVR Technology, banks could offer telephone banking facilities for financial services. With further advancements in technology, banks were able to offer services through PC owned and operated by customers at their convenience, through the use of intranet propriety software. The users of these services were, however, mainly corporate customers rather than retail ones Sohail M. & Shanmugham B. (2003). The security first network bank was the first Internet banking in the world that was built in 1995 in USA. After that some famous banks introduced their internet banking one after another, such as Citibank and bank of America. This advancement in Technology has played an important role in improving the standard of activities in the Banking industry. Adewuyi, I. (2011), noted that only the banks that have their whole activity networked electronically and have fully implemented the ICT that can withstand the competition for survival in the new millennium.

2.3 Background of Ethiopian Banks

2.3.1 The Historical development of Ethiopian banking system

Banking in Ethiopia began in 1905 with the Bank of Abyssinia, a private company controlled by the Bank of Egypt. In 1931 it was liquidated and replaced by the Bank of Ethiopia which was the bank of issue until the Italian invasion of 1936. During the Italian occupation, Bank of Italy banknotes formed the legal tender. Under the subsequent British occupation, Ethiopia was briefly a part of the East Africa Currency Board. In 1943, the State Bank of Ethiopia was established, with two departments performing the separate functions of an issuing bank and a commercial bank. In 1963, these functions were formally separated and the National Bank of Ethiopia (the central and issuing bank) and the Commercial Bank of

Ethiopia were formed. In the period to 1974, several other financial institutions emerged including the state owned.

1. The Agricultural and Industrial Development Bank (established largely to finance state owned Enterprises)
2. The Savings and Mortgage Corporation of Ethiopia
3. The Imperial Savings and Home Ownership Public Association (which provided savings and Loan services)

Major Private commercial institutions, many of which were foreign owned, included

1. The Addis Ababa Bank
2. The Banco di Napoli
3. The Banco di Roma

Source Bhaskar R. et al. (2011)

2.3.2 Current Conditions of Ethiopian banking system

The financial system of Ethiopia is very underdeveloped. There is a centralized bank called National bank of Ethiopia, two are state owned banks dominate the sector and the remaining sixteen are private banks. There are no foreign banks in the country, and the system remains isolated from the effects of globalization while policy makers fear that liberalization will lead to loss of control over the economy. The government controls interest rates and sets them below the high inflation rate. Bhaskar R. et al (2011). The National Bank of Ethiopia is the country's central bank. The state owned Commercial Bank of Ethiopia is the largest bank in Ethiopia and controls 2/3 of the assets of the entire banking system. Kiyota (2007) describes the Ethiopian banking sector as 88% concentrated versus 59% for Kenya, 67% for Tanzania, 63% for Uganda, and 81% for sub Saharan Africa as a whole. Bhaskar R. (2011)

According to the information obtained from National bank of Ethiopia as at September 30, 2015, there are 19 banks operating in the country. Of which sixteen are private and three are public banks; business wise, one is development oriented, while the rest are commercial banks. All commercial banks are categorized into three peers based on their asset size accordingly; Large bank (CBE), mid-sized banks (include CBB, AIB, DB, BOA, WB, UB, and NIB) and small banks (include LIB, CBO, ZB, OIB, BIB, BBI, AB, ADIB, DGB and EB). Among the state owned banks DBE is treated separately due to its

unique nature. Thus, standards and rating systems used by African Development Banks are adapted to assess safety and soundness of the bank.

Commercial banks of Ethiopia are introducing new banking products that enhance efficiency and inclusion of financial services. They introduced new banking services include; ATM, POS, Internet, mobile, agent mobile banking, credit card, and debit card services. Thus 12 banks have introduced ATM, 11 banks POS, 5 banks mobile banking, 7 banks internet banking, 8 banks mobile & agent banking services. The number of debit cards, mobile banking and internet banking users has reached 2,824,708,727,493 & 18,552 respectively. Source National Bank of Ethiopia quarter report as of sep. 30 (2015/16)

2.4. Definition & Features of Electronic Banking Services available in Ethiopian Commercial Banks

1. Automated Teller Machines (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) Sintayehu Y. (2015).

2. Debit Card

A debit card looks just like a regular ATM card, and you can use it at ATMs. The difference is that a debit card has a Visa® or Master card® logo on its face. That means you can use a debit card wherever Visa® or Master card® debit cards are accepted, for example, department stores, restaurants, or online. (retrieved from internet).

3. Credit card

A Credit Card is issued by a credit card provider, like Capital One, and they are designed to pay for things in shops or online. You can also use credit cards for balance transfer and taking out cash (also known as cash advance or cash withdrawal) from an ATM. A debit card is not a credit card. When you use a debit card, the money is deducted from your checking account. So when you spend using a Debit Card it comes straight out of your account. You'll see the details on your bank account statement. With a credit card, you're borrowing money to be repaid later. If you do not pay off your balance in full each month, you will be charged interest on the amount remaining on your account. (Retrieved from internet).

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

The system allows consumers to pay for retail purchase with a check card, a new name for debit card. This card looks like a credit card but with a significant difference. The money for the purchase is transferred immediately from account of debit card holder to the store's account Malak J. (2007). We use the same card to use ATM machine and POS machine but the difference between using the ATM service and POS service is that during using ATM machine the transaction is accomplished between only the bank and the customer without the involvement of other party but while using POS machine, there are various parties involved including consumers, the banks that issue the cards (known as issuers) and merchants, the banks that provide merchants with POS devices (known as acquirers).

5. Internet banking

It is an electronic home banking system using web technology in which Bank customers are able to conduct their business transactions with the bank through personal computers or by using a phone that has internet feature. 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).

6. Mobile banking

Mobile banking is a service that enables customers to conduct some banking services such as account inquiry and fund transfer, by using of short text message (SMS). 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 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 R. & Buse S. (2007).

7. Prepaid card

Prepaid cards are simply a plastic alternative to carrying money around and are often called every day cards. You load them with cash when you first buy them and top them up when they run out just like a pay-as-you-go mobile. They are not a credit card so you can't run up debts on them. Prepaid cards can also be used to shop online. (Retrieved from internet).

8. Mobile and agent banking

Mobile and agent banking is a form of branchless banking which allows people to access bank accounts and retail outlets of merchants, by using a mobile phone device. Hello Cash is a mobile and agent banking service Using Hello Cash Customers are able to pay bills, make and receive money transfers by using their mobile phones. Local merchants are used as mini branches for the financial institutions with the role of facilitating the registration of new customers and serving as Cash Deposit and Withdrawal access points. Hello Cash users can access their accounts using a mobile phone through various mobile phone channels such as IVR, USSD, SMS and online web portal as a complementary channel. The service is available in 5 languages [Amharic, Oromifa, Tigrigna, Somali and English] allowing a localized and convenient user experience. The National Bank of Ethiopia (NBE) issued a Regulation of

Mobile and Agent Banking Services Directives No. FIS /01/2012 Directives for Mobile & Agent Banking allowing financial institutions to reinforce the coverage of financial services in the country by using existing merchants as an agent network, Telecom infrastructure and Mobile phone technology. Source (NBE). The total e - banking users in Ethiopia as of December, 31, 2015 has been depected on Table 1.1 (see Appendix B)

2.5 Customer Satisfaction

According to Edfy P. (2000) customer satisfaction is the process through which businesses ensure customers' loyalty and non defection of customers to the competitors. Customer satisfaction has business leader's attention, as it is the basis for ensuring sustainability in a business. Nigel H. et. al (2007) defines it as a measure of how products and services supplied by a company surpasses customer expectation, therefore, 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. Customer satisfaction holds the potential that increases the organization's customer base, to use more volatile customers mix and the organizations reputation. Thimoty, (2012). Consequently, obtained competitive advantage is secured through intelligent identification and satisfaction of customers need. In addition to this customer satisfaction provides customers value and as a result customers loyalty can be reaped.

Businesses always start and close with customers and hence customers must be treated as the King of the market. All business enhancements, profit, status, image etc of the organization depends on customers. Hence, it is important for all organizations to meet all customers' expectations and identify that they are satisfied Customer satisfaction is the customers overall feeling of contentment in a business interaction. Customer satisfaction is defined as a measure of how products and services supplied by an organization meet or surpass customer satisfaction. According to Berry L. & Chicago I.(2010) customer satisfaction is defined using 10 dimensions of satisfaction which include quality, value, timeless, efficiency, ease of access, environment, interdepartmental team work, frontline services, behavior, commitment to the customer and innovation. Satisfaction may develop quickly or it may be cultivated over a period. It is the overall pleasant experience after consuming a product or service. Therefore,

customer satisfaction is the state of mind that customers have about a company when their expectations have been met or exceeded over the life time of the product or service.

The International Engineering Consortium I.E.C. (2005) spells out the ability to be flexible in managing customers, enables the business to reap the benefits of good customer satisfaction and this is because customer satisfaction is closely linked to quality in recent years. The achievement of customer satisfaction leads to company loyalty and product repurchase. Clearly defining and understanding customer satisfaction can help any company identify opportunities for product and service innovation and serve as the basis for performance appraisal and reward systems. Only customers can evaluate service in light of their unique expectations. Consequently, responsibility for measuring and demonstrating continuous service improvements should focus to the service professional. Only when service teams are actively involved in every facet of the service business, including measurement of quality, can organizations capture the enthusiasm needed to radically enhance service delivery.

2.5.1 Determinates of Customer Satisfaction

Consumer satisfaction can be determined by a number of factors that is to say customer expectations, fees and charges, quality, customer care, and many others as discussed below.

1 Product perceived performance and expectations

If the performance falls short of the expectations the customer is dissatisfied and when the performance exceeds expectations the customer is highly satisfied or delighted Ulrich K & Eppinger S. (2004). Many companies are aiming for high satisfaction because customers who are just satisfied still find it easy to switch when a better offer comes in. Customer satisfaction does not only result from providing excellent service, but from customers perceiving that a company delivers a service that is unique. Achieving this quality of service takes a serious commitment from every employee in the organization through providing excellent service that exceeds customers' expectations to the extent that they are willing to tell others about their experience. Oliver R. (1980) found that disconfirmation can affect customer satisfaction. Positive disconfirmation (perceived performance above the expectation) increased

consumer satisfaction and while negative disconfirmation (perceived performance below expectation) decreases consumer satisfaction

2. Service Quality

Service quality or perceived service quality is a determinant of customer satisfaction. Some researchers state that service quality and satisfaction measure the same underlying concept and therefore are the same. Other authors argue that satisfaction with a specific transaction precedes the perception of the overall quality of the firm and therefore is the antecedent of perceived quality. Finally others suggest that the concept of satisfaction and quality are different and that it is the perceived service quality that will affect customer satisfaction. Fornell C.(1992) found that as a general psychological phenomenon, satisfaction is primarily a function of customer's quality experience with a product or service. So over all it is expected that the greater the perceived quality, the higher the level of customer satisfaction.

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 M. (2010). It is now the most powerful competition weapon and organization's life giving blood. Perceived service quality refers to the consumers' global attitudes 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 A. & Malta M. (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 A. et. al. (1988). Delivering quality service means conforming to customer expectations on a consistent basis Thakur S. (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 lead to their satisfaction or dissatisfaction Thakur S. (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 S. (2010). Thus it had been recognized that customers evaluate service quality by comparing the actual performance with service expectations that they held Thakur S. (2011). In order to meet the needs and desires of customers, the business must know the needs

and desires of the customers. This information is vital not only for successful business but also for understanding and improving customer satisfaction.

3 The perspective of the customer

Value of Products and Services According to Swaminathan J. & Ananth A. (2010) perceived value of the product is one of the determinants of customer satisfaction. Customer satisfaction depends greatly upon receiving a quality product with the expected value attached and service at a competitive price. The customer is not only looking for the right product or service, he is also looking for someone who is knowledgeable about the product or service as well. Product ambiguity Clarity of issues also determines customer satisfaction. Product experience can often be ambiguous, such as when the guilty of a product is difficult to evaluate. The difficulty may arise when a product for example clothes or insurance cannot be judged based on objective criteria, or when a product for example diamond may have many credence qualities or subjective attributes, Alternatively, there might be a potential for multiple interpretations of product quality Sometimes it is difficult to determine what is acceptable, desired, or valued from product. If products are difficult or ambiguous to evaluate consumers are likely to lack confidence about the performance rating.

4 Fees and Charges

Service quality attributes in e-banking industry are important since human-internet interaction is the main service delivery and communication channel. Offering high quality services to satisfy consumers' needs, at lower costs, are potential competitive advantage of e banking. So studies show that e-banking has successfully reduced operating and administrative costs Rotchanakitumnuai S. & Speece M. (2003). Cost savings have helped e-based banks offer lower or no service fees, and offer higher interest rates on interest-bearing accounts than traditional banks Gerlach D. (2000).

2.5.2 Electronic Banking and Customer Satisfaction in Commercial Banks

Electronic banking is linked to customer satisfaction through globalization. This has not only brought the world closer together, but it has allowed the world economy to become a single interdependent

system. This means that local and international business can easily share information quickly and efficiently. Electronic banking has drawn attention of many banks to application of various technology devices in promoting or achieving better customer service delivery that guaranteed customer satisfaction that translates into increased profitability and higher return on investment. Electronic banking services and customer satisfaction have a positive relationship, which has afforded banks the opportunities to impress customers, which eventually encourage them to keep coming back. Today it would be difficult to see any bank in the country that doesn't render one form of electronic banking service or the other, even banks in the most remote parts of the world, Vaidya (2011) argues that emerging technology would enable to create new ways of lead generation, prospecting as well as developing deep customer relationship and electronic banking would achieve superior customer experience with bi-directional communications. In his view , ascertains that access to basic financial services, ability to save, transfer and also invest small amounts of money can make a huge difference to people around the world. The other linkage between electronic banking and customer satisfaction is cost effectiveness. He explains that information technology has helped to computerize the business process thus streamlining businesses to make extremely cost effective money- making machines.

Electronic banking has created more time for businesses. This is so in that electronic banking has made it possible for business to open 24/7 all over the globe. This means that a business can be opened any time anywhere, making purchase from different countries easier and more convenient. It also means that you can have your goods delivered right to your doorstep with having to move a single muscle.

2.6 Definition & 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, Z. & 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/demo ns tra t io n, and help function Leelapongp R. 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 inspire 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 A.et. al (1985). Moreover, security is defined as personal and possessions safety of customers. It also includes confidentiality maintained by service providers Johnston R. (1997). Today, security is considered to be one of the very important factors in determining the decision of consumers to use electronic banking services. Assurance about security relates to the extent to which the electronic banking guarantees the safety of customers` financial and personal information, an area which has witnessed a proliferation of research interest Kimery K. & McCord M. (2002), Miyazaki A. & Krishnamurthy S. (2002).

According to Arwa F. et al (2004) another important factor affecting the customer service delivery is the level of security or risk associated with it. Even in countries where electronic banking has long been established, one of the most important factors slowing progress of electronic banking services is the consumer concern for security of financial transactions over electronic banking. An empirical survey, by Sara N. (2008), of Australian consumers confirmed this fact. A key factor in customer relationships in today's business is trust Wu, H. et al (2010). According to Supinaha R. et al. (2008), slow growth of electronic banking services is caused by security concerns, lack of trust and lack of knowledge about the availability of such a service. Hence, users find electronic banking system useful, convenient, and easy to use, while privacy of data and security measures of the electronic banking technology is the issues that bother the minds of customers Adesina A. (2010). The same results obtained from the study of Booz D. & Hamilton K. (1997) reveals that security concern among customers was the top-ranking obstacle for non-adoption of electronic banking in Latin America. Therefore, it is pointed that security has a positive effect on customer service delivery, in the banking industry. Also, to minimize customer's security concerns, banks need to effectively educate their customers and assure them of the service's security Fleming N. (2011). Therefore, the role of security was assessed by physical access control to the machine, User authentication and authorization, confidentiality, data integrity, secure storage of user information, user's privacy protection, authentication of the parties involved and the like.

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).

2.6 Empirical Evidences

Different researchers have conducted some related studies in different parts of the world however there are limited numbers of studies conducted in Ethiopia. Here below some of the researches which have been conducted in Ethiopia & in other countries are reviewed under two topics

2.6.1 The effect of electronic banking on customers' satisfaction

Sintayehu Y. (2015) conducted a research on the impact of e banking service on customers' satisfaction, the case of selected commercial banks in Addis Ababa. The objective of the study was to find the e banking dimensions that have impact on customer satisfaction. The author conducted case study research methodology and the study employed both qualitative and quantitative approach and identified most of e banking users are younger age and salaried but business men/women are not active participant in e banking service. Though e banking has significant impact on customers' satisfaction in terms of its dimensions reliability, service content and transaction efficiency, customers are suffering from frequent disruption of e banking service due to poorly developed telecommunication infrastructure and power supply.

Assefa M. (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. The results of the study implied that majority of users are young, educated & salaried but business men/women are not active user of the service. E banking service saves customers time by reducing waiting time for the service at the bank hall and it enables customers to control their account movements.

Milion A. (2013) conducted a study to assess and examine the impact of e-banking on customers‟ satisfaction in Ethiopian banking industry with particular emphasis in Gondar city in comparison with the ordinary mortar and brick banking system.. The study employed both interview and questioner and found that there is a relationship between demographic characteristics and customer satisfaction in e-banking than ordinary banking. In general e-banking has impact in improving customer satisfaction, reducing waiting time to get bank service and customers to control their account movements.

The study of AlaEddin M. & Hassan A. (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 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

AmmarSa'eed H. (2012), conducted a study on the objective to investigate the Effect of E-Banking Services on Customer Value and Customer Loyalty, An applied Study on Jordanian Commercial Banks. The researcher had chosen the Analytical descriptive method using an applied manner. The results revealed that e-banking services have a positive effect on customer value and customer loyalty. In addition the research indicated that there is an indirect effect of E-Banking Services on Customer Loyalty through Customer Value as mediator.

Jannatul M. (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. 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.

2.6.2 Challenges & opportunities of e-banking

Garedachew W. (2010) conducted a research on the opportunities and challenges of e banking in Ethiopia. The study focused on analyzing the status of e banking in Ethiopia and investigated 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.

Wondwossen T. & Tsegai G. (2005) also studied the challenges and opportunities of e payments in Ethiopia; their objective was studying e payment practices in developing countries. The authors employed interview and on site observation to investigate challenges in e payment of Ethiopian banks 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 T. & Tsegai G. (2005), an adequate legal structure and security framework could foster the use of e payments.

The Bultum A. (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 Wogagen 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 statically analyzed the 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 framework, 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 need to be focused on technological innovation competition rather than traditional bases of retail bank competition.

Gerrard P. & Cunningham J. (2006) in their study in Singapore identifies 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 M. (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 M. (1999).

The study of Kerem K. (2009) 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.

2.7 Conclusion

In conclusion, it can be noted that not much scholarly work exists about electronic banking in Ethiopia and how it affects customer satisfaction. This is due to the fact that Electronic Banking is just a new initiative in the banking sector. However a few scholars have come up to raise their views about electronic banking and how it relates to customer satisfaction particularly in unpublished work like dissertation, concepts paper and proposal, articles from World Wide Web (internet), in journals and chapters in unedited books, since most of them are done in qualitative approach there is always a feeling that information collected is inadequate. Therefore, to address the current gap in the literature, methodology and question of representativeness this study is designed to examine the effect of e-banking on the satisfaction of customers in three Private Banks and one public bank in Addis Ababa which have been selected from the current three peers division of banks by National bank of Ethiopia.

2.8 Conceptual Frame Work of the Research

In the light of the literatures reviewed this study conceptualizes the effect of e – banking service quality dimensions (Reliability, Transaction Efficiency, Customer Support, service security, Ease of Use and Performance) on customer satisfaction. The conceptual framework is depicted in Fig 1.

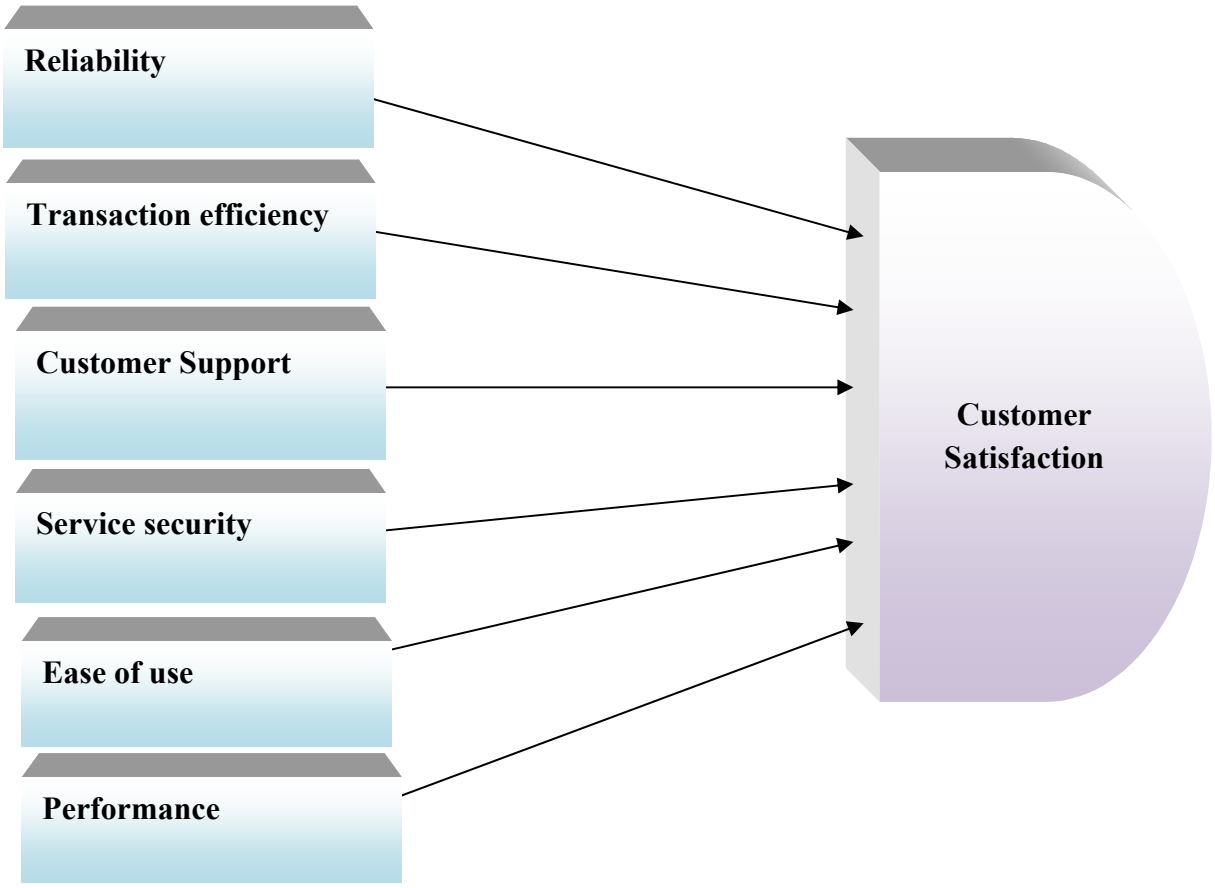


Fig 1 Conceptual Model Adopted From Rangsan.N. and Titida. N. (2013)

Chapter Three

3. Research Design and Methodology

3.1 Introduction

In this chapter, the design and methodology of the research is discussed. It consists the research design, the sample and sampling techniques, procedure used to collect data, method of data analysis and reliability and validity.

3.2 Description of the Study Area

The study was conducted in Addis Ababa the capital city of Ethiopia during April to June, 2015. According to the secondary data obtained from National Bank of Ethiopia It has been understood that there were 18 commercial banks that are licensed and operating in Ethiopia. Among them one of them was state owned (Commercial Bank of Ethiopia) while the others 16 were privately owned commercial banks. By taking into account size of the banks and their years of experience in operation, four banks (Commercial Bank of Ethiopia, Dashen Bank, United Bank and Cooperative Bank of Oromia) were selected and used as a representative sample for study. The study was mainly focused on finding the effect of e – banking services on customer satisfaction the case of selected commercial Banks in Ethiopia. See the Categorization of Commercial banks of Ethiopia on table 3. 2 at Appendix C

3.3 Research Approach & Design

To get a thorough understanding of the effect of e banking on customer satisfaction under different context public and private commercial banks in Ethiopia Quantitative methods of research aproach was used for this study, because quantitative method of research approach is useful to determine the relationship between one independent variable and another dependent or outcome variable within a population. Therefore quantitative data was collected on the service quality measurement dimensions by using conceptual model by Rangsan.N. & Titida. N. (2013). The model offers six dimensions to measure e – banking service quality. These six dimensions are the independent variables which are reliability,

transaction efficiency, customer support, service security, ease of use and performance used to measure e – banking service quality.

The researcher tried to explain the effect of the independent variables (reliability, transaction efficiency, customer support, service security, ease of use and performance) on the dependent variable customer satisfaction based on the result that were found by multiple regression, because of this, the research design was explanatory and descriptive type.

3.4 Population and Sample Frame

The researcher wanted to measure the effect of e banking services on customers' satisfaction in commercial banks of Ethiopia from the view point of the customers in accordance with the conceptual model of measuring service quality. Therefore, the population under this study is all customers of commercial banks of Ethiopia who have been using e - banking services started from 2013 up to now. because within these three years e banking service is being widely used by customers and adopted by all banks.

3.5 Sampling Techniques and sample Size

Sampling involves the various procedures that aid to select a part to represent a population. Purposive sampling was used in determining the sampled banks in the study taking into account size of the bank and years of experience in operation. The bank selection is done following the historical formation time of banks and in fact with consideration of their ownership structure and asset size. Among the 18 Ethiopian commercial banks, four of them (Commercial Bank of Ethiopia, Dashen Bank, United Bank and cooperative bank of oromia) were selected taking into account size of the banks and their years of experience in operation. They were assumed to be representative samples of all other banks in the country.

Sample size is 385 customers from a population of approximately 3,873,484 customers as of December 31, 2015 according to NBE data. The sample size to this study is determined by using the formula developed by Cochran (1963:75). Sample size from the customers is calculated as follows:

$$no = \frac{Z^{2pq}}{e^2}$$

Where: n_0 = the sample size

Z^2 = the abscissa of the normal curve that cuts off an area α at the tails (1 - α equals the desired confidence level, i.e. 95%)

e = the desired level of precision

p = the estimated proportion (standard deviation) of an attribute that is presented in the population, and q is 1-p. The value for Z is found in statistical tables which contain the area under the normal curve.

$$no = \frac{(1.96)^2(0.5)(0.5)}{(0.05)(0.05)} = 385.$$

The above sample size is the representative sample proportion at 95% confidence level and ±5% precision when the population is large and unknown. If the population is small, then the sample size can be reduced slightly. This is because a given sample size provides proportionately more information for a small population than for a large population. As a result, the sample size (n0) = 385, since the population for this study is finite, the sample size (n) can be adjusted Cochran (1963:75), no, can be adjusted as follows: ?=?01+ (n0−1)N, Where n is the sample size and N is population of the study. n = 384.8236384 ≈ 385

Table 3.1 Population and Sample size determination

Bank	Active No. Of E Banking Users	Proportionate Sampling Size	Sample Size
CBE	3,308,591	85%	327
DB	416,708	10%	38
CBO	4,800	1%	4
UNT	143,385	4%	16
Total	3,873,484	100%	385

3.6. PROCEDURE FOR DATA COLLECTION

As the geographic area of Addis Ababa is divided into four sub areas (districts) which include north, south, east and west district, the selected banks' branches from each district were taken proportionately and randomly with proportional number of customers as described in Table 3.2. To distribute the questionnaire convenience sampling method was used because to find the list of each customer name which was taken as a sample is difficult, but to increase the representativeness of the sample the questionnaire was given to customers at different time interval.

A total of 400 questionnaires were distributed to potential respondents. However, the total amount of usable questionnaires obtained were 360, that is a response rate of 90%. The sample is representative because a rule of thumb, a sample size of 200–300 should be considered to be adequate for a proper analysis. Gaur A. and Gaur, (2009)The questionnaire was distributed to the following branches of the selected commercial banks of Ethiopia as displayed in table 3.2

Table 3.2 List of branches the questionnaire was distributed to

	CBE		DSA		UB		CBO	
District	Branch Name	Case	Branch Name	Case	Branch Name	Case	Branch Name	Case
North	Arada	41	Arada	10	Mehal Arada	5	Cherchiel	4
	Mehal Ketema	41						
East	Meskel Square	41	Air Port	10	Bole	5	Bole Medhanialem	4
	Airport	41						
West	Mehal Gebeya	41	Abakoran	10	Tana	5	Merkato	4
	Addis Ketema	41						
South	Sengatera	41	Bisrate Gebreal	10	Lideta	5		
	Mexiko	41						
Total		328		40		20		12

3.7. SOURCE and INSTRUMENTS OF DATA COLLECTION

Primary data was collected from questionnaire. Secondary data was collected from books, journals, internet, annual reports, and the selected commercial banks website. The instrument used was a Structured Questionnaire as instrument of data collection. The questionnaire was designed for customers of the bank in five scale Likert measurement. All the questions were positively worded to aid in the coding to SPSS then the Questionnaire was translated into Amharic. The face validity was checked by pilot testing the questionnaire to customers of the selected commercial banks and by expertise in the banking sector and professionals in the academics'. The questionnaire was designed based on previous empirical literature and its consistency was pre-tested using Cronbach Alpha. A 31 Item Measure was used to indicate the customers' degree of agreement for the 31 performance statements, based on their assessments of the e – banking services provided by the banks. a five-point rating scale was used to measure performance in which the alternatives range from ``strongly disagree '' to ``strongly agree '' and to measure the level of customer satisfaction additional ten questions were used with response ranging from 'very dissatisfied' to 'very satisfied'.

3.8. METHOD OF DATA ANALYSIS

Descriptive statistics was used to interpret demographic variables of the respondents and to find the mean scores of e banking service quality dimensions whereas inferential statistics was used for hypothesis testing using correlation and multiple regression analysis via SPSS version 20. The dependent variable is customer satisfaction and the independent variables are the e - banking service quality measurement dimensions (reliability, transaction efficiency, customer support, service security, ease of use and performance).

3.9. RELIABILITY AND VALIDITY

The validity and reliability of the measurement dimensions of service quality have been checked;

3.9 1. RELIABILITY

The Cronbach alpha coefficient is an indicator of internal consistency of the scale. A high value of the Cronbach alpha coefficient suggests that the items that make up the scale "hang together" and measure the same underlying construct. A value of Cronbach alpha above 0.70 can be used as a reasonable test of scale reliability. Gaur A. and Gaur S. (2009). Therefore all the six dimensions of measuring e banking service quality were found to be high in their internal consistency and thereby in measuring the dimensions of interest. (crombach alpha >0.7 good) Nunally, (1978).

3.9.2. VALIDITY

The first step in assessing validity is called the face validity test. Face validity establishes whether the measuring device looks like it is measuring the correct characteristics. The face validity test is done by showing the instrument to experts in the banking sector and professionals in the academics. Afterwards some adjustments were made.

Gaur A. & Gaur S. (2009) internal validity, also called causality, examines whether the observed change in a dependent variable is indeed caused by a corresponding change in hypothesized independent variable, and not by variables extraneous to the research context. Bhattacherjee A. (2012). By using the Pearson correlation coefficient between the customer satisfaction level and the five dimensions of service quality, the causality of independent variable and dependent variable was established at 95% confidence level.

3.10. ETHICAL CONSIDERATIONS

In order to keep the confidentiality of the data given by respondents, the respondents are not required to write their name and assured that their responses is treated in strict confidentiality. The purpose of the study is disclosed in the introductory part of the questionnaire. The questionnaires were distributed only to voluntary participants.

3.11 Research Model Specification

The aim of this study was to examine the effect of e banking service on customers' satisfaction by Ethiopian commercial banks. The researcher employed the MLR model to determine the significance level of the factors at which the customers' satisfaction is determined in e-banking.

Customer satisfaction in e-banking = CSEB

Basically, $CSEB = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5X5 + \beta 5X6 + \varepsilon$

Where, CSEB = Customer Satisfaction in E-Banking

X1 = Reliability

X2 = Transaction efficiency

X3 = Customer support

X4 = Service Security

X5 = Ease of use

X6 = Performance

Here α is constant and β is coefficient of estimate and ε is the error term. Customer satisfaction in e-banking is dependent variable on independent variables X1 to X6.

The six factors Reliability, Transaction efficiency, Customer support, Service security, Ease of use and Performance have been established based on reviewed literature and empirical evidences.

Chapter Four

4. RESULTS AND DISCUSSION

4.1 Introduction

In this chapter, the data collected from respondents has been analyzed and interpreted. A structured questionnaire was distributed to 400 e – banking service users of the selected Commercial Banks of Ethiopia (CBE, DSB, UNB & CBO) . Out of these, 360 questionnaires were collected and usable, that is a 90% response rate. SPSS version 20 was used for the analysis.

The analysis had the objective of measuring the effect of e – banking service on customers' satisfaction in commercial banks of Ethiopia, using the conceptual model then establishing the relationship between e – banking service quality dimensions and customer satisfaction. The hypothesis that e – banking service quality measurement dimensions have a significant effect on customer satisfaction have been tested. In order to proceed with the analysis the reliability and validity of the construct was tested. Finally the study established a model commercial banks of Ethiopia can use to prioritize from among the service quality dimensions by using multiple regression analysis.

4.2 RELIABILITY ANALYSIS

Reliability refers to the confidence we can place on the measuring instrument to give us the same numeric value when the measurement is repeated on the same object. (Gaur & Gaur, 2009) The dimensions for measuring e – banking service quality as explained in the literature are established by the conceptual model as reliability, transaction efficiency, customer support, service security, ease of use and performance. But the scale has to be checked for its internal consistency or whether it measures what it set out to measure. The Cronbach alpha coefficient is an indicator of internal consistency of the scale. A high value of the Cronbach alpha coefficient suggests that the items that make up the scale "hang together" and measure the same underlying construct. A value of Cronbach alpha above 0.70 can be used as a reasonable test of scale reliability Gaur A. & Gaur S. (2009). Therefore all the six e banking service quality dimensions were found to be high in their internal consistency.

Table 4.1 Cronbach Alpha Cofficient for each variable

Variables	No of Items	Crronbach Alpha
Reliability	5	.860
Transaction efficiency	5	.886
Customer Support	5	.830
Service Security	6	.836
Ease of Use	5	.883
Performance	5	.762
Collective reliability	6	.895

As can be seen from Table 4.1, all the dimensions have relatively the same Cronbach Alpha results which are over 0.70. This implies that all the e – banking service quality dimensions have internal consistency.

4.3 VALIDITY ANALYSIS

The empirical findings of this study conducted by using Pearson correlation have proven that there is a relationship between e - banking service quality dimensions and customer satisfaction at $p<0.05$ coefficient level for all the six dimensions. Therefore the validity of the instrument is supported at a high level of significance. (See correlation Table 4.9)

4.4 Descriptive Findings

4.4.1 Demographic characteristics of respondents and their relationship with the bank

The demographic profile of the respondents (including gender, age, education level and marital status) and relationship with the bank (including their relationship with the bank, account type and e- banking services they use) are described as follows:

Table 4.2 Demographic Profile of e banking customers

No.	Demographics		Frequency	Percentage
1	**Gender**	Male	221	61.2
		Female	139	38.5
2	**Age**	18-24	100	27.7
		25-35	191	52.9
		36-50	57	15.8
		51-60	12	3.3
3	**Marital Status**	Single	136	37.7
		Married	137	38.0
		Separated	49	13.6
		Divorced	25	6.9
		Widowed	13	3.6
4	**Education Level**	Primary	3	.8
		High School	44	12.2
		TVET	36	10.0
		University degree	242	67.0
		Master degree	35	9.7
5	**Employment Status**	Unemployed	18	5.0
		Student	17	4.7
		Salaried	229	63.4
		Business Man/Woman	68	18.8
		Pensioner	2	.6
		Other	26	7.2

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 services offered by the selected banks.

As can be seen from Table 4.2 the sample 61.2% e-banking customers were male and most of respondents were in the age group of 25- 35 years (52.9%). It is also evident from the table 27.7% of the

respondents were youngsters (between 18 and 24 years). There were only 15.8% and 3.3% respondents with the age of 36 to 50 and 50 to 60 respectively. Regarding marital status e banking service users were both married and unmarried 38% and 37.7% respectively. Respondents were predominantly 67% degree holders, no respondents were illiterate. This implies that respondents had high literacy level. As far as occupation is concerned majority of respondents were salaried (63.4%), though there were some percentages of business people (18.8%), students (4.7%), pensioner (0.6%), other (7.2%) and unemployed (5%).

Table 4.3 Respondents Relationship with the bank

No.	Items		Frequency	Percentage
1	Respondents relationship with the bank	Depositor	281	77.8
		Borrower	15	4.2
		Both depositor and borrower	37	10.2
		other service seeker	27	7.5
2	Respondents' account type with the bank	Checking account	60	16.6
		Saving Account	300	83.1
3	E banking products	ATM	294	81.4
		Pos	64	17.7
		Mobile banking	90	24.9
		Internet banking	53	14.7
		Other products of e banking	27	7.5

As far as the respondents' relationship with the banks is concerned most of respondents were depositors (77.8%) and some were both depositors and borrowers (10.2) and customers who had relationship with the bank solely borrowers and other service seekers were 4.2% and 7.5% respectively. Regarding respondents account type with the bank most of respondents had saving account with (83.1%) and the remaining respondents had checking account with (16.6%). Finally regarding the e banking products

majority of respondents were ATM users with (81.4%), the remaining products were used by some number of customers as follow Mobile banking (24.9%), POS (17.7%), internet banking (14.7%) and other e banking products (7.5%).

4.5 Descriptive Analysis of e – banking service quality dimensions

One of statistical approach for determining equivalence between groups is to use simple analyses of means and standard deviations for the variables of interest for each group in the study Marczyk, et al, (2005).The mean indicates to what extent the sample group averagely agrees or disagree with the different statements. The lower the mean, the more the respondents disagree with the statement. The higher the mean, the more the respondents agree with the statement. On the other hand, standard deviation shows the variability of an observed response from a single sample. Standard deviation therefore, measures of the 'fit' (i.e. how well the mean represents the data). The Smaller standard deviations relative to the value of the mean itself indicates that the data points are closer to the mean. A large standard deviation relative to the mean indicates that the data points are distant from the mean (i.e. the mean is not an accurate representation of the data). Andy F. (2009),

The six dimensions and their mean and standard deviation were calculated using a one sample T test; the result is presented on the table below.

Table 4.4 One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Reliability	360	3.5111	.85461	.04504
Transaction efficiency	360	3.5283	.91528	.04824
Customer support	360	3.5417	.82849	.04367
Service security	360	3.5417	.77375	.04078
Ease of use	360	3.7972	.82177	.04331
Performance	360	3.2206	.87307	.04601

As the table suggests all e – banking service quality dimensions are rated with standard deviation of above satisfactory. As far as the mean values are concerned, all the e- banking service quality

dimensions **Ease of Use** (mean of 3.7972), **Customer Support** (mean of 3.5417), **service security** (mean of 3.5417) and **Transaction efficiency** (mean of 3.5283), **Reliability** (mean of 3.511) and **Performance** (mean of 3.221) have relatively major roles on e-banking service quality and in turn overall e-banking customer satisfaction.

4.6 CUSTOMER SATISFACTION

To see the levels of customer satisfaction in the selected commercial banks of Ethiopia, the researcher used categorized satisfaction level i.e., ranges from highly dissatisfied, Dissatisfied, Neutral, satisfied and, highly satisfied. This customer satisfaction variable is also used as dependent variable in this study. The researcher investigated the association and effect of e banking service quality dimensions with customer satisfaction. As the one – sample statistics table below shows the respondents for their level of satisfaction, the standard deviation (0.7842) of customers' satisfaction level indicates that there was small variability in overall customers' satisfaction in the data.

Table 4.5 One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Customer Satisfaction	360	3.5914	.78425	.04133

4.7 Inferential Statistical Analysis

4.7.1 Chi-Square Test

Here the relationship between demographic characteristics and customer satisfaction on e banking service 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 table 4.6. and the detail is shown at appendix C.

Table 4.6 Chi-Square Test for independence result

Demographic Character	Value	Df.	Sig
Gender	18.678[a]	1	.000
Age	194.156[b]	3	.000
Marital Status	201.944[c]	4	.000
Educational Level	515.417[c]	4	.000
Employment Status	612.633[d]	5	.000

Chi-Square value is significant at P<.05 Level

Source SPSS analysis result

Chi-Square analysis revealed that there were strong relationship between demographic characteristics and customer satisfaction on e banking services as their p values were lower than 0.05. Chi square value of gender (18.678) is less than 0.05 indicating that there is strong relationship between gender and customers satisfaction and as the residual result between the observed and the expected result shows us males use e banking service more than females. (See the table for chi square at the Appendix C)

regarding age the chi square (194.156) is less than .05 tells us as there is strong relationship between age and customer satisfaction on e banking and also the residual value tells us majority of users are between the age of 18 and 35, this tells us youngsters are more comfortable in using technology. Regarding marital status chi square (201.944) is less than .05 tells us as there is strong relationship between marital status and customer satisfaction and also majority of users are unmarried. The chi square (515.417) for educational level is less than .05 indicating that there is strong relationship between educational level and customer satisfaction. The more customers are educated the more the individual level of IT literacy to increase, thus, they tend to prefer using e banking and get more satisfied.

Regarding employment status chi- square (612.633) is less than 0.05 tells us as there is strong relationship between employment status and customers satisfaction on e banking, also the residual result shows us most of e banking users are salaried or employed than others.

4.7.2 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 (reliability, transaction efficiency, customer support, service security, ease of use and performance).

4.7.2.1 Diagnosis Test

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

1. **Multicolinearity Test between Study Variables**

Multicollinearity exists when there is a strong (perfect) correlation with a correlation coefficient of 1 between two or more predictors in a regression model. One way of identifying multicollinearity is to scan a correlation matrix of all of the predictor variables and see if any correlate very highly (by very highly I mean correlations of above .80 or .90). Andy F. (2009), In this section the correlation between explanatory variables; reliability, transaction efficiency, customer support, service security, ease of use and performance have been presented and analyzed. A correlation matrix is used to ensure the correlation between explanatory variables.

Table 4.7 Correlation Matrix between explanatory variables

	Reliability	Transactions Efficiency	Customer Support	Service Security	Ease of Use	Performance
Reliability	**1**	.744**	.587**	.617**	.526**	.569**
Transaction Efficiency		**1**	.604**	.685**	.531**	.578**
Customer Support			**1**	.668**	.547**	.523**
Service Security				**1**	.618**	.527**
Ease of Use					**1**	.500**
Performance						**1**

Correlation is significant at the 0.01 levels (2-tailed)

Pearson correlation, Sig (2-tailed), N 360

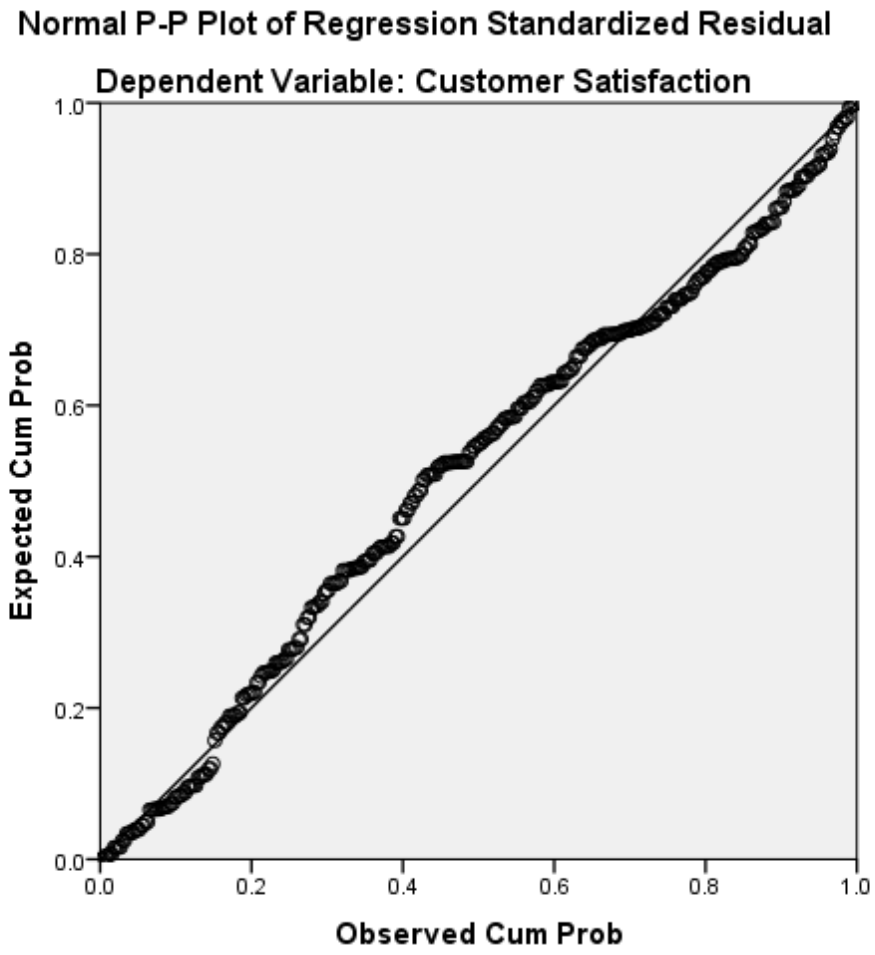
Source: SPSS out put

As we observed from the table no explanatory variables are perfectly correlated or with a correlation of above 0.8 or 0.9, therefore the study result indicates that as there is no Multicollinearity problem.

2. 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 X1 (reliability), X2 (transaction efficiency), X3 (customer support), X4 (Service Security), X5 (ease of use) and X6 (performance) is linear; plots of the regression residuals through SPSS software had been used.

Figure1. Normal point plot of standardized residual



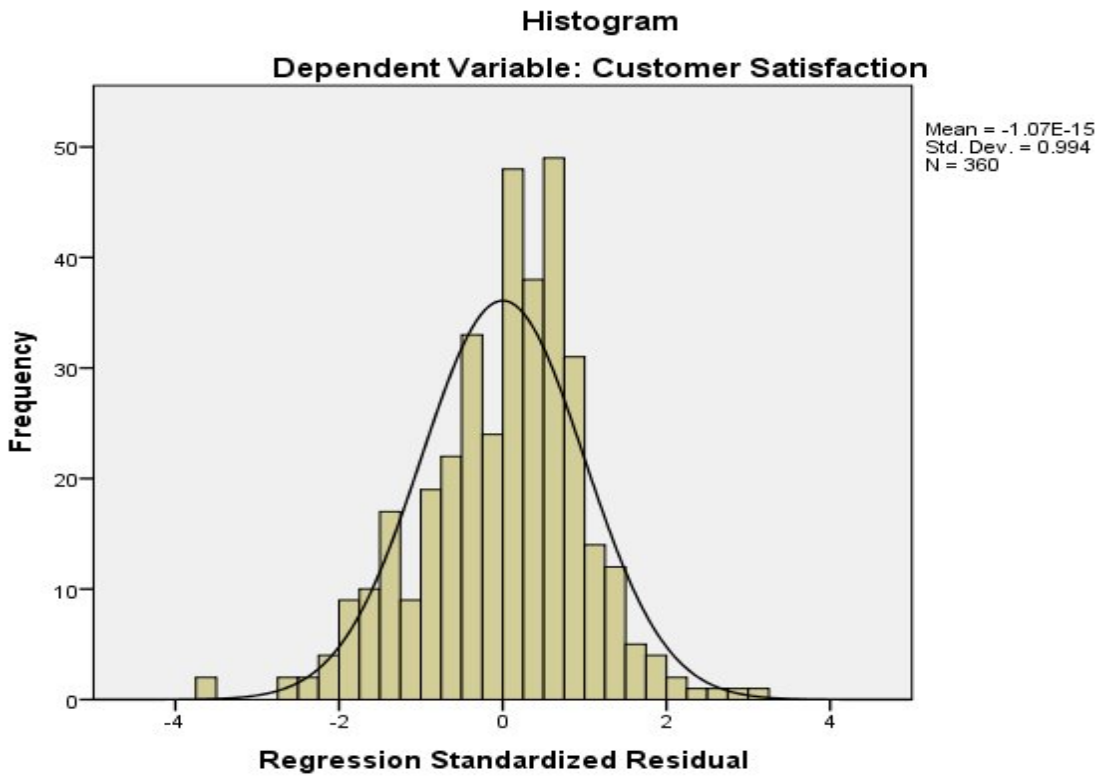
The p plot of residuals reveals no large deviation in the spread of the residuals as we look from left to right on the figure and it is almost all residuals lay on the linear straight line therefore this tells us the relationship between the predictor variables (reliability, transaction efficiency, customer support, service security, ease of use and performance) and the dependent variable (customers satisfaction on e banking) is linear.

2. Normality Test

In an ideal world our data would be distributed symmetrically around the centre of all scores. As such, if we drew a vertical line through the centre of the distribution then it should look the same on both sides. This is known as a **normal distribution** and is characterized by the bell-shaped curve with which you

might already be familiar. And also As per the classical linear regression models assumptions, the error term should be normally distributed or expected value of 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

Though the figure 4.2 displays some standard residuals are a little bit far away from the curve, many of the residuals are fairly close more to the curve and the histogram is bell shaped This shape basically implies that the majority of scores lie around the centre of the distribution (so the largest bars on the histogram are all around the central value. Therefore, this indicates that the residuals or (disturbance or errors) are normally distributed.

To get strong assurance of the residual or errors are normally distributed In addition to the above test for normality, normal distribution is detected based on skewness and kurtosis statistics. Skewness is a measure on the asymmetry of a distribution. Whereas, kurtosis measures the extent to which

observations cluster around a central point. The acceptable range for normality for both statistics is between (-1.0 and +1.0). As depicted in Table 4.8, all variables are within the acceptable range for normality (-1.0 to + 1.0). The kurtosis statistics for all independent variables are within the suggested range of normality (-1.0 to + 1.0).

Table 4.8 Normality of Distribution Using Descriptive Statistics

Variables	N	Mean	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
Reliability	360	3.5111	-.631	.129	-.060	.256
Transactions	360	3.5283	-.790	.129	.078	.256
customer	360	3.5417	-.634	.129	-.054	.256
Security	360	3.5417	-.625	.129	.609	.256
Ease	360	3.7972	-.782	.129	.470	.256
Performance	360	3.2206	-.151	.129	-.366	.256
Customer Satisfaction	360	3.5914	-.822	.129	.320	.256

Thus, according to the above diagnosis information presented in all the four tests there are no significant data problems that violate the assumptions of multiple regressions.

4.7.2.2. Correlation analysis between customer satisfaction in e banking and e-banking service quality dimensions

To determine the existence and level of association, the researcher used bivariate correlation from which Pearson correlation coefficient is considered. Pearson correlation coefficient falls between -1.0 and +1.0, indicates the strength and direction of association between the two variables. Andy F. (2005) the Pearson´s correlation coefficient (r) was used to conduct the correlation analysis to find the level and direction of the relationships between the dimensions of service quality and customer satisfaction. It was also used to rank the variables that have the strongest associations with customer satisfaction. The classification of the correlation efficient (r) is as follows: 0.1 – 0.29 is weak; 0.3 – 0.49 is moderate; and > 0.5 is strong. Andy F. (2005) the bivariate correlation of a two-tailed test confirm the presence of statistically significant difference at probability level $p<0.05$ i.e. assuming 95% confidence interval on statistical analysis. The Pearson correlation Analysis shown the service quality indicator variables were

significantly (statistically) and positively correlated with Overall customer satisfaction. Accordingly, Transaction efficiency followed by Reliability and Service security have the strong positive relationship with customer satisfaction at (r=0.622), (r=0.596) & (r=0.574) respectively. The rest of the dimensions; Ease of use, Customer support & Performance have a moderate positive correlation with customer satisfaction of; (r=0.495), (r=0.479) & (r=0.469) respectively. That means, all the service quality indicators have positive correlation effect upon the level of customer satisfactions though there degree of effect vary.

Table 4.9 Correlation Matrix between Dependent Variable and explanatory variables

	Customer Satisfaction	Reliability	Transaction efficiency	Customer support	Service Security	Ease of use	Performance
Customer Satisfaction	1.000	.596	.622	.479	.574	.495	.469
Reliability		1.000	.744	.587	.617	.526	.569
Transaction efficiency			1.000	.604	.685	.531	.578
Customer support				1.000	.668	.547	.523
Service Security					1.000	.618	.527
Ease of use						1.000	.500
Performance							1.000

Source: - SPSS Output

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

Hence, in all the cases as the correlation statistics confirms the presence of positive relationships to customer satisfaction which is significant even at the $p<0.01$ level. From this we can infer that an improvement in any of the e - banking service quality dimensions by the banks will result in the increase of customer satisfaction. Moreover, the inter-correlations between e – banking service quality dimensions also show a positive and significant relationship. Therefore when banks makes change to one e banking service quality dimension the association is likely to positively motivate other e banking service quality dimensions positively too. With this the researcher found out that all the dimensions have a positive relationship with customer satisfaction and answered the second research question of whether there was a relationship between service quality dimensions and customer satisfaction. This has the implication for the bank to focus on the dimensions with the highest correlation, that is Transaction efficiency and Reliability at (r= 0.744) But does not exactly inform the bank on the exact amount of

investment it has to make to acquire a desired amount of change in customer satisfaction. Hence, regression analysis was done to assist management of the bank and also prove the hypothesis made.

4.7.2.3. Regression Analysis between customer satisfaction on e banking and explanatory variables

The researcher tested the six hypothesis set out to be tested at the beginning based on the regression analysis. The researcher believes that banks can use the result of the regression analysis for future decision making via identifying which e banking service quality dimension got the highest effect on customer satisfaction. This will answer the last research question of this study. 'What is the dominant service quality dimension that has strong relation with customer satisfaction in Commercial Banks of Ethiopia?

Collinearity test was performed, Collinearity Statistics gives two values—Tolerance and VIF (variance inflation factor). As one can see Tolerance is just the inverse of VIF. In social sciences re- search, a VIF value as high as 10 is considered to be acceptable. In turn, tolerance values greater than 0.1 have very serious collinearity effects. (Gaur & Gaur, 2009) Therefore, variables like Reliability, Transaction efficiency, Customer support, Service security, Ease of use and Performance were selected and included in the regression analysis.(see appendix C)

1. Reliability

The result of regression analysis on the independent variable (Reliability) with the dependent variable (customer satisfaction) indicates existence of positive and statistically significant relationship between them. Table 4.8,1.(a) depicts that the independent variable Reliability alone explain 35.5% (R2 = .355) of variation in the customer satisfaction. This shows that there are other variables which can influence the e banking customer satisfaction level of Commercial banks of Ethiopia.

Table 4.10 Model Summary for Reliability

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.596[a]	.355	.353	.63067

Table 4. 11 Reliability Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.671	.141		11.876	.000
	Reliability	.547	.039	.596	14.041	.000

The beta value on the coefficient table indicate, the more the bank spent on the reliability dimension, to improve completing a task accurately, delivering a service exactly as promised and performing the service right at the first time, the more the customer is satisfied. Hence, if assumed other things being constant and reliability increased by one unit, it increases customer satisfaction by 0.596

Hypothesis Testing (H1)

H1: Reliability has significant effect on customer's satisfaction in e banking services of commercial banks of Ethiopia

H0: Reliability has no significant effect on customer's satisfaction in e banking services of commercial banks of Ethiopia

Table 4. 12 Reliability ANOVA Analysis

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	78.411	1	78.411	197.141	.000[b]
	Residual	142.392	358	.398		
	Total	220.803	359			

a. Dependent Variable: Satisfaction

b. Predictors: (Constant), Reliability

Since the significance result on the ANOVA table is 0.000 which is $p< 0.05$, the regression analysis proved the presence of positive/ direct association between reliability and customer satisfaction. Therefore, the regression outcome agreed to accept the alternative hypothesis "Reliability has a significant effect on customer satisfaction in Commercial banks of Ethiopia" and leads to the rejection of the null hypothesis.

2. Transaction Efficiency

The result of regression analysis on the independent variable (Transaction Efficeincy) with the dependent variable (customer satisfaction) indicates existence of positive and statistically significant relationship between them. Table 4.13 depicts that the independent variable Transaction Efficeincy alone explain 38.6% (R2 = .386) of variation in the customer satisfaction. This shows that there are other variables which can influence the e banking customer satisfaction level of Commercial banks of Ethiopia.

Table 4.13 Model Summary for Transaction Efficiency

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.622[a]	.386	.385	.61515

Table 4. 14 Transaction Efficiency Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.712	.129		13.242	.000
	Transactions	.533	.035	.622	15.017	.000

Dependent variable customer satisfaction

The beta value on the coefficient table indicate, the more the bank spent on the Transaction efficiency dimension, to improve providing complete help function, processing of transaction fast and delivering efficient transfer of Funds, the more the customer is satisfied. Hence, if assumed other things being constant and transaction efficiency increased by one unit, it increases customer satisfaction by 0.622

Hypothesis Testing (H2)

H2: Transaction efficiency has significant effect on customer's satisfaction in e banking services of commercial banks of Ethiopia

H0: Transaction efficiency has significant effect on customer's satisfaction in e banking services of commercial banks of Ethiopia

Table 4. 15 Transaction Efficiency ANOVA Analysis

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	85.331	1	85.331	225.496	.000[b]
	Residual	135.472	358	.378		
	Total	220.803	359			

a. Dependent Variable: Satisfaction

b. Predictors: (Constant), Transactions

Since the significance result on the ANOVA table is 0.000 which is $p< 0.05$, the regression analysis proved the presence of positive/ direct association between Transaction Efficiency and customer satisfaction. Therefore, the regression outcome agreed to accept the alternative hypothesis "Transaction Efficiency has a significant effect on customer satisfaction in Commercial banks of Ethiopia" and leads to the rejection of the null hypothesis.

3 Service Securities

The result of regression analysis on the independent variable (Service security) with the dependent variable (customer satisfaction) indicates existence of positive and statistically significant relationship between them. Table 16 depicts that the independent variable Service security alone explain 33% (R2 = .330) of variation in the customer satisfaction. This shows that there are other variables which can influence the e banking customer satisfaction level of Commercial banks of Ethiopia.

Table 4.16 Model Summary for Service Security

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.574[a]	.330	.328	.64291

Table 4.17 Service Security Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.530	.159		9.623	.000
	Security	.582	.044	.574	13.274	.000

Dependent variable customer satisfaction

The beta value on the coefficient table indicate, the more the bank spent on the Service security dimension, to improve keeping accurate record of transaction, providing security for transaction data and privacy, its security and allowing users to check the validity and detail of past transaction every time more the customer is satisfied. Hence, if assumed other things being constant and service security increased by one unit, it increases customer satisfaction by 0.574.

Hypothesis Testing (H4)

H4: Service Security has significant effect on customer's satisfaction in e banking services of commercial banks of Ethiopia

H0: Service Security has no significant effect on customer's satisfaction in e banking services of commercial banks of Ethiopia

Table 4.18 Service Security ANOVA Analysis

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	72.829	1	72.829	176.197	.000[b]
	Residual	147.974	358	.413		
	Total	220.803	359			

a. Dependent Variable: Satisfaction

b. Predictors: (Constant), Security

Since the significance result on the ANOVA table is 0.000 which is p< 0.05, the regression analysis proved the presence of positive/ direct association between service security and customer satisfaction. Therefore, the regression outcome agreed to accept the alternative hypothesis "Service Security has a significant effect on customer satisfaction in Commercial banks of Ethiopia" and leads to the rejection of the null hypothesis.

4 Ease of Use

The result of regression analysis on the independent variable (Ease of use) with the dependent variable (customer satisfaction) indicates existence of positive and statistically significant relationship between them. Table 4.19 depicts that the independent variable Ease of use alone explain 24.5% (R2 = .245) of variation in the customer satisfaction. This shows that there are other variables which can influence the e banking customer satisfaction level of Commercial banks of Ethiopia.

Table 4.19 Model Summary for Ease of Use

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.495[a]	.245	.243	.68233

Source SPSS

Table 4.20 Ease of Use Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.797	.170		10.557	.000
	Ease	.472	.044	.495	10.782	.000

Dependent variable customer satisfaction

The beta value on the coefficient table indicate, the more the bank spent on the ease of use dimension, to improve easy to find information in the e banking system, easiness of the e banking to use, the language in e banking displays easy to understand, information and text are clear and easy to understand and the

providing of clear instruction the more the customer is satisfied. Hence, if assumed other things being constant and service security increased by one unit, it increases customer satisfaction by 0.495.

Hypothesis Testing (H5)

H5: Ease of Use has significant effect on customer's satisfaction in e banking services of commercial banks of Ethiopia

H0: Ease of Use has no significant effect on customer's satisfaction in e banking services of commercial banks of Ethiopia

Table 4.21 Ease of Use ANOVA Analysis

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	54.125	1	54.125	116.254	.000[b]
	Residual	166.678	358	.466		
	Total	220.803	359			

a. Dependent Variable: Satisfaction

b. Predictors: (Constant), Ease

Since the significance result on the ANOVA table is 0.000 which is $p< 0.05$, the regression analysis proved the presence of positive/ direct association between ease of use and customer satisfaction. Therefore, the regression outcome agreed to accept the alternative hypothesis "Ease of use has a significant effect on customer satisfaction in Commercial banks of Ethiopia" and leads to the rejection of the null hypothesis.

4.7.2.4. OVERALL REGRESSION ANALYSIS

The result of regression analysis on the independent variables (Reliability, Transaction Efficiency, Service Security and Ease of Use) with the dependent variable (customer satisfaction) indicates existence of positive and statistically significant relationship between them. Table 22, depicts that the independent variables all together collate with the dependent variable at 68.1% (R = 0.681) and explain 46.40% (R^2 = .464) of variation in the customer satisfaction. The remaining 53.6% of the variation in the

level of customer satisfaction of CBE, DSB, UB & CBO are explained by other variables which are not included in this model.

Table 4.22 Overall Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.681[a]	.464	.455	.57881

a. Predictors: (Constant), Performance, Ease, customer, Reliability, Security, Transactions

Table 4.23 Over all Regression Analysis of The Model

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.959	.166		5.783	.000		
	Reliability	.191	.057	.208	3.343	.001	.392	2.552
	Transactions	.222	.057	.259	3.921	.000	.347	2.883
	customer	-.008	.054	-.009	-.151	.880	.474	2.110
	Security	.173	.064	.171	2.722	.007	.384	2.606
	Ease	.114	.050	.119	2.269	.024	.551	1.815
	Performance	.050	.046	.055	1.077	.282	.572	1.748

a. Dependent Variable: Customer's Satisfaction

As the regression analysis table reveals all explanatory variables significantly affect the dependent variable customer's satisfaction at P< 0.05 except the variables customer support and performance at sig. value greater than 0.05, therefore ,

H3: Customer support has a significant effect on e banking customer's satisfaction is not supported by the collected data as P Value > 0.05 and Beta -0.009 which shows a negative and insignificant relationship.

H6: Performance has a significant effect on e banking customer's satisfaction is not supported by the collected data as P Value >0.05 and Beta 0.055 which shows insignificant effect on customer's satisfaction. Therefore, regression equation from Table 4.23 for the conceptual model will be

Y= a + bx1 + bx2+ bx3…

CS = 0.959 + 0.208(Reliability) + 0.259(Transaction Efficiency) + 0.171(Service Security) + .119(Ease of Use)

Overall ANOVA Analysis

ANOVA that, tests whether the model is significantly better at predicting the outcome than using the mean as a 'best guess'. Specifically, the *F*-ratio represents the ratio of the improvement in prediction that results from fitting the model, relative to the inaccuracy that still exists in the model.

Table 4.24 Overall ANOVA Analyses

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	102.152	4	25.538	76.408	.000[d]
Residual	118.652	355	.334		
Total	220.803	359			

a. Dependent Variable: Satisfaction

b. Predictors: (Constant), Ease, Reliability, Security, Transactions

In the model the F ratio is 76.408, which is highly significant at ($p<.05$). We can interpret this result as the model significantly predicts the outcome variable and null hypothesis can be clearly rejected since the p-value is 0.000 which is sufficiently low. The model is well fitted at $p<0.05$ level of significance, which means that explanatory variables Ease of use, Reliability, Service Security and Transaction Efficiency have significant effect on the improvement of the level of customer's satisfaction among public and private Banks in Ethiopia

4.8 Conclusion of Findings and Result

These findings provide significant support for the independent variables Transaction efficiency, Reliability, Ease of use and Service security which advocates that the variables have significant effect on customer's satisfaction level in commercial banks of Ethiopia e banking service delivery. However, the hypotheses H3 and H6 regarding the effect of variables Customer support and Performance on e banking customer satisfaction level in commercial banks of Ethiopia e banking service delivery are failed to accept. The findings are also consistent with other researchers findings for example Jun et al, (1999) Jannatul,(2009); Parsurman et al, (1988); Yang, Jun and Peterson (2004), Lui & Amett (2000) found that reliability provides higher degree of satisfaction on e-banking. Storback cited in Thahkur, (2011) also empirically found that e-banking transaction 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.

Chapter Five

5. CONCLUSIION AND RECOMMENDATIION

The objectives of this study were to identify factors that affect customer's satisfaction , to examine how e banking influences customers satisfaction, to examine the relationship between the socio-demographic characteristics and customers satisfaction in e - banking and finally to identify the dominant e banking dimensions that can maximize operational efficiency primary and secondary data sources were used and successive mix of descriptive and inferential analysis were made to examine the existing situation with regard to customers satisfaction in e banking and determine factors affecting customers satisfaction in e banking services of Ethiopian commercial banks. Results indicate that e banking service's customers is increasing in the past three years in Ethiopia. Respondents pointed out the variables most affecting their satisfaction. Summary of the findings and implications are presented below.

5.1 Summary of Major Findings

Descriptive analysis results revealed that 61.2% of e banking customers was male and most of respondents were youngsters between the ages of 18 and 35, e - banking customers were both married and unmarried, the majority of customers around 67% were degree holders and no customers were below primary school or illiterate, and most of e banking customers around 63.4% was salaried.
As far as relationship with a bank is concerned most of e banking users around 77.8% was depositors, 83.1% was saving account holders and 81.4% was ATM users.

Over all Customers' satisfaction on e–banking is above satisfactory level with a mean value of 3.59 on a 5 point Likert scale. Out of the e-banking service quality dimensions ease of use (mean of 3.797), service security (mean of 3.542), Transaction efficiency (mean of 3.528) and Reliability (mean of 3.511) have relatively major roles on e – banking service quality and in turn overall e – banking customer's satisfaction.

Inferential analysis results tell us that there were strong relationship between demographic characteristics (gender, age, marital status, educational level and employment status) and customer satisfaction in e banking services as their chi- Square value's p value is lower than 0.05. Pearsons

bivariate correlation found that all the e banking service quality measurement dimensions have positive association with customer satisfaction.

Transaction efficiency showed the highest positive correlation (r=0.622) with customer satisfaction and Reliability demonstrates the second highest positive correlation (r=0.596) with customer satisfaction, Service security and Ease of use show (r= 0.574) and (r= 0.495) respectively. Whereas, customer support and performance revealed the least positive correlation with customer satisfaction as compared to the other dimensions (r=0.479) and (r=0.469). the multiple regression analysis tells us that all explanatory variables (Ease of use, Reliability, Service Security and Transaction Efficiency) together correlate with the dependent variable customer satisfaction at R = 68.1% and they explain 46.4 % or (R square = 0.464) variation in the level of customers satisfaction in Commercial Banks of Ethiopia e - banking service delivery.

To test the hypothesis and also find the dominant service quality dimension, the researcher performed a simple regression analysis for each variable and accordingly as variables Transaction efficiency, Reliability, Service Security and Ease of Use increase by 1% the customer's satisfaction to increase by 62.2%, 59.6%, 57.4% and 49.5% respectively. These results are significant at 0.05 p value.

Accordingly hypothesis H1(Reliability has significant effect on e-banking customer's satisfaction), H2(Transaction efficiency has significant effect on e-banking customer's satisfaction), H4(Service security has significant effect on e-banking customer's satisfaction),& H5(Ease of use has significant effect on e-banking customer's satisfaction), were accepted but H3(Customer support has significant effect on e-banking customer's satisfaction), &H6 (Performance has significant effect on e-banking customer's satisfaction) were not supported.

5.2 CONCLUSION

Based on the findings obtained this study ascertained that there is a positive relationship between e banking service quality dimensions (Transaction efficiency, Reliability, Service security and Ease of use) and customer satisfaction in e banking service in agreement with the hypothesis. In addition, the regression model indicated that 46.4% of the variance in customer's satisfaction is accounted for by the

four e – banking service quality dimensions (Transaction efficiency, Reliability, Service Security and Ease of use). Individually or keeping the effect of the other variables as 1% increment in each variable Transaction efficiency, Reliability, Service security and Ease of use to result in the increment of customer's satisfaction by 62.2%, 59.6%, 57.4% and 49.5% respectively. According to their magnitude of increment on customer's satisfaction it can be arranged in that Transaction efficiency is the most dominant e banking service quality that affects customer's satisfaction. The second dominant dimension is reliability the third and the fourth are Service security and Ease of use respectively.

This research also ascertained that demographic variables have statistically significant relationship with customers' satisfaction in e banking services. Most of e banking users are youngsters, dominantly degree holders, and salaried but the participation of customers with the age of above 35 is low and there were no illiterate e banking users and the participation of business man/woman in e banking service is low. Most of e banking users are depositors and saving account holders and majority of e banking customers are ATM users.

5.3 Recommendation

This study has shown the effect of e - banking services on Customer satisfaction: The case of selected commercial banks in Ethiopia: Since the study confirm dimensions of e banking service quality transaction efficiency, reliability, service security and ease of use have significant effect on customer's satisfaction, banks should give strong emphasis to each e – banking service quality dimension in maintaining and improving the e banking service quality that is to improve completing a task accurately, delivering a service exactly as promised and performing the service right at the first time to achieve reliability and providing complete help function, processing of transaction fast and delivering efficient transfer of funds to achieve transaction efficiency and keeping accurate record of transaction, providing security for transaction data and privacy, allowing users to check the validity and detail of past transaction every time to achieve service security and easy to find information , easy to use the system, the language in e banking displays easy to understand, information and text are clear and easy to understand to achieve ease of use.

As the regression analysis result of e banking service quality dimensions transaction efficiency and reliability show the highest effect on customer satisfaction in the current study banks should work on all

the indicators such as providing complete help function, processing of transaction fast and delivering efficient transfer of funds and completing a task accurately, delivering a service exactly as promised and performing the service right at the first time to maximize their customers' satisfaction in e banking services they provide.

Banks should work strongly in increasing the number of users from all aspects that is from gender, age, educational status, occupational and should do great job in making business men/women to be the users of e banking. Banks should also look at all the other dimensions along with their respective measurement indicators to improve and work on the current level of satisfaction.

Banks also should work strongly to increase the usage of other e banking products such as pos, prepaid card, credit card, mobile banking and internet banking by creating awareness on their customers about the services' advantage and by teaching them how to use each service.

5.4. IMPLICATIONS FOR FURTHER RESEARCH

This study measured the effect of e – banking services on customer satisfaction. However, variables in this study explained only 46.4% of the variance. the other 53.6% variance in the customers' satisfaction must be due to other factors. Further research on these areas might find other customer's satisfaction factors not covered by this study.

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Appendix

Appendix A: Questionnaire

Addis Ababa University School of Commerce

Marketing Management Graduate Program

Dear Respondents,

This questionnaire is designed specifically to carry out a research on the effect of e-banking on customer's satisfaction the case of selected commercial banks in Ethiopia. The purpose of this study is to find the electronic banking service dimensions that affect the level of customer satisfaction in Commercial Bank of Ethiopia, Dashen Bank, United Bank and Cooperative Bank of Oromia as partial fulfillment of the requirements for the degree in Masters of Marketing Management. Here I kindly request you to attempt all the items in the questionnaire. Whatever information is provided will be treated with utmost confidentiality for an academic purpose. There is no need to write your name.

I thank you in advance

Tsiyon Gashaw
Tell: 0911048361
Email ziongash@gmail.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 (√) information of your choice box that express yourself

1. Gender: Male□ Female□
2. Age : 18--24□ 25--35□ 36--50□ 51--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□ other □

Part II

Customer Feelings about Electronic Banking

1. Please put right mark (√) for response of your feeling about the question provided

No		**Strongly Disagree 1**	**Disagree 2**	**Undecided 3**	**Agree 4**	**Strongly Agree 5**
	Reliability					
1	e banking completes a task accurately					

2	e banking deliver the service exactly as promised					
3	e banking perform the service right at the first time					
4	The bank website does not freeze after customer put in all the information					
5	Information provided on website					
	Transactions efficiency					
1	e banking provide complete help function					
2	Process of transactions is fast					
3	e banking deliver efficient transfer of Funds					
4	In e banking there is Faster log in facility					
5	e banking complete its process efficiently					
	Customer support					
1	e banking contains enough services					
2	Case of problem happen, can contact staff immediately					
3	e banking contains responsible section to guide for common problem					
4	e banking provides knowledgeable staff to solve problem					
5	Staff can describe step to use and condition to use clearly.					
	Service security					
1	e banking keep accurate record of transaction					
2	e banking provide security for transaction data and privacy					
3	No problem during using e banking service					
4	e banking is secure					
5	Feel safe when using e banking					
6	Can check validity and detail of past transaction every time					
	Ease of use					
1	Easy to find information in the e					

	banking system					
2	e banking is easy to use					
3	The language in e banking displays easy to understand .					
4	Information and text are clear and easy to understand					
5	e banking system provides clear instruction					
	Performance					
1	e banking is providing multi language					
2	e banking provide 24 hours- 7 days service					
3	e banking allows to transfer between the same bank					
4	e banking Performance of Plastic cards (ATM, Debit/Credit) is as promised					
5	e banking leaves the operation unfinished					

2. Please put right mark (√) for response of your satisfaction level in relation to each dimension

No.		**Highly Unsatisfied (1)**	**Unsatisfied (2)**	**Neutral (3)**	**Satisfied (4)**	**Highly Satisfied (5)**
1	How satisfied are you with e banking technological performance of the bank (Software application, ATM and POS machines)					
2	How satisfied are you with e banking services accessibility (accessibility of POS and ATM services)					
3	How satisfied are you with the e banking completion of a task accurately					
4	How satisfied are you with the speed of e banking transaction processing					
5	How satisfied are you with e banking guidance for common problem					
6	How satisfied are you with e banking security for transaction data and privacy					
7	How satisfied are you with e banking easiness to use					

8	How satisfied are you with e banking service functionality 24/7 (functionality of POS and ATM services)					
9	How satisfied are you with the e banking wide range of products and services provided					
10	What is your overall satisfaction with the e-banking services provided by the bank?					

*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, making payment, performing balance checks, pay bills, view record of transactions, check interest in accounts, send money overseas, etc.

ለደንበኞች የቀረበ መጠይቅ

አዲስ አበባ ዩንቨርስቲ ስኩል አፍ ኮሜርስ

ማርኬቲንግ ማናጅመንት የድሕረ ምረቃ ፕሮግራም

ይህ መጠይቅ በተመረጡ የኢትዮጵያ ንግድ ባንኮች የኢ-ባንኪንግ አገልግሎት በደንበኞች እርካታ ላይ ያለውን ተጽኖ ለማጥናት በውስን መልኩ አልሞ የተነደፈ ነው፡፡ የዚህ ጥናት ዓላማ በደንበኞች እርካታ ደረጃ ላይ ተጽኖ ያላቸውን የኤሌክትሪክ ባንኪንግ አገልግሎት ዘርፎችን መለየት ነው፡፡ በኢትዮጵያ ንግድ ባንክ፣ዳሸን ባንክ፣ ሕብረት ባንክ፣ የኦሮሚያ ሕብረት ስራ ባንክ ለማስተርስ ኦፊ ማርኬቲንግ ማኔጅመንት ጥናት እንደ ተካፋይ የጥናት ዳሰሳ ይካሄዳል፡፡ በዚህ መጠይቅ የቀረቡ ጥያቄዎችን ምላሽ ለመስጠት እንድትሞክሩ በትህትና እጠይቃለሁ፡፡ የትኛውንም የምትሰጡትን መረጃ በሚስጥር በበቂ ሁኔታ ለትምህርት ዓላማ ብቻ እንደሚውል አረጋግጣለሁ፡፡ ስም መፃፍ አያስፈልግም

አስቀድሜ አመሰግናለሁ

ፅዮን ጋሻው

ስልክ፡ 0911048361

E-mail:-ziongash@gmail.com

ይህን መጠይቅ በተመለከተ ጥያቄ ካለዎት እባክዎ ከላይ በተገለጸው ኢ-ሜይል አድራሻ ጥያቄዎን ይፃፉ

ክፍል ፣

የድሕረ ታሪክ መረጃ

ይገልፁልኛል በሚሉት የመልስ መስጫ ሳጥን እባክዎ የቲክ ምልክት (√) ያድርጉ፡፡

1. ፆታ፡ ወንድ ☐ ሴት ☐
2. ዕድሜ፡ [illegible] ☐ [illegible]☐ [illegible]☐ [illegible]☐
3. የጋብቻ ሁኔታ ☐ላጤ ☐ ያገባ[illegible]☐ብቻውን የሚኖር[illegible]☐የተፋታ[illegible]☐ ባል[illegible]ሚስት የሞተችበት
4. የአሁኑ የትምህርት ሁኔታ

   ያልተማረ ☐ አንደኛ ደረጃ ☐ ሃይስኩል ☐ ቲቪቲ☐[illegible]ዩንቨርስቲ ድግሪ☐ ማስትሬት☐

   ☐ ዶክትሬት ☐ከዶክትሬት በላይ[illegible]

 ስራ፡ ☐የሌለው ☐ ተማሪ ☐ ተከፋይ ☐ ነጋዴ ☐ ጡረተኛ ☐ሌላ

 በባንኩ እርሱዎ የየትኛው የደንበኛ ዓይነት ኖት

☐ አስቀማጭ ☐ ተበዳሪ ☐ ተቀማጭ ያለው እና ተበዳሪ ☐ ከዚ ውጪ ተጨማሪ ግልጋሎት ፈላጊ

 እርስዎ በባንኩ ብር የሚያስቀምጡ ከሆነ በየትኛው የባንክ ደብተር ነው ገንዘብዎን የሚያስቀምጡት

☐ በቼክ ደብተር ☐ የቁጠባ ደብተር

 የትኛውን የኢ ባንኪንግ አገልግሎት ነው የሚጠቀሙት

☐ ኤቲኤም ☐ፖስ ☐ሞባይል ባንኪንግ ☐ኢንተርኔት ባንኪንግ ☐ከዚ ውጪ

ክፍል II

የኤሌክትሮኒክ ባንክ ደንበኞች አስተያየት እይታ

እባክዎ የቲክ ምልክት √ ከእርስዎ አስተያየት ተስማሚ ለሆነው ያስቀምጡ

ተ.ቁ		አልስማማም ፍፁም	አልስማማም	አልወሰንኩም	እስማማለሁ	በጣም እስማማለሁ
	አስተማማኝነት					
	ኢ ባንኪንግ ስራን በተገቢ ይፈፅማል					
	ኢ ባንኪንግ በተገባው ቃል መሰረት አገልግሎቱን ያከናውናል					
	ኢባንኪንግ በመጀመሪያ ጊዜ አገልግሎቱን በትክክል ይፈጽማል					
	የባንኩ ድሕረ ገፅ ደንበኞች መረጃቸውን አስገብተው እንደጨርሱ አያግደውም					
	በድሕረ ገፁ በቂ መረጃ ይቀርባል					
	የልውውጥ ብቃት					
	ኢባንኪንግ በቂ አጋዥ መረጃ ይሰጣል					
	የገንዘብ ልውውጥ ሂደቱ ፈጣን ነው					
	ኢባንኪንግ በበቂ ሁኔታ እና ባግባቡ ገንዘብን ያዘዋውራል					
	ኢባንኪንግ እጅግ ፈጣን ሎግ አለው					
	ኢባንኪንግ የአገልግሎቱን ሂደት በበቂ እና በአስተማማኝ ሁኔታ ይፈጽማል፡፡					
	የደንበኞች ትብብር /ድጋፍ/					
	ኢባንኪንግ በቂ አገልግሎት ይሰጣል					
	ችግር ሲያጋጥም በቀጥታ ሰራተኛን ማናገር ይችላሉ					
	ኢባንኪንግ ተመሳሳይ ችግሮችን ለመፍታት በኃላፊነት ይሰራል					
	ኢባንኪንግ ችግሮችን ለመፍታት በቂ እውቀት					

	ያላቸው ሰራተኞች አሉት					
	ሰራተኞች አገልግሎቱን ለመጠቀም የሚያስችሉ ሂደቶችን እና ሁኔታዎችን በግልጽ ማስረዳት ይችላሉ					
	የደህንነት አገልግሎት					
	ኢ-ባንኪነግ ትክክለኛ የሆነ የልውውጥ ማህደር አለው					
	ኢ-ባንኪንግ የመረጃ ልውውጥ እና የግለኝነት ደህንነት ይሰጣል					
	ኢ-ባንኪንግ አገልግሎት በመጠቀም ሂደት ውስጥ ምንም አይነት ችግር የለም					
	ኢ-ባንኪንግ ስጠቀም ደህንነቱ የተጠበቀ ነው					
	ኢ-ባንኪንግ ስጠቀም ደህንነት ይሰማኛል					
	ያለፈውን የገንዘብ ልውውጥ እና ትክክለኛነት በየጊዜው መከታተል እችላለሁ					
	ቀላል አጠቃቀም					
	በኢ-ባንኪንግ ስርዓት መረጃ ለማግኘት ቀላል ነው					
	ኢ-ባንኪንግ ለመጠቀም ቀላል ነው					
	የኢ-ባንኪንግ ቋንቋ አጠቃቀም ቀላል እና ግልጽ ነው					
	የኢ-ባንኪንግ መልእክቶች እና መረጃዎች ቀላል እና ግልጽ ናቸው					
	የኢ-ባንኪንግ ስርዓት ግልጽ መመርያ የያዘ ነው					
	ብቃት					
	ኢ-ባንኪንግ በብዙ ቋንቋ የተዘጋጀ ነው					
	ኢ-ባንኪንግ የሃያ አራት ሰዓት እና ሰባት ቀን ግልጋሎት ይሰጣል					
	በኢ-ባንኪንግ በተመሳሳይ ባንክ መሀል ገንዘብዎትን ማስተላለፍ ይችላሉ					
	የኢ-ባንኪንግ ፕላስቲክ ካርዶች ኤቲኤም ብድር ወይም እዳ ይፈቅዳል ቃል በተገባው መሰረት ይሰራሉ					
	ኢ-ባንኪንግ የአገልግሎቱን ሂደት ባግባቡ አይጨርስም					

እባክዎ ከእርስዎ እይታ አቅጣጫ ይሰማኛል በሚሉት ላይ የቲክ ምልክት √ያስቀምጡ

		በጣም አልረካሁም	አልረካሁም	ምንም	ረክቻለሁ	በጣም ረክቻለሁ
	በኢ-ባንኪንግ የቴክኖሎጂ አጠቃቀም ሶፍት ዌር፤ ኤቲኤም፤ ፖስ ማሽነሪ ምን ያህል እርካታ ያገኛሉ					
	በኢ-ባንኪንግ የቴክኖሎጂ አጠቃቀም ሶፍትዌር አፕልኬሽን፣ ኤቲኤም እና ፖስ ማሽነሪ ተደራሽነት ምን ያህል እርካታ ያገኛሉ					
	በኢ-ባንኪንግ በትክክል የስራ አፈፃፀም ምን ያህል እርካታ ያገኛሉ					
	ኢ-ባንኪንግ አገልግሎት በገንዘብ ልውውጥ ሂደት ውስጥ ባለው ፍጥነት ምን ያህል እርካታ ይሰማዎታል					
	ኢ-ባንኪንግ አገልግሎት ለተለመዱ ችግሮች በሚሰጠው መፍትሄ ምን ያህል እርካታ ይሰማዎታል					
	ለመረጃ ልውውጥ እና ለግለኝነት በኢ-ባንኪንግ አግልግሎት የደህንነት ዝርጋታ ምን ያህል እርካታ ይሰማዎታል					
	በኢ-ባንኪንግ ቀላል አጠቃቀም ያሎት እርካታ					
	በኢ-ባንኪንግ በ ፖስ ፣ ኤቲኤም ? ? ዘዘተ አገልግሎት አሰራር ያለዎት እርካታ					
	በኢ-ባንኪንግ ሰፊ የምርት መጠን እና የአገልግሎ ተደራሽነት ምን ያህል እርካታ ይሰማዎታል					
	በአጠቃላይ በባንኩ በቀረበሎት የኢ-ባንኪንግ አገልግሎት ያለዎት እርካታ ምን ያህል ነው					

ኢ-ባንኪንግ አገልግሎት ሲባል የካርድ ባንኪንግ፣ ሞባይል ባንኪንግ እና የኢንተርኔት ባንኪንግ ለደንበኞች የገንዘብ ልውውጥ አገልግሎ የቀረቡ የተለያዩ የፈንድ ማስተላለፍ፣ ክፍያ አፈፃፀም፣ የቼክሂሳብ፣ ዋስትና ክፍያ፣ የዝውውር መዝገብ፣ የወለድ ቼክ ከሒሳብ፣ ለውጭ አገር የሚላክ ገንዘብ ወዘተ የሚደረግ ነው::

Appendix B

Sources from National Bank of Ethiopia

As at September 30, 2015, there were 19 banks operating in the country. Of which sixteen are private and three are public; business wise, one is development oriented, while the rest are commercial banks.

All commercial banks are categorized into three peers based on their asset size; large bank (CBE), mid-sized banks (include CBB, AIB, DB, BoA, WB, UB and NIB) and small banks (include LIB, CBO, ZB, OIB, BIB, BBI, AB, AdIB, DGB and EB).

Table 1.1 Total e - banking users in Ethiopia as of December, 31, 2015

No	BANK	No. Int. BNK. Users	No. mobile	No. agent	No.ATM cards	NO. repaid cards	Total e banking users In Ethiopia
1	CBE	21,810	885,977	0	2,400,266	538	3,308,591
2	COU	0	0	0	0	0	0
3	DEE	0	0	0	0	0	0
4	AWI	0	0	0	117,735	0	117,735
5	DAS	5,423	5,047	23	398,623	0	409,116
6	ABYS	0	0	0	39,126	14	39,140
7	WEG	0	0	0	109,958	0	109,958
8	UNT	8,889	48,680		85,816	0	143,385
9	NIB	0	0	0	57,328	0	57,328
10	CBO	0	0	0	3,308	0	3,308
11	LIB	0	0		0	0	0
12	ZEM	0	0	0	23,968	506	24,474
13	ORI	0	0	0	0	0	0
14	BER	0	0	0	17,881	0	17,881
15	BUN	0	0	0	0	0	0
16	ABA	0	0	78	4,474	0	4,552
17	ADS	0	0	0	2,246	0	2,246
18	ENAT	0	0	0	0	0	0
19	DEG	0	0	0	0	0	0
	INDUSTRY TOTAL	36,122	939,704	101	3,260,729.00	1058	4,237,714

Source (National Bank of Ethiopia)

Table 3. 2 Categorization of Commercial banks of Ethiopia

	Large-sized peer	Mid-sized peer	Small-sized peer
Name of Banks	CBE	CBB	ILB
		AIB	CBO
		DB	ZB
		BOA	OIB
		WB	BIB
		UB	BBI
		NIB	AB
			ADIB
			DGB
			EB

Source - National Bank of Ethiopia

Appendix C

SPSS Sources

	Code	N	Mean	Std. Deviation
e banking completes a task accurately	R1	360	3.6389	1.07265
e banking deliver the service exactly as promised	R2	360	3.5556	1.06199
e banking perform the service right at the first time	R3	360	3.5167	1.08920
The bank website does not freeze after customer put in all the information	R4	360	3.3528	1.03450
Information provided on website	R5	360	3.4917	1.07643
Reliability			**3.5111**	**.85461**

	Code	N	Mean	Std. Deviation
e banking provide complete help function	T1	360	3.6361	.98926
Process of transactions is fast	T2	360	3.653	1.0708
e banking deliver efficient transfer of Funds	T3	360	3.5111	1.11704
In e banking there is Faster log in facility	T4	360	3.4083	1.16228
e banking complete its process efficiently	T5	360	3.4333	1.17115
Transaction Efficiency			**3.5283**	**.91528**

	Code	N	Mean	Std. Deviation
e banking contains enough services	C1	360	3.4222	1.13665
Case of problem happen, can contact staff immediately	C2	360	3.7083	1.09236
e banking contains responsible section to guide for common problem	C3	360	3.4611	1.07057
e banking provides knowledgeable staff to solve problem	C4	360	3.5556	.99706
Staff can describe step to use and condition to use clearly.	C5	360	3.5611	1.06953
Customer Support			**3.5417**	**.82849**

	Code	N	Mean	Std. Deviation
e banking keep accurate record of transaction	S1	360	3.4722	1.07091
e banking provide security for transaction data and privacy	S2	360	3.6111	.95228
No problem during using e banking service	S3	360	3.0361	1.17842
e banking is secure	S4	360	3.5972	1.06945
Feel safe when using e banking	S5	360	3.6806	1.01557
Can check validity and detail of past transaction every time	S6	360	3.8528	.96050
Service Security			**3.5417**	**.77375**

	Code	N	Mean	Std. Deviation
Easy to find information in the e banking system	E1	360	3.7000	1.02013
e banking is easy to use	E2	360	3.8583	.95843
The language in e banking displays easy to understand..	E3	360	3.8333	1.00694
Information and text are clear and easy to understand	E4	360	3.8611	.96608
e banking system provides clear instruction	E5	360	3.7333	1.02666
Ease of Use			**3.7972**	**.82177**

	Code	N	Mean	Std. Deviation
e banking is providing multi language	P1	360	2.9861	1.21381
e banking provide 24 hours-7 days service	P2	360	3.5528	1.14784
e banking allows to transfer between the same bank	P3	360	3.4889	1.18481
e banking Performance of Plastic cards (ATM, Debit/Credit) is as promised	P4	360	3.0083	1.28303
e banking leaves the operation unfinished	P5	360	3.0667	1.26271
Performance			**3.2206**	**.87307**

	Code	N	Mean	Std. Deviation
How satisfied are you with e banking technological performance of the bank (Software application, ATM and POS machines)	Sat1	360	3.6222	1.04844
How satisfied are you with e banking services accessibility (accessibility of POS and ATM services)	Sat2	360	3.4667	1.04708
How satisfied are you with the e banking completion of a task accurately	Sat3	360	3.6722	.99206
How satisfied are you with the speed of e banking transaction processing	Sat4	360	3.6889	1.01129
How satisfied are you with e banking guidance for common problem	Sat5	360	3.5194	1.04743
How satisfied are you with e banking security for transaction data and privacy	Sat6	360	3.5861	1.07300
How satisfied are you with e banking easiness to use	Sat7	360	3.7250	1.10931
How satisfied are you with e banking service functionality 24/7 (functionality of POS and ATM services)	Sat8	360	3.6500	1.12195
How satisfied are you with the e banking wide range of products and services provided	Sat9	360	3.4111	1.20947
What is your overall satisfaction with the e-banking services provided by the bank?	Sat10	360	3.5722	1.12471
Customer Satisfaction			**3.5914**	**.78425**

Correlations of explanatory Variables & dependent variables

		Reliability	Transactions	customer	Security	Ease	Performance	Satisfaction
Reliability	Pearson Correlation	1	.744**	.587**	.617**	.526**	.569**	.596**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	360	360	360	360	360	360	360
Transactions	Pearson Correlation	.744**	1	.604**	.685**	.531**	.578**	.622**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
	N	360	360	360	360	360	360	360
customer	Pearson Correlation	.587**	.604**	1	.668**	.547**	.523**	.479**

	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000
	N	360	360	360	360	360	360	360
Security	Pearson Correlation	.617**	.685**	.668**	1	.618**	.527**	.574**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000
	N	360	360	360	360	360	360	360
Ease	Pearson Correlation	.526**	.531**	.547**	.618**	1	.500**	.495**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
	N	360	360	360	360	360	360	360
Performance	Pearson Correlation	.569**	.578**	.523**	.527**	.500**	1	.469**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
	N	360	360	360	360	360	360	360
Satisfaction	Pearson Correlation	.596**	.622**	.479**	.574**	.495**	.469**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	360	360	360	360	360	360	360

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

Normality Test

Descriptive Statistics

	N	Mean	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Reliability	360	3.5111	-.631	.129	-.060	.256
Transactions	360	3.5283	-.790	.129	.078	.256
customer	360	3.5417	-.634	.129	-.054	.256
Security	360	3.5417	-.625	.129	.609	.256
Ease	360	3.7972	-.782	.129	.470	.256
Performance	360	3.2206	-.151	.129	-.366	.256
Satisfaction	360	3.5914	-.822	.129	.320	.256
Valid N (listwise)	360					

Overall Regression analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.959	.166		5.783	.000		
	Reliability	.191	.057	.208	3.343	.001	.392	2.552
	Transactions	.222	.057	.259	3.921	.000	.347	2.883
	customer	-.008	.054	-.009	-.151	.880	.474	2.110
	Security	.173	.064	.171	2.722	.007	.384	2.606
	Ease	.114	.050	.119	2.269	.024	.551	1.815
	Performance	.050	.046	.055	1.077	.282	.572	1.748

a. Dependent Variable: Satisfaction

Overall Model Summary using Backward method

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.681[a]	.464	.455	.57881	.464	51.012	6	353	.000
2	.681[b]	.464	.457	.57801	.000	.023	1	353	.880
3	.680[c]	.463	.457	.57813	-.002	1.141	1	354	.286

a. Predictors: (Constant), Performance, Ease, customer, Reliability, Security, Transactions

b. Predictors: (Constant), Performance, Ease, Reliability, Security, Transactions

c. Predictors: (Constant), Ease, Reliability, Security, Transactions

Overall Regression Analysis Using Backward Regression Method

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.959	.166		5.783	.000		
	Reliability	.191	.057	.208	3.343	.001	.392	2.552
	Transactions	.222	.057	.259	3.921	.000	.347	2.883
	customer	-.008	.054	-.009	-.151	.880	.474	2.110
	Security	.173	.064	.171	2.722	.007	.384	2.606
	Ease	.114	.050	.119	2.269	.024	.551	1.815
	Performance	.050	.046	.055	1.077	.282	.572	1.748
2	(Constant)	.955	.164		5.835	.000		
	Reliability	.190	.057	.207	3.357	.001	.399	2.508
	Transactions	.221	.056	.258	3.930	.000	.350	2.857
	Security	.170	.060	.168	2.828	.005	.428	2.335
	Ease	.113	.050	.118	2.273	.024	.562	1.781
	Performance	.049	.046	.054	1.068	.286	.583	1.716
3	(Constant)	.976	.163		5.998	.000		
	Reliability	.201	.056	.219	3.625	.000	.414	2.417
	Transactions	.232	.055	.271	4.190	.000	.362	2.765
	Security	.176	.060	.174	2.941	.003	.432	2.315
	Ease	.122	.049	.128	2.513	.012	.582	1.720

a. Dependent Variable: Customers Satisfaction

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	102.541	6	17.090	51.012	.000[b]
	Residual	118.263	353	.335		
	Total	220.803	359			
2	Regression	102.533	5	20.507	61.379	.000[c]
	Residual	118.270	354	.334		
	Total	220.803	359			
3	Regression	102.152	4	25.538	76.408	.000[d]
	Residual	118.652	355	.334		
	Total	220.803	359			

a. Dependent Variable: Satisfaction

b. Predictors: (Constant), Performance, Ease, customer, Reliability, Security, Transactions

c. Predictors: (Constant), Performance, Ease, Reliability, Security, Transactions

d. Predictors: (Constant), Ease, Reliability, Security, Transactions

Chi-Square Test

Frequencies

Respondents Gender

	Observed N	Expected N	Residual
Male	221	180.0	41.0
Female	139	180.0	-41.0
Total	360		

Respondents Age

	Observed N	Expected N	Residual
18-24	100	90.0	10.0
25-35	191	90.0	101.0
36-50	57	90.0	-33.0
51-60	12	90.0	-78.0
Total	360		

Respondents Marital Status

	Observed N	Expected N	Residual
Single	136	72.0	64.0
Married	137	72.0	65.0
Separated	49	72.0	-23.0
Divorced	25	72.0	-47.0
Widowed	13	72.0	-59.0
Total	360		

Respondents Current Education Level

	Observed N	Expected N	Residual
Primary	3	72.0	-69.0
High School	44	72.0	-28.0
TVET	36	72.0	-36.0
University degree	242	72.0	170.0
Master degree	35	72.0	-37.0
Total	360		

Respondents job

	Observed N	Expected N	Residual
Unemployed	18	60.0	-42.0
Student	17	60.0	-43.0
Salaried	229	60.0	169.0
Business Man/Woman	68	60.0	8.0
Pensioner	2	60.0	-58.0
Other	26	60.0	-34.0
Total	360		

Test Statistics

	Respondents Gender	Respondents Age	Respondents Marital Status	Respondents Current Education Level	Respondents job
Chi-Square	18.678[a]	194.156[b]	201.944[c]	515.417[c]	612.633[d]
df	1	3	4	4	5
Asymp. Sig.	.000	.000	.000	.000	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 180.0.

b. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 90.0.

c. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 72.0.

d. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 60.0.