ST.MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

ASSESSING THE EFFECT OF SERVICE QUALITY FACTORS ON BROADBAND INTERNET CUSTOMERS SATISFACTION IN ADDIS ABABA, THE CASE OF ETHIO TELECOM

THOMAS HAILU

March, 2014

Addis Ababa, Ethiopia

ASSESSING THE EFFECT OF SERVICE QUALITY FACTORS ON BROADBAND INTERNET CUSTOMERS SATISFACTION IN ADDIS ABABA, THE CASE OF ETHIO TELECOM

THOMAS HAILU

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

March, 2014

ADDIS ABABA, ETHIOPIA

ST.MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

FACULTY OF BUSINESS

ASSESSING THE EFFECT OF SERVICE QUALITY FACTORS ON BROADBAND INTERNET CUSTOMERS SATISFACTION IN ADDIS ABABA, THE CASE OF ETHIO TELECOM

BY:

THOMAS HAILU

SGS/0039/2004B

APPROVED BY BOARD OF EXAMINERS

_____	_____
Dean, Graduate Studies	**Signature & Date**
_____	_____
Advisor	**Signature & Date**
_____	_____
External Examiner	**Signature & Date**
_____	_____
Internal Examiner	**Signature & Date**

ACKNOWLEDGEMENT

I would begin by thanking the Almighty God for the strength and knowledge He gave me to carry out the whole academic career.

I sincerely thank my advisor, Tesfaye Debela (PHD) for his excellence guidance, unrestricted and friendly support to enrich the content and make this paper work real.

I also would like to thank St. Mary's University for proving me the best of MBA program.

I would like to extend my special thanks to all respondents [enterprise customers of Ethio Telecom] for their cooperation and responding for my questionnaire. Finally, I am grateful to pass my deep thank to my family, colleagues and the St. Mary's University staffs for all the encouragements they gave me during this study.

Table of Content

LIST OF TABLES AND FIGURES

List of tables

List of Figures

ACRONYMS

ET	Ethio Telecom
CDMA	Code Division Multiply Access
EVDO	Evolution-Data Optimized or Evolution-Data only
DSL	Digital subscriber Line
CMTS	Cable Modem Termination System
DOCSIS	Data Over Cable Service Interface Specification
HFC	Hybrid fiber-coaxial
BPL	Broadband Power Line
BBI	Broad band internet
ICI	Information and Communication Technology
VDSL	Very high bit-rate Digital Subscriber Line
MHz	Megahertz
GHz	Gigahertz
LOS	line-of-sight
LMDS	Local Multipoint Delivery System
GSM	Global System for Mobile Communications
SOHO/SME	Small Office home Office or Small and Medium Enterprise
Mbps	Mega byte per second
MMDS	Multipoint Multichannel Distribution System
Mbps	Mega byte per second
WiFi	Wireless Fidelity
WiMax	Worldwide Interoperability for Microwave Access
WCDMA	Wideband Code Division Multiple Access

ABSTRACT

The aim of this research was to examine the main factors that affect the satisfaction of enterprise broadband internet subscribers of Ethio Telecom in Addis Ababa. To assess the customers' satisfaction the study applied a modified SERVQUAL model. The study has conducted a questionnaire survey. To select representatives the probability sampling techniques was applied. Altogether out of the 378 distributed questionnaire 320 (84.6%) responded questionnaire were used for analyzing the study. For the analysis and hypotheses testing, both the descriptive and inferential statistics were measured using some measures of central tendencies and Statistical Package for Social Sciences (SPSS) Version 20. And to estimate the relationship and effect of each SERVQUAL dimension on customers' satisfaction the simple and multiple regression models were applied. The finding shows that the majority (63.4%) of respondents are dissatisfied. The result of the study also indicated that network quality is the most influential dimension which can influence the overall satisfaction of the customers. Generally, since the satisfaction level of the enterprise (key account and SOHO/SME) broadband internet service customers is below average, that is 36.6%, ethio telecom should work hard to improve its customer's satisfaction. And the enterprise customers are demanding more improvements on the network quality aspects of broadband internet service than the other service quality dimensions. The researcher expects that the findings of this research would be useful for ethio telecom in formulating appropriate strategies and addressing the area of attention for the network improvement and expansion of broadband internet service in the whole country.

***Key words**: Service quality, customer satisfaction, SERVQUAL, Broadband internet service.*

CHAPTER ONE

1. INTRODUCTION

This chapter presents an overview of the entire study. It includes the background of the study, statement of the problem, objective of the study, research questions, hypothesis of the study, significance of the study, delimitations of the study, and possible limitations and organization of the study.

1.1 Background of the Study

In the today's competitive world it is a widely accepted fact that no modern economy can thrive without an integral information technology and telecommunications infrastructure on board. The importance of information and communication technology (ICT) is undeniable as it has been applied in various fields for the purpose of service enhancement. It has been proven that resources can be managed efficiently and effectively through ICT (International Telecommunication Union, 2009). Thus the world of telecommunications has changed rapidly as we enter the era of convergence between broadband internet, wireless networks, and the content sector. According to the International Telecommunication Union (ITU) definition, broadband refers to an Internet connection speed of 256 Kbps or higher as the total throughput in both, download and upload, directions. This statistical indicator is defined irrespective of type of access or type of device used for internet access, or method of payment. And (Becta, 2008) has defined broadband as a generic term to describe high-speed symmetrical service, allowing fast in and outbound data capacity. Dwivedi et al. (2007) confirmed that broadband, as an key enabling technology in the networked society, can help boost the economy of countries at a national level and can help to improve the lives of their citizens by facilitating delivery of education, health and telecommunications services at low cost and to a wider population.

In spite of the overall rapid growth broadband diffusion, many countries in developing country are still in the early stage of broadband deployment and are assessing policy strategies to promote faster adoption. The current deployment of broadband is significantly more advanced in some countries than others. The rate of internet penetration in Africa, (as estimated by Internet World Stats for the second Quarter of 2012), the average internet penetration rate was 15.6%. In the rest of the world (world minus Africa), the average

internet penetration rate is 27.7%, but in Ethiopia, with internet penetration rate of just 1.1 % (www.internetworldstats.com).

Compare to the other countries the number of broad band internet users in Ethiopia is very limited. According to the World Bank report, the historical data for Internet users in Ethiopia is limited in numbers as a result of low internet accessibility. In 2009, the rate of internet penetration in Ethiopia was less than 1% and the total Internet users were reported at 360,000 (World Bank Report on ITU, 2009). And in 2012 with the total of 960,331 internet users, Ethiopia is still ranked among the bottom internet users in the world (June 30, 2012, www.internetworldstats.com)

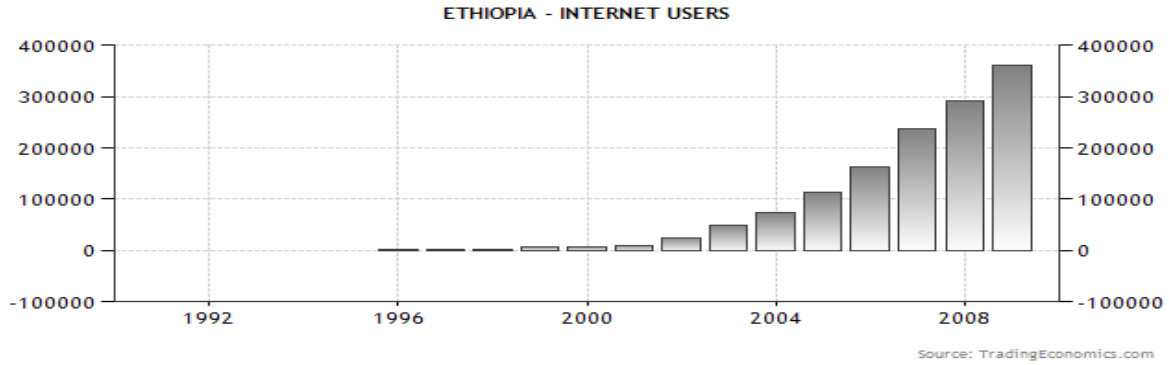

Fig. 1 Trend of number of internet user in Ethiopia

Source: TradingEconomic.com

In Ethiopia, broadband internet services has been started as of March 2005 in line with the dial up (narrowband service) with a limited number of subscribers out of which most of the subscribers were government institutions like universities, different ministry offices and Banks. And prior to April 2011, fixed broadband internet was not allowed to residential subscribers, which limit the number of broadband internet subscribers. But the introduction of the wireless broadband internet CDMA (Code Division Multiple Access) network in 2009 gives another opportunity for using broadband internet. This dramatically increase the number of broadband internet subscribers to 330,000 in Ethiopia and 132,000 of them were in Addis Ababa and the rest 198,000 broadband internet subscribers are found in regions (Ethio telecom data base, June 2013).

Customer satisfaction is influenced by many factors such as service quality and price. However, according to Ahmed et al. (2010), quality had a long term effect on the satisfaction of customers. And Atalik and Arslan (2009) found that creating value and offering quality of service offered to customer creates loyal customers. Further according to Gowan, et al, (2001) because of its unique characteristics it is difficult to

measure service quality objectively. Researchers have used different instruments to measure service quality but the most widely used instrument is SERVQUAL scale. SERVQUAL scale is the measures of service quality based on the gap between expectation and performance. Within SERVQUAL model there are five specific dimensions of service quality: tangibles, reliability, responsiveness, assurance and empathy (Parasuraman, Zeithaml, & Berry, 1988).

Though in Ethiopia at this time the speed of broadband diffusion is still at the initial stage the number of internet users is growing at a faster rate as a result of globalization, upgrading the telecom infrastructure, and reducing subscription fees and charges. According to different studies and public opinion customers are dissatisfied with Ethio telecom service provisioning. And particularly internet services in Ethiopia have been receiving many negative feedbacks in terms of service and network quality factors, pricing levels, and other demographic factors. Thus the main purpose of this study was to identify the effect of these factors on broad band internet customers' satisfaction particularly in Addis Ababa.

1.2 Statement of the Problem

Internet plays a significant role at the mental level of information and knowledge as a medium to organize globalization and by increasing the frequency, speed and efficiency of information exchange in every field – commercial, industrial, educational, scientific, political, religious, recreational, etc. Internet also overcomes the limits of time and space by enabling instantaneous access to information around the world.

Despite the aforementioned roles of internet services in Socio-Economic development of one's country, internet penetration is too limited in Ethiopia. This is due to different factors that affect broad band internet customers' satisfaction among others. Empirically, researches support the concept that there is a positive relationship between customers' satisfaction and service provisioning organizations financial performance (Rust & Zahorik, 1993; Anderson et al., 1994). However, the case in Ethio telecom is the reverse to what the researchers found. Which means the organization is always profitable and has excellent financial performance but customers are dissatisfied with most of its services.

Customer satisfaction is actually how customer evaluates the ongoing performance and it is a critical issue in the success of any business system in today's business world (Gustafsson, Johnson & Roos, 2010). According to Atalik and Arslan (2009) the ability of a service provider to create high degree of satisfaction is crucial for product differentiation and developing strong relationship with customers. However one of the key challenges of this market is how they satisfy and retain their customers and also

manage service quality, which holds a significant importance to customer satisfaction and their perceived performance.

Furthermore, customer satisfaction is influenced by various factors. According to Andaleeb and Conway (2006) service quality is the main driving factor for satisfaction of customer in service sectors. And Gustafson et al. have conclude that a firm should concentrate on the improvement of service quality and charge appropriate and fair price in order to satisfy its customers who would ultimately help the firm to retain its customers (Gustafson et al., 2005). Telecom sector like other sectors is not exception to the rule. Kangis, P. & Passa, (2007) found satisfied customers of telecom sector have high extent of usage and intentions to repurchase in future. Mussie (2010) in his study conducted on service quality and customer satisfaction with mobile services found that 59.1% customers are dissatisfied with the Ethio telecom mobile service. Similarly, Potluri and Mangnale (2010) who conducted investigation on Ethio Telecom customer satisfaction reported that about 57% of the customers are dissatisfied with the overall performance of the Ethio telecom services. However, no research has been conducted specific to Ethio Telecom's internet subscribers' satisfaction level. Therefore the main purpose of this study was to assess the factors that affect broadband internet customers' satisfaction.

Ethio telecom has initiated new strategies to provide solutions to its customers and enhance satisfaction, especially to enterprise customer, as a result of its transformation from the former Ethiopian Telecommunication Corporation to Ethio telecom as of December 2010 as France Telecom takes over the management. New strategies include new tariff, price discount, new promotion strategy, new product and services, new service delivery process and the like have been adopted. However, as the public opinion and as the researchers conducted in various services areas customers are dissatisfied with the service performance of Ethio telecom. Particularly the broadband internet services in Ethiopia have been receiving many negative feedbacks in terms of service quality, network quality factors, price levels and other demographic factors. Therefore, the problem of the study is to determine the main factors that affect the satisfaction of broadband internet customers in Ethio Telecom, Addis Ababa. To this end, this study investigates the relationship of these factors and broadband internet customers' satisfaction using the SERVQUAL instrument (tangibles, reliability, responsiveness, empathy, assurance) given by Parasuraman, et al. (1988) and two additional dimensions: network quality and price factors.

1.3 Research Questions

This study conducted mainly to address the following research questions:

1. What are the major factors that affect the satisfaction of broadband internet users in Ethio telecom, Addis Ababa?
2. Do the SERVQUAL dimensions have a significant and positive influence on the quality of broadband service provisioning?
3. Do broadband internet connection price factors have a significant effect on satisfaction of internet subscribers?
4. How do the broadband internet network quality factors affect the satisfaction level of internet customers of Ethio Telecom in Addis Ababa?

1.4 Objectives of the Study

1.4.1 General Objective:

The general objective of this study was to assess the main service quality factors that affect the satisfaction of broadband internet service users in Addis Ababa.

1.4.2 Specific Objectives were:

- To assess the overall satisfaction of enterprise customers with the broadband internet services of Ethio Telecom.
- To determine the relationship between service quality and customer satisfaction with broadband internet services.
- To determine the influence of each SERVQUAL dimension on broadband internet service quality and customer satisfaction.
- To examine the relationship between price factors and customers satisfaction level of broadband services.
- Finally to suggest possible ways of improving the quality of broad band internet service on the basis of the findings.

1.5 Definition of Terms in the Study

SERVQUAL Model: A model used for measuring service quality developed by Parasuraman et al. (1988).

A modified SERVQUAL dimensions: Reliability, Assurance, Responsiveness, Empathy, Tangibles, Network and Price aspects.

- **Reliability:** The ability to perform the promised service dependably and accurately.
- **Assurance:** Knowledge and courtesy of employees and their ability to inspire trust and confidence.
- **Responsiveness:** The willingness to help customers and to provide prompt service.
- **Empathy:** Caring and individualized attention that the firm (service provider) provides to its customers.
- **Tangibles:** Physical facilities, equipment, appearance of personnel and communication materials.
- **Network quality and Price aspects:** The ability of service provider to provide high network availability with a consistence speed of broadband internet service at an acceptable tariffs and fair prices.
- **Key account customer:** Enterprise customers who have more than 50 employees and/ or have greater than 50,000 (fifty thousand birr) capital.
- **Small Office Home Office (SOHO) also called Small & Medium (SME):** Collectively called **SOHO/SME** are small enterprises such as PLCs, internet cafés and other private businesses who have less than 50 employees and/ or have less than 50,000 (fifty thousand birr) capital.

1.6 Significance of the Study

This study is believed to benefit mainly the internet service provider, Ethio telecom, in various aspects:

- By identifying the factors that affect the satisfaction level of broadband internet customers, the study can help in formulating effective strategies that improves the quality of services delivery.
- The results of the study could be used to characterized the pattern and distribution of broadband internet customers that can help the company to know the type and some profile of its customer in addressing the area of attention for the network expansion of broadband Internet.
- In addition, the study would be able to benefit company to reallocate resources in areas that have greater influence on customer satisfaction.

1.7 Delimitation of the Study

The research project was confined only to broadband internet customers of ET and specifically those who are in Addis Ababa, which includes the Key Account (KA), Small and Medium Enterprises (SME). The KA in turn includes Government Administration, Financial Institutions, Service Enterprises, Production Enterprises and International Organizations, NGOs and Embassies. And the SME are small enterprises such as PLCs, internet cafés and other private businesses. Due to time and cost constraints, the study was limited only to broadband services customers who are in Addis Ababa, so customers those who are in regions and who use the narrowband internet and those who are non subscribers were not included in the research.

1.8 Limitation of the Study

Broadband service is a relatively recent phenomenon, and local economic data is often not collected on a regular basis for a detailed econometric analysis. Thus the main limitations of the study were the general lack of sufficient demographic data and the inability to incorporate all broadband internet users who are in the other regions of the country due to time and other resource limitations. Therefore, it could be difficult to generalize the findings and results to represent the whole internet customers' satisfaction in Ethiopia.

1.9 Organization of the study

This study is divided in five chapters. The first chapter contains the introduction part. The second chapter (literature review) which presents the related theories and previous studies related to the topic. The third chapter contains research methodology and design used in this study. The fourth chapter contains the data presentation and analysis. Finally, chapter five is all about the summary of findings, conclusion and recommendations, and limitation and implications for further research.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

This chapter demonstrates the review of related literatures. It includes explanations of what and types of broadband internet, status and importance of broadband service, customer satisfaction and determinants of customer satisfaction and details of the SERVQUAL dimensions.

2.1 Definition of Broad Band Internet

Despite the fact that the diffusion of broadband internet in the telecom world is at its infant stage various definition has out reached in the literatures in different ways. For example the definition given by Becta has defined broadband as a generic term to describe high-speed symmetrical service, allowing fast in and outbound data capacity (Becta, 2008; OECD, 2008). And Robert who have perhaps done the most to popularize the issue to the world of entertainment has defined broad band as "any technology – currently, cable, telephone-based (DSL), wireless, or through electric power lines – that permits users to communicate and download online entertainments at rates substantially faster than older generation 'dial-up' services, and unlike dial-up services, is 'always on."(Robert, 2005). In line with the definition and comparison broadband internet with dial up given by Robert, Sang Won has also defined broadband internet empirically as "a high-speed internet services, such as ADSL, cable and satellite; broadband service can transmit information at up to 40 times the speed of a dial-up modem connection" (Sang won, 2007). Furthermore, according to the International Telecommunication Union (ITU) definition, broadband refers to an Internet connection speed of 256 Kbps or higher as the total throughput in both, download and upload, directions. This statistical indicator is defined irrespective of type of access or type of device used for Internet access, or method of payment. Dwivedi et al. (2009) confirmed that broadband, as an key enabling technology in the networked society, can help boost the economy of countries at a national level and can help to improve the lives of their citizens by facilitating delivery of education, health and telecommunications services at low cost and to a wider population.

The broadband revolution continues, the ever increasing competition in the broadband service markets forcing broadband service suppliers to plan their strategies for delivery of "triple play" of their services, with voice, data and video provided by a single connection. According to U.S National Telecommunication and Information studies, over recent years, as the internet and intranets have evolved, increasing requirements for bandwidth intensive applications such as peer to peer file sharing and Tele-working has resulted in relentlessly increasing demands for higher broadband bandwidth provisioning.

2.2 Competing Broadband Technologies

There are a myriad of competing technologies which can provide the bandwidth required delivering broadband services, but each technology has its limits in terms of bandwidth, reliability, cost or coverage. Optical fiber offers almost limitless bandwidth capabilities, has excellent reliability and is becoming increasingly economical to install. Consequently fiber seems to be unsurpassed in its superiority over the other broadband technologies (Corning, 2005). However, many competitive copper and wireless technologies are developing at a significant pace and some technologies have so far managed to continually meet the ever increasing bandwidth requirements of the consumer .In general broadband solutions can be classified by two groups: fixed line technologies or wireless technologies.

Fig. 2: competing Broadband technologies (Left fixed line and right wireless)

Source: Corning's Broadband Technology overview, 2011

2.2.1 Fixed Line Technologies

The fixed line solutions communicate via a physical network that provides a direct "wired" connection from the customer to the service supplier. It relies on a direct physical connection to the subscriber's residence or business. Many broadband technologies such as cable modem, xDSL (digital subscriber line) and broadband power line have evolved to use an existing form of subscriber connection as the medium for communication. Cable modem systems use existing hybrid fiber-coax Cable TV networks (Ogawa, 2005). By contrast, as Christing et al, (2009) described in their book; that fiber connection require the installation of a new (fiber) link from the local exchange (central office) directly to or closer to the subscriber. Consequently, although fiber is known to offer the ultimate in broadband bandwidth capability, the installation costs of such networks have been prohibitively high until recently.

According to Corning's Broadband Technology overview published in 2009, the fixed line broadband technologies include:

- Hybrid Fiber Coax: Cable TV & Cable Modems: Mainly Digital cable TV networks are able to offer bi-directional data transfer bandwidth in addition to voice and digital TV services.
- Digital Subscriber Line (xDSL): DSL technology uses the existing copper telephone infrastructure to facilitate high speed data connections. DSL equipment achieves this by dividing the voice and data signals on the telephone line into three distinct frequency bands.
- Broadband Power Line (BPL): BPL systems allow for high speed data transmission over existing power lines, and do not need a network overlay as they have direct access to the ubiquitous power utility service coverage areas. BPL systems are being promoted as a cost-effective way to service a large number of subscribers with broadband.
- Fiber to the Home/Curb: is a generic term for those technologies which bring fiber, a step closer to the subscriber. However, not all fiber solutions in access networks bring the fiber directly to the home/subscriber. Some technologies in the access that rely on fiber, like VDSL, bring fiber from the local exchange (central office) down to a node in the access network or to the curb, where equipment is housed in a street cabinet to convert signals from optical to electronic, ready for the final hop to the subscriber over twisted copper pair.

2.2.2 Wireless Technologies

"Wireless solutions use radio or microwave frequencies to provide a connection between the customer and the operator's network; mobile phone connectivity is a prime example…." (Loma, Scientific International, 2004).Generally, wireless broadband according to Peter Lange refers to "the technologies that use point-to-point or point-to-multi point microwave in various frequencies between 2.5 and 43 GHz to transmit signals between hub sites and an end-user receiver. While on the network level, they are suitable for both access and backbone infrastructure, it is in the access network where wireless broadband technology is proliferating" (Peter L, 6th edition 2010).

There are a wide range of frequencies within which wireless broadband technologies can operate, with a choice of licensed and unlicensed bands. Generally speaking, higher frequencies are advantageous relative to lower frequencies as more spectrums are available at high frequencies and smaller antennas can be used, enabling ease of installation. As the same time Corning's Broadband Technology overview identified different types of Wireless technologies which can be broadly categorized into those requiring line-of-sight (LOS) and those that do not. "Point-to-point microwave, Local Multipoint Delivery System (LMDS), Free Space Optics (FSO), and Broadband

Satellite all require line-of-sight for reliable signal transmission while cellular technologies like GSM, CDMA, 3G, WiFi, WiMax, and fixed wireless broadband technologies like Multipoint Multichannel Distribution System (MMDS) require no line-of-sight between the transmission hub and receiving equipment. Clearly, the non line-of-sight (NLOS) technologies provide advantages in terms of ease of deployment and wider network coverage" (Corning, 2009).

2.3 The Status and Importance of Broadband Internet

Countries around the world are looking to spur the growth of broadband access and use as the next stage in the development of telecommunications networks and services. Using a variety of networks and devices—from mobile handsets to desktop computers—broadband offers high-speed data transmission, enables multimedia communication, improves access to information, and supports high-quality Internet connectivity. In addition, by exploiting wireless technology for high-speed Internet connections, broadband can cement gains from the significantly global expansion in access to telecommunications provided by mobile telephones.

The state of broadband by late 2009 the number of broadband subscriptions—both wire line and wireless—had crossed 1 billion globally (Martin et. al 2009).Most of these connections are in the developed world, with the developing world lagging significantly.

	Broadband subscribers (million)	***Market penetration (per 100 inhabitants)***
East Asia & Pacific	381.4	17.8
Eastern Europe & Central Asia	49.2	12.4
European Union (EU-27)	294.1	60.5
Latin America & Caribbean	52.4	9.2
Middle East & North Africa	27.8	7.6
North America	210.9	62.5
South Asia	9.1	0.6
Sub-Saharan Africa	15.6	1.9
World	1040.6	15.6

Table 1: Global broadband subscriptions (wire line and wireless), September 2012

Source: Building broadband: Strategies and policies for the developing world, Yongsoo, Kelly, and Siddhartha, Global Information and Communication Technologies (GICT) Department, World Bank, January 2012.

Organization for Economic Co-Operation and Development, 2009, in its report states that there are more than 1 billion broadband subscriptions globally. In September 2009, there were over 465 million fixed broadband subscribers—nearly three times the number in December 2004. There were also more than 575 million wireless high-speed data subscriptions—almost 20 times as many as in December 2004. Pyramid Research forecasts that by 2013 the number of broadband subscriptions (both wire line and wireless) will exceed 3 billion as today‘s narrowband networks are upgraded to broadband. Some countries, such as Singapore, already have a combined fixed and mobile broadband penetration rate in excess of 100 per 100 inhabitants. But broadband is spread unevenly. For example, North American and European Union countries together contain about half of global subscribers—while South Asia and Sub-Saharan Africa contain less than 3 percent (Table 1). Even in the current deployment of broadband is significantly more advanced in some countries than others. The rate of internet penetration in Africa, as estimated by Internet World Stats for the second Quarter of 2012, the average internet penetration rate was 15.6%. In the rest of the world (world minus Africa), the average internet penetration rate is 27.7%. But in Ethiopia, with internet penetration rate of just 1.1%, (960,331 Internet users on June 30, 2012) which ranked it among the bottom internet users in the world. (www.internetworldstats.com).

2.4 Customer Satisfaction and Determinants of Customer Satisfaction

2.4.1 Customer satisfaction

Customer satisfaction is the concept that occupies a central position in marketing thought and practice. Poltluri and Mangnale articulated customer satisfaction as the actuality of how a given customer evaluates the ongoing performance of any business system in today’s business world (Poltluri & Mangnale, 2010). In the same mood according to Atalik and Arslan (2009) the ability of a service provider to create high degree of satisfaction is crucial for product differentiation and developing strong relationship with customers. Further, Kotler (2003) said that there is wide consensus that “satisfaction is a person’s feeling of pleasure or disappointment resulting from comparing a product’s perceived performance (or outcome) in relation to his or her expectations”. Therefore, satisfaction is closely related to consumers’ expectations. More specifically, as explained by Hutcheson and Moutinho, 1998 the narrower the gap is between the consumers’ expectations and the actual performance of the product or service, the higher is the consumer’s satisfaction.

Broadband, as defined by different authors above, is an element with a high-speed internet services which can be used for different purposes. And thus this element has to respond to the level of customer's satisfaction. According to Singh and Khanduja(2010) satisfied customers form the foundation of any successful business as customer satisfaction leads to repeat purchase, brand loyalty, positive word of mouth and profitable relationships. And specific to the telecommunication industry according to Hanif, Hafeez and Riaz (2010) customer satisfaction makes the customers loyal to one telecommunication service provider. Hence, customer satisfaction is very important in today's business world and the profitability and survival of any organization depends on the ability to create high degree of satisfaction. Most researchers agree that satisfaction is an attitude or evaluation that is formed by the customer comparing their pre-purchase expectations of what they would receive from the product to their subjective perceptions of the performance they actually did receive. And several companies are adopting customer satisfaction as their operational goal with a carefully designed framework. Accordingly Gustafson et al suggested a firm should concentrate on the improvement of service quality and charge appropriate fair price in order to satisfy their customers, which would ultimately help the firm to retain its customers (Gustafson et al., 2005).

As in any other sector customer satisfaction in the telecom industry also is influenced by many factors such as service quality and price levels. However, quality factors had a long term effect on the satisfaction of customers. According to Zhao, Bai, and Hui (2002) because of its unique characteristics it is difficult to measure service quality objectively. Researchers have used different instruments to measure service quality but the most widely used instrument is SERVQUAL scale. SERVQUAL scale is the measures of service quality based on the gap between expectation and performance. Within SERVQUAL model there are five specific dimensions of service quality: tangibles, reliability, responsiveness, assurance and empathy (Parasuraman, Zeithaml, & Berry, 1988).

Thus, these definitions of customer satisfaction have in common that, if the performance falls short of expectations, the customer is dissatisfied. If the performance matches the expectations, the customer is satisfied. If the performance exceeds expectations, the customer is highly satisfied or delighted. In conclusion, customer satisfaction is defined as a result of customer's evaluation to the consumption experience with the services. However, different factors may affect their levels of satisfaction in variety of ways.

2.4.2 Determinants of Customer Satisfaction

The customer satisfaction literature confirms that the most direct determinants of satisfaction are quality of service, price, perceived value or performance and compliant handling. Gronroos (2004) stated that perceived service quality is an important determinant of customer satisfaction that has both cognitive and affective dimensions of the offerings of service providers. And Parasuraman et al. (1988) defined service quality as "the overall evaluation of a specific service firm that results from comparing that firm's performance with the customers' general expectations of how firms in that industry should perform. Therefore, it is important to a company or organization of product or service provider to improve their quality level.

The other most important determinant of customer satisfaction is customer expectation. It has been found out that expectation plays a major role in determining satisfaction. According to expectancy disconfirmation theory of Parasuraman et al., 1988 and Gronroos 2001, customer is satisfied if the performance of product/service is equal to his/her expectations (positive disconfirmation) and he/she is dissatisfied if the product/service performance is perceived to be below his/her expectation (negative disconfirmation). If expectation largely exceeds perceived performance, the customer is highly dissatisfied. The other perspective of the disconfirmation is that customer satisfaction relates to a comparison of customer perceive quality with perceived performance, rather than comparing expectation with perceived performance

Customer satisfaction is also driven by perceived value. Several studies have shown that perceived value is significant determinant of customer satisfaction. Turel and Serenko (2004) in their investigation of telecom services in Canada suggested that the degree of perceived value is a key factor affecting customer satisfaction. Though the concept of value is relative and has several dimensions to it, Zeithmal (1988) considers customer value as the overall assessment of the utility of a product based on perception of what is received and what is given.

The perceived value process involves a trade-off between what the customer gives such as price/money, sacrifice, perceived risk, opportunity cost, and learning cost in exchange for what he/she gets such as quality, benefits, utilities (Wang & Lo, 2002; Zeithmal, 1988). Conceptually, since what the customer gets for what he/she gives is based on performance of the product /service, what he/she gives became a standard for comparison. In this, a sort of disconfirmation occurs in that the customer becomes satisfied if the performance of product/service is equal to what he/she gives

(positive disconfirmation); he/she is dissatisfied if the product/service performance is perceived to be below what he/she gives (negative disconfirmation). If what he/she gives exceeds perceived product/service performance, the customer is highly satisfied. It is called as value-disconfirmation.

Researches manifest the fact that there is some kind of intertwine relationships among all antecedents of customer satisfaction. It is established empirically that customers overall cognitive or affective evaluation is based on basically the service quality, but the customer's perception of the performance of the service quality encountered is compared with some cognitive or affective standard like his/her expected quality, perceived quality or value quality.

Furthermore, the other issue for determining customers' satisfaction on the broadband service is; as Peter argues given that broadband services are often touted as being more expensive — there's also the issue of price (Peter Lange, 6th edition 2010). Broadband is more costly than dial-up because ADSL, cable modem, satellite and wireless services do generally cost more to set up. And according to ITU industry and service factors like price, speed and stability might influence broadband penetration. Fixed broadband price might be a key industry factor in promoting broadband demand (International Telecommunication Union, 2003a). In general, lower prices can contribute to higher broadband adoption. A competitive market structure leads to low prices (International Telecommunication Union, 2003a). And through data analysis of a national sample of US households, Rappoport et al. (2003) found that price elasticity of demand for broadband service is much greater than narrowband service. A more empirical argument by, Garcia-Murillo (2005) through statistical analysis of approximately 100 countries found that fixed broadband price and competition have been influential factors of fixed broadband adoption.

On the other hand as a product differentiation strategy in the broadband access market, broadband speed might influence broadband demand. Higher speed may even be a key driver of broadband adoption (International Telecommunication Union, 2003b). Chaudhuri et al. (2005) found strong influences of traditional socio-demographic variables like income and education on broadband deployment. To conclude researches manifest the fact that there is some kind of intertwine relationships among all antecedents of customer satisfaction.

2.4.3 The relationship between service quality and customer satisfaction

Service quality is an important tool to measure customer satisfaction and there is a close relationship between service quality and customer satisfaction. Wang and Lo (2002) in their study of china's

telecommunication industry found that service quality has positive or negative influence on customer satisfaction. Ahmed et al., (2010) in their study effect of Service Quality on Customers Satisfaction in telecom sector found that all the SERVEQUAL dimension have a significant relationship with the satisfaction of customers. Many authors like Kadir et al., (2011) and others who studied the relationship between perceived service quality and customer satisfaction have shown that service quality determines customer satisfaction.

However, although much has been written on the relationship between service quality and satisfaction earlier in 2000 Caruana, Money and Berthon (2000) found that customers who believe that the service provider provides high levels of service quality does not mean they will be highly satisfied. In other words, satisfaction does not depend on service quality alone and higher levels of quality are worthwhile to the extent that customers believe that value is being enhances.

2.4.4 Models for Customer Satisfaction

Fernandez-Gonzalez and Prado (2007) in their study of "Measurement and analysis of customer satisfaction: company practices in Spain and Portugal" discussed about different models of measuring customer satisfaction by referring various literatures. According to them, customer satisfaction can be measured by SERVQUAL Model. Moreover as shown in the works of Wisniewski & Donnelly (1996), Mussie (2010), and Yongsoo and Siddhartha (2012) customer satisfaction can be measured using Expectancy-Disconfirmation Model, Performance only Model (SERVPERF) Attribute Importance Model, Norms Model and Attribution Model. Among all these models, the SEVQUAL Model is still the most robust in measuring customer satisfaction in many organizations. Since the aim of this study was to assess service quality dimensions effect on customer satisfaction, the focus will be on SERVQUAL model.

2.4.4.1 Measures of Service Quality (SERVQUAL)

Service quality as explained by different studies is difficult to measure objectively, since services have been described as intangible, heterogeneous and inseparable. Many years, researchers have proposed and evaluated alternative service quality models and instruments for measuring service quality. Among them as Wisniewski & Donnelly (2007), explained in 2007 SERVQUAL Scale is mainly used for measuring service quality of services providing organization. The SERVQUAL scale has been tested and/or adapted in a great number of studies conducted in various service settings, cultural contexts and geographic locations. For instance Teicher et al., has applied the

SERVQUAL scales in their study of the quality of service offered by mobile communications and e-government (Teicher, 2002). And Joshi et al, in their study of assessment the effect of telecom service provisioning on customer satisfaction, (Joshi, Khurana & Khurana, 2010) has applied the SERVQUAL dimensions. Furthermore, Singh and Khanduja (2010) suggest that organizations can assess at least five dimensions of service quality to ascertain the level of services provided and to determine which dimensions need improvement. Assessing service quality and better understanding how various dimensions affect overall service quality would enable organizations to efficiently design the service delivery process and allocate resources to provide better service to customers.

Therefore, as Singh and Khanduja concluded SERVQUAL, a model developed by Parasuraman et al. in 1988, is the most prominent and widely used model for measuring service quality and customers' perceptions of service quality (Singh and Khanduja, 2010). The model conceptualizes service quality as a gap between customer's expectations (E) and the perception of the service providers' performance (P). According to Parasuraman et al. (1985), "service quality should be measured by subtracting customer's perception scores from customer expectation scores (Q = P - E)". The greater the positive score mark means the greater the positive amount of service quality or the greater the negative score mark, the greater the negative amount of the service quality.

Parasuraman et al. (1988) in their study of four different service industries identified 10 determinants of service quality, which included access, communication, competence, courtesy, credibility, reliability, responsiveness, security, tangibles and customer knowledge. Subsequently, Parasuraman et al. (1988) reduced these 10 determinants to five. Reliability, tangibles and responsiveness remained distinct, but the remaining seven components collapsed into two aggregate dimensions, assurance and empathy. Therefore, in the SERVQUAL scale, Parasuraman et al. (1988) identified five determinants of "tangibles", "reliability", "responsiveness", "assurance" and "empathy" as the main items of SERVQUAL scale for measuring service quality. The instrument is administered twice in different forms, first to measure expectations and second to measure perceptions. The dimensions to be measured in this study are the five dimensions of quality and two other added dimensions (network quality factors and price factors). (As they are defined in chapter one)

2.4.4.2 Model of Service Quality Gaps

The Gaps Model of Service Quality defines service quality as the difference between customer expectations of service and perceived service or in terms of the gap between what the service should provide and the customer's perception of what the service actually provides. It assumes that the smaller the gap, the higher the quality of services. One of propose of the SERVQUAL instrument is to ascertain the level of service quality based on the five key dimensions and to identify where gaps in service exist and to what extent. Generally according to Parasuraman, et al. (1988) along with the five SERVQUAL dimensions there are five gaps that occur due to the differences between expected and perceived service quality level. These can be summarized as follows:

- The difference between customers' expectation and management's perceptions of those expectations, i.e. not knowing what consumers expect is called gap one. This gap is occurred as a result of the lack of a marketing research orientation, inadequate upward communication and too many layers of management. It is called positioning gap.
- The difference between management's perceptions of customer's expectations and service quality specifications; i.e. improper service-quality standards is called gap two. This gap is occurred as a result of inadequate commitment to service quality, a perception of unfeasibility, inadequate task standardization and an absence of goal setting. It is known as the specification gap.
- The difference between service quality specifications and service actually delivered i.e. the service performance gap or the delivery gap is called gap three. This may occurred because of personnel might be poorly trained, or incapable of or unwilling to meet the standard; or they may be held to conflicting standards, such as taking time to listen to customers and serving them fast.
- The difference between service delivery and the communications to customers about service delivery, i.e. whether promises match delivery is called gap four. It exists when the promises communicated by the business to the consumer do not match the consumers' expectation of those external promises. This is known as a communication gap. And,
- The difference between customer's expectation and perceived service. This gap depends on size and direction of the four gaps and other customer behaviors associated with the delivery of service quality on the marketer's side. This gap is considered to be the true measure of

service quality. The Gap on which the SERVQUAL methodology has influence is Gap 5. Because gaps 1-4 are within the control of an organization and need to be analyzed to determine the cause or causes and changes to be implemented which can reduce or even eliminate these four gaps emerge from an executive perspective on a service organization's design, marketing and delivery of service. Moreover, they contribute to another gap, mentioned earlier; Gap 5 Which is the discrepancy between customers' expected services and the perceived service actually delivered. Gap 5 is a function of the other four gaps: that is, Gap 5 = f (gaps 1, 2, 3, and 4). Parasuraman et. al. (1985) seeks to measure gap 5 using the SERVQUAL instrument. The gap model is basically customer-oriented. Quality is realized by the customer after the service has been received and it relates to the difference between expected and perceived quality.

According to the Gaps Model of service quality, when what is delivered matches what is expected, customers find the service acceptable. If the service provided is better than what they expected that is when perception is better than expectation exceptional service materializes. Consequently, when expectations and perceptions are ranked on a scale, the gap is a number reflecting the difference between the two expectation rankings minus perception ranking. If there is a poor service gap, a minus number occurs. If the number, by chance, is zero, service is acceptable (expectations match perceptions). If a positive value emerges (perceptions exceed expectations), the service organization has achieved exceptional service.

2.4.4.3 Criticisms of SERVQUAL Model

Notwithstanding its growing popularity and widespread application, SERVQUAL has been subjected to a number of criticisms. Using only functional quality attributes to explain or predict consumers' behavior might be a misjudgment of service quality as it does not represent all the service quality attributes of a service encounter and therefore has low predictive validity (Gronroos, 2001). Researchers also questioned the effectiveness of SERVQUAL in evaluating service quality and criticized the measurement of service quality through the SERVQUAL questionnaire (Cronin & Taylor, 1992). However, Parasuraman et al. (1994) claim that diagnostic ability is the major practical benefit of the SERVQUAL model, as the purpose of measuring service quality is to diagnose the service shortfalls which need attention or action. In other work, Cronin and Taylor (1994) cited in Parasuraman et al. (1994) comment that recent conceptual advances suggest that the disconfirmation based SERVQUAL scale is measuring neither service quality nor consumer satisfaction. Rather, the SERVQUAL scale appears at best an operationalization of only one of the many forms of expectancy disconfirmation.

Parasuraman et al. (1988) state that the five dimensions which make up the SERVQUAL questionnaire are distinct dimensions and categorized the 21 questions in to those five dimensions. Therefore each question of 21 questions of the SERVQUAL questionnaire belongs to one distinct dimension. Ahemd et al. (2010) in their study conclude that organizations can at least assess five dimensions of service quality to ascertain the level of services provided, and to determine which dimensions need improvement. Carillat et al. (2007) investigated the validity of SERVQUAL using 17 studies that applied SERVQUAL and come up with the conclusion that SERVQUAL is an adequate and valid tool to measure the service quality.

Having all the above arguments on the SERVQUAL instrument, it is still the most widely used measurement instrument. Parasuraman et al., (1988) argued that, with minor modification, SERVQUAL can be adapted to any service organization. Therefore, the researcher used modified SERVQUAL model to assess the satisfaction of broadband internet customers of Ethio telecom.

2.5 Summary of the Literature

The importance of information and communication technology (ICT) is undeniable as it has been applied in various fields for the purpose of service enhancement. It has been proven that resources can be managed efficiently and effectively through ICT. Thus the world of telecommunications has changed rapidly as we enter the era of convergence between broadband internet, wireless networks, and the content sector. Broadband is a generic term to describe high-speed symmetrical service, allowing fast in and outbound data capacity. It refers to an Internet connection speed of 256 Kbps or higher as the total throughput in both, downloads and uploads directions. This statistical indicator is defined irrespective of type of access or type of device used for internet access, or method of payment.

Broadband is a key enabling technology in the networked society, can help boost the economy of countries at a national level and can help to improve the lives of their citizens by facilitating delivery of education, health and telecommunications services at low cost and to a wider population. In spite of the overall rapid growth broadband diffusion, many countries in developing country are still in the early stage of broadband deployment and are assessing policy strategies to promote faster adoption. Compare to the other countries the number of broad band internet users in Ethiopia is very limited; though Ethio telecom has initiated new strategies to provide solutions to its customers and enhance satisfaction, especially to enterprise customer; new strategies such as new tariff, price discount, new promotion strategy, new product and services, new service delivery process and the like has been adopted. And, as the public opinion and as the researchers conducted in various services customers are dissatisfied with the overall service performance of Ethio telecom. Particularly the broadband internet services in Ethiopia have been receiving many negative feedbacks in terms of service quality, network quality factors, price levels and other demographic factors. Therefore, the focus of the study is to determining the main factors that affect the satisfaction of broadband internet customers in Ethio Telecom, Addis Ababa.

As the customer satisfaction literature undertaken for different sectors confirms that the most direct determinants of satisfaction are quality of service, price, perceived value or performance and compliant handling, this study's focus in investigating the relationship and effect of these factors on broadband internet customers' satisfaction using the modified SERVQUAL instrument given by Parasuraman, et al. (1988). These are tangibles, reliability, responsiveness, empathy, assurance,

network quality and price factors. The other issue that was assessed in this study was the service quality gap; this was done by using the gap model analysis; which defines service quality as the difference between customer expectations of service and perceived or actual performance of the service__ That is in terms of the gap between what the service should provide and the customer's perception of what the service actually provides. According to this model of service quality, when what is delivered matches what is expected, customers find the service acceptable. It further assumes that the smaller the gap, the higher the quality of services. More specifically, the narrower the gap is between the consumers' expectations and the actual performance of the product or service, the higher is the consumer's satisfaction.

CHAPTER THREE

3 RESEARCH METHODOLOGY

This chapter explains the research methodologies that includes, research design, source of data, population and sampling method, research instrument, and method of data analysis.

3.1Research Design

Research Locale: The objective of this study was to investigate the level of Ethio Telecom customer's satisfaction with regard to broadband internet services and explore the service quality factors that affect their satisfaction. The study has been conducted on broadband internet users of Ethio Telecom; this includes corporate (key accounts) and small and medium enterprises. In order to investigate the objectives and answer the research questions and hypothesis, the research modes that this study followed were both descriptive and inferential statistics. And a questionnaire survey technique has been used to collect data from respondents and the questions were developed based on the SERVQUAL questionnaire developed by Parasuraman et al (five SERVQUAL dimensions) and for two additional dimensions (network quality and price aspects) developed by researchers (discussed in chapter one and two). Therefore, the researcher used a modified SERVQUAL instrument so as to be able to fulfill the research goals and make possible to draw lessons, conclusions and recommendations up on the results of the findings. Generally this research design is developed based on the following research frame work and hypotheses.

3.2 Conceptual frame work

The conceptual framework (see Figure 3.1 below), is developed by combined the works of different researches. To show the influence of the five SERVQUAL dimensions on customer satisfaction, a model was adopted from the works of Parasurman et al, (1994) and Turel and Serenko (2004). And, to show the effect of network quality and price factors on customer satisfaction the works of Ilias and Panagiotis, (2010) and Dwivedi et al. (2007), were assessed, in which they found that network quality factors are the major predictors of both customer satisfaction and loyalty, and have significant positive effect on both concepts. Further, industry factors like price and speed might influence broadband internet customers' satisfaction in Ethio Telecom. According to the ITU broadband internet price factors are among the key industry factors in promoting broadband demand

(International Telecommunication Union, 2003a). More interestingly, Chaudhuri et al. (2005) found strong influences of price factors on broadband internet customers' satisfaction.

Therefore it is based on this research framework that the research method is designed to identify the influence of the seven SERVQUAL dimensions (as the independent variables) on broadband internet customer's satisfaction (as the dependent variable) of Ethio Telecom. In addition to this, the variables selected for investigation are reflected and defined in alternative hypotheses as shown in the figure below.

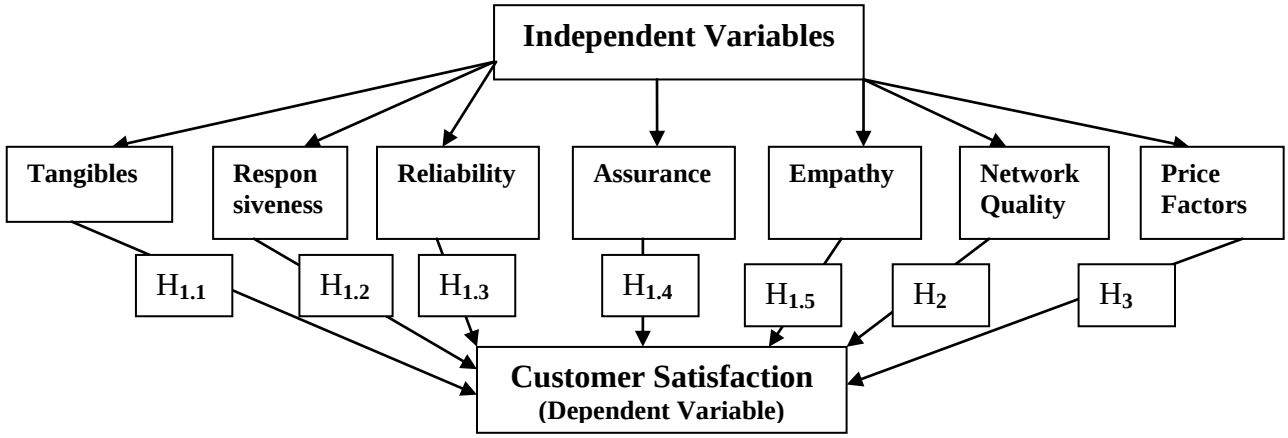

Figure 3.1 Conceptual frame work of the Modified SERVQUAL model

3.3Research Hypothesis

In this study the following hypotheses were formulated and tested based on the research questions and findings:

H1: There is a positive significance relationship between the SERVQUAL dimensions and overall broadband internet customers' satisfaction. This can be further classified as:

H1.1: The tangibles have significant positive influence on broadband internet customers' satisfaction in Addis Ababa.

H1.2: Reliability has significant positive effect on broadband internet customers' satisfaction in Addis Ababa.

H1.3: Responsiveness has significant positive effect on broadband internet customers' satisfaction in Addis Ababa.

H1.4: Assurance has significant positive effect on broadband internet customers' satisfaction in Addis Ababa.

H1.5: Empathy has significant positive link effect on broadband internet customers' satisfaction in Addis Ababa.

H2: The network quality factors have significant positive influence on customer satisfaction level of broadband services in Addis Ababa.

H3: The price factors have significant positive effect on customer satisfaction level of broadband services in Addis Ababa.

H4: There is positive relationship between overall service quality and broadband internet customers' satisfaction.

3.4 Type and Source of Data

This study has applied both secondary and primary data. The secondary data were collected based on time series data from Ethio telecom data bases, and from related research journals and articles, unpublished materials of Ethio Telecom and web addresses/internet. Using these sources of data were helped the researcher in collecting information regarding to:

- The history of broadband internet in Ethiopia _the trend, the price lists (fees and tariffs), the network coverage, speed, stability which helped the researcher to define the two main variables in the study, vi-sa-vis Price factors and network quality factors.
- Accessing the total number of broadband internet users so as to define the target study population and to draw an appropriate sample size from it.

On the other hand the Primary data were collected from Ethio Telecom customers of broadband through a self administered questionnaire. As Bowling et.al, explains the questions were developed based on Likert scale questions to assess their level of satisfaction towards broadband. Likert-type or frequency scales use fixed choice response formats and are designed to measure attitudes or opinions of respondents towards the given sentence which explains the factor/s (Bowling 1997, Burns & Grove 1997). With this data the researcher used to measure the effect of the seven (modified) SERVQUAL dimensions on the overall customers' satisfaction of ET's broadband internet service users. These are the five SERVQUAL dimensions_ Tangibles, Responsiveness, Reliability, Assurance, & Empathy and the two additional/ modified measures_ Network quality & Price aspects.

3.5 The Population of the Study

The general population of this study was the broadband internet customers of Ethio telecom in Addis Ababa. Customers in Ethio telecom are segmented in to four categories based on the amount of revenue they generated and the nature of their business. These are the Key Accounts (KA), the Small and Micro Enterprises, Small Office Home Office (SOHO) enterprises and the non-business Residential customers. According to Ethio Telecom the Key Accounts (KA) and Small and Medium

Enterprises (SOHO/SME) customers which aggregated more that 80% of the broadband service usage and revenue are served under the enterprise division of Ethio Telecom and the other two categories (Small Office Home Office (SOHO) enterprises and the non-business Residential customers) are served under the residential division of Ethio Telecom. So the study was focused only on the Key Accounts (KA) and Small and Medium Enterprises (SOHO/SME) in which both are treated under the enterprise division and are believed to good representatives and were taken/ targeted as the only population domains.

And as a data extracted from ET database on June 2013 shows the number of broadband internet subscribers in Ethiopia has increased to 330,000. And 132,000 of the subscribers were found in Addis Ababa and the rest 198,000 broadband internet subscribers are found in regions (Ethio telecom data base, June 2013). And according to Ethio Telecom from the total subscribers in Addis Ababa, 2,110 subscribers are defined as key account customers and 4,480 subscribers are categorized as SOHO/SME customers. Therefore the total population of this study was the sum of both KA and SOHO/SME customers, which was 6590 (2,110 + 4,480).

3.6 Sampling Method

Given all broadband internet subscribers of Ethio telecom defined as Key Account (KA) and Small and Micro Enterprises (SOHO/SME) in Addis Ababa as population of this study, two sampling methods were used. First stratified sampling method has been used by dividing the population in to two subgroups (strata) based on the type of broadband internet service they are using; wired or wireless and type of customer they are; as they are defined by Ethio Telecom as the Key Accounts (KA) and Small and Medium Enterprises (SOHO/SME) customers. Then a proportionate representative was selected from each stratum using a simple random sampling. Applying this simple random sampling is good due to the fact that, as it explained by Flower and Rice, it possesses the recognized characteristics of a good sample frame such as comprehensiveness, accuracy, adequacy, and up-to-date and non-duplicated information (Fowler 2002, Rice 1997). And for this study since the current population (through time series) of broadband users in Addis Ababa were defined as 6590, and the planned sample size at 95% confidence level (5% margin of error) were 378 respondents. This is based on the recommended sampling plan developed by Isaac and Michael,(Isaac and Michael, 1981; Smith, MF, 1983) (http://www.pearsonncs.com/- research-notes/sample-calc.htm), see also in appendix I.

3.7 Sample Size Determination

As indicated above, the company has 6590 broadband internet customers in Addis Ababa. Out of this 2110 are Key Account customers and the rest 4480 were registered as the SOHO/SME customers. Based on this distribution the researcher chooses a stratified sampling method and the total sample size was 378(at a 95% confidence level), which is 6% of the total population. And based on their proportionate size; to draw a sample from each stratum, 151 (40%) of the samples were taken from the KA customers and the rest 227 (60%) of the samples were taken from the SOHO/SME categories.

3.8 Research Instrument

To collect the data from the respondents, this study followed the subsequent instruments. For each customers included in sample, questionnaire were distributed to gather information related to customer satisfaction level on broadband internet. The questions were developed based on the following two categories: (1) multiple type questions examining the demographics of the respondents, and (2) A five-point Likert scale questions (ranging from 1 strongly disagrees to 5 strongly agree) to assess their level of satisfaction towards broadband. The secondary data as stated above were collected from databases of Ethio telecom after getting licenses from the concerned authority and other published or unpublished sources.

As discussed above along with the five dimensions of service quality used in the SERVQUAL Model for measurement of service quality which was developed by Parasuraman et al. (1988) another two services related factors (network and price aspects), which are used specifically for telecommunication industry are adopted from different literatures. Negi (2009) in his study of user's perceived service quality of mobile communications in Ethiopia suggest that network aspect and convenience have significant effect on service quality and customer satisfaction. Lai et al. (2007) found that price as an additional dimension to the SERVQUAL model in mobile communications. Joshi et al., (2010) in their study of service quality in telecom sector found that network quality is very important factor in determining service quality. Therefore, the researcher adopted these two dimensions (network quality and price aspects) to the broadband internet service because both mobile and internet are telecommunication services and they share the same backbone (network) at high level. Hence, this study was used a modified SERVQUAL dimensions.

Then the structured questionnaire was employed the typical form of fixed-response alternative questions that require the respondent to select from a predetermined set of answers to every question.

The questionnaire were employed the Likert non-comparative scaling technique and it is a widely used rating scale which requires the respondents to indicate a degree of agreement or disagreement with each of a series of statements or questions. This rating scale is easy to construct and administer and respondents readily understand how to use the scale (Uebersax, John S.2006).

Respondents were asked to identify the quality of broadband internet service expected from Ethio telecom and their perceived level of service with the actual broadband internet service being delivered by ET. The items in the questionnaire were designed to be scored on a five point likert type scale, 1 (strongly disagree) and 5 (strongly agree), and highly dissatisfied (1) to highly satisfied (5) for the overall service quality and customer satisfaction. Respondents were asked to circle any of the numbers to show their level of agreement with each statement.

The questionnaire were also includes some questions about educational back ground of respondents, experience in the current position and the company, the type, speed and bundle of broadband internet services subscribed, and for how many computers do they share the subscribed broadband, average monthly budget of the company in Ethiopia birr and the length of the time the customers have been used the broadband internet services.

Table 3.1: Modified SERVQUAL dimensions and Question Items

Dimensions	Code	Items
Tangibles	T1	ET has up-to-date equipments to use for broadband internet service.
	T2	The physical facilities (such as office layout, furniture etc) visually appealing at the business centers of ET.
	T3	Employees (frontline, sales personnel and technicians) of the service provider are well dressed and appear neat.
	T4	Materials and equipments (such as modem, cooper, and fiber and customer premises equipment) will be in line with the type of services provided.
Reliability	RL1	The behavior of employees creates confidence in customers.
	RL2	The broadband internet service is provided at the promised time.
	RL3	ET employees do understand the specific needs of their customers.
	RL4	Service provider does keep its records accurately.
Responsiveness	Rs1	Employees who involve in the delivery of the service (such as Front line, customer care, sales persons and technicians) will give prompt service to customers.
	Rs2	Employees who involve in delivery of the broadband internet service will always be willing to help customers.
	Rs3	Service provider will have operating hours convenient to all its customers.
	Rs4	Employees of the service provider will never be too busy to respond to customers' request promptly.

Assurance	AS1	ET Employees will have the knowledge to answer customers' questions.
	AS2	Employees of ET do tell customers exactly when the requested broadband service be performed.
	AS3	When employees of the service provider promise to do something by a certain time, they will do so.
	AS4	Customers will feel assured that service requests are duly (properly) followed up.
Empathy	EM1	Employees of service provider will give customer individual attention.
	EM2	ET Employees will be consistently nice or courteous with customers.
	EM3	When a customer faces a problem, employees of service provider do show a sincere interest in solving it.
	EM4	Overall Employees of service provider do have their customer's best interests at heart.
Network Aspect	NW1	Service provider provides network of 24hours a day and 7days a week without break.
	NW2	Service provider's broadband internet speed is high.
	NW3	Service provider has consistent speed of broadband internet service without major interruptions.
	NW4	There will not be significant delay over maintenance of broadband connection.
Price Aspects	Pr1	The service provider sets appropriate subscription (initial) fees for broadband services.
	Pr2	The usage tariffs for broadband internet of the service provider are fair and worthwhile.
	Pr3	ET has full of choice of different types of broadband internet access to subscribe at different levels of tariffs.
	Pr4	Overall the broadband internet services of Ethio Telecom are affordable.

Source: Survey Questionnaire

3.9 Reliability Test

Since survey method was the main strategy of collecting data in this research, the reliability of the scale was first set under a reliability test to check whether the collected data is free from random error or not. As suggested by Parasurama et al., (1988) it can be appropriate to modify the items of SERVQUAL instrument to make the survey more relevant to the context of a particular service environment. Therefore, the instrument was maintained service quality dimensions (tangibles, reliability, responsiveness, empathy, assurance) and it was include other two dimensions: network and price aspects. And the structured questionnaire adopted in this study was developed for pilot

test. The questionnaire with 7 dimensions (tangibles reliability, responsiveness, assurance, empathy, network and price aspects) and 29 items were developed and distributed to 20 respondents by selecting randomly from the broadband internet customers as a pilot survey to test the fittest of the instrument to measure the satisfaction level of broadband internet service users of Ethio telecom.

According to Frey et, al, collected data is worthwhile only if they are recorded in an accurate and reliable ways. And for any measurement to be valid, it must first demonstrate reliability (Frey, Botan, and Kreps, 2002). In order to be reliable, the Cronbach's alpha should exceed the threshold of .70. In this study the reliability of the instrument was assessed using cronbanch's alpha coefficient for the service quality constructs: expectation and perception. As a result, cronbach's alpha showed a satisfying reliability, above the 70% as indicated in the table below (Detail in Appendix II).

Table 3.2: Reliability test

Reliability Statistics

Number of Valid cases	Cronbach's Alpha	Number of Items
20	.844	29

Source: own survey, 2014.

As shown in the table above (detail also in Appendix II, 1) the Cronbach's alpha coefficients for expectation and perception service quality items ranges from 0.848 to 0.854 and 0.832 to 0.844 respectively; these are greater than the minimum value. Therefore modifying the SERVQUAL dimensions applied in this study was reliable). The overall Cronbach alpha coefficient for perceived scale items is 0.84. This indicates that there was a high degree of internal consistency amongst the instruments used for data collection. And therefore, the scales used in this study demonstrate high reliability.

Further, as suggested by Frey, Botan, and Kreps (2002), overall reliability test has to be conducted, before going to further analysis so as to review the internal consistency of each scale item. And as discussed above in chapter three; in order to be reliable, the Cronbach's alpha should exceed the threshold of .70 and the higher alpha coefficients indicates higher scale reliability. Thus, as shown in the below table 4.1, the overall reliability of the instrument was assessed by using again the Cronbach's Alpha coefficient for the service quality constructs expectation and perception. (For the details see in the appendix II, 2)

Table 3.3: Scale Reliability (Cronbach Alphas) – Overall Expected and perceived Service Quality

Reliability Statistics

Number of Valid cases	Cronbach's Alpha	Number of Items
320	.859	29

As we can see from the above table the overall reliability test was conducted for a total of 320 cases with 29 question items of each case. As a result, a reliability test result approximately .86 is scored; which is higher than the minimum threshold.70. Thus, this indicates that there was a high degree of internal consistency amongst the overall scale items.

3.10 Research Participants

The research participants of this study were IT heads or network administrators' of each organization or enterprise but the organization or the enterprise has no IT heads or network administrators the questionnaire was distributed to the management members or end users. The questionnaire was distributed to the person who is responsible for the broadband internet services of the organization. The IT heads or network administrators of the key account and SOHO/SME customer were selected as participants, because Network administrators or IT heads are responsible for the maintenance and administration of the enterprise broadband internet services and they are also registered as the contact persons for the Ethio telecom services. Therefore, the researcher believes that they could represent the satisfaction level of their organization/company broadband internet services.

3.11 Data Collection Procedure

The list of the key account and SOHO/SME contact persons, mobile number and address with respect to their company was taken from Ethio telecom Enterprise division, Tele marketing section. Based on this list, the researcher calls or visits the selected participants, then asks the customer whether they use broadband internet service from Ethio telecom or not. Then when they are the broadband internet users then questionnaire were administered otherwise the randomly selected respondents have been changed by other broadband internet users. In addition, before distributing the questionnaire the researcher asks the customers that who is responsible for their company broadband internet services. Then the questionnaire was filled by the responsible persons and in most of the customers IT heads and or Network administrators are the persons responsible for the company broadband internet service and most of the questionnaire were filled by them. In some of

the organizations there are no IT heads and Network administrators, therefore questionnaire were filled by management members, general facilities and or staffs or end users.

The survey questionnaire were self administered mostly by visiting the offices of the customers in Addis Ababa and some of the questionnaire were filled out by the customers who come to the Ethio telecom Enterprise business or service centers. The researcher has been informed how the overall questionnaire should be filled and the difference between the expectation and perception questions. Then, respondents were asked to identify the quality of broadband internet service expected from Ethio telecom and their perceived level of service with the actual broadband internet service being delivered by ET.

Moreover, the researcher told the respondents the time of delivering the response at their earliest convenience; here the time was one week. A week later the researchers will check for response and start collecting the questionnaire as per the stated time by going to the offices of the respondents. From the total 378 questionnaire distributed 320 filled questionnaires were collected, which represented 84.66% response rate, and has been used in the data analysis.

3.12 Method of Data Analysis

The study deploys both qualitative and quantitative data analysis techniques. To measure the descriptive and inferential statistics this study has applied some measures of central tendencies and the Statistical Package for Social Sciences (SPSS) Version 20.0. After information was collected from different sources, the information obtained through questionnaire was scaled, once the information scaled then the researcher organize in appropriate categories related to respondents view and in terms of the research variables. The descriptive statistics (frequencies distribution) was applied to assess the level of customer satisfaction while the relationship and the influence of the broadband internet services quality dimensions and customer satisfaction were analyzed using linear and multiple regression. Accordingly the summarized data were interpreted vis-à-vis the theoretical frame work of the study to arrive at meaningful conclusions.

Specifically the statistical tools were applied as the following:

- The descriptive statistics (frequencies distribution and mean) were used to assess the level of customer satisfaction and overall quality of service.
- To identify the service quality gap, mean of each item within the broadband internet service quality dimensions were computed for both expectation and perception.

- To assess the influence of all broadband internet service quality dimensions and overall service quality on customer satisfaction multiple linear simple linear regression was used respectively.

The study's dependent variable is the customer satisfaction and is denoted by "Y" in the below relationship functional equation. And there were 7 independent variables in which their coefficients were estimated after the data collection and analysis. These are the five SEVQUAL dimensions (Tangibles, Responsiveness, Reliability, Assurance and Empathy) and two other independent variables: Network factors and Price factors. And each independent variable is also expressed in chapter one, and in the hypothesis to be tested part.

$$\mathbf{Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + U_i}$$

$$\mathbf{Y =}$$

Where: Y= The Satisfaction Level of Ethio Telecom broadband internet users

X_i = the factors that affect the satisfaction of broadband internet user of Ethio Telecom,

(Namely: $X_{1=}$ Tangibles X_2= Responsiveness X_3= Reliability X_4= Assurance

X_5= Empathy X_6 =Network quality aspects and X_7= Price factors)

U_i = is the error term, the level of disturbance factors (to represent the effect of unpredictable factors on the dependent factor) and α is the constant (Y intercept) while βi is the coefficient of the predictors.

CHAPTER FOUR
4 DATA PRESENTATION, ANALYSIS AND INTERPRETATION

This chapter contains the, respondents' characteristics, overall service quality analysis, overall customer satisfaction analysis, the influence of service quality dimensions on customer satisfaction and expectations, perceptions and gap scores analysis.

4.1 Respondents Characteristics

A total of 378 questionnaires were administered and data were collected from Ethio Telecom key account and SOHO/SME broadband customers in Addis Ababa. Among these only 320 (84.66%) distributed questionnaire have been collected and analyzed using the descriptive statistics (frequency statistics) and inferential statistics. And the frequency and the percentage of the characteristics of respondents are summarized in the table below.

Table 4.2: Respondents characteristics

Variables		Frequency	Percent	Cumulative Percent
Sex	Male	215	67.2	67.2
	Female	105	32.8	100.0
Educational background	Certificate	7	2.2	2.2
	Diploma	51	15.9	18.1
	1st Degree	192	60.0	78.1
	2nd Degree and above	70	21.9	100.0
Position	IT head	103	32.2	32.2
	Management member	53	16.6	48.8
	Network Administrator	127	39.7	88.4
	Staff/end user	27	8.4	96.9
	Others	10	3.1	100.0
Work experience	1 to 3 years	18	5.6	5.6
	4 to 6 years	57	17.8	23.4
	6 to 8 years	73	22.8	46.3
	8 to 10 years	124	38.8	85.0
	10 years and Above	48	15.0	100
BBI user Experience	Less than 2 years	21	6.6	6.6
	2 to 4 years	66	20.6	27.2
	4 to 6 years	133	41.6	68.8
	6 years and above	100	31.3	100.0

Customer category	Key Account	133	41.6	41.6
	SOHO/SME	187	58.4	100.0
Broadband internet service subscribed	ADSL (Wired line)	57	17.8	17.8
	EVDO (Wireless)	22	6.9	24.7
	Both	241	75.3	100.0
Speed of subscribed ADSL BBI service	256 to 512kb/s	12	4	4.0
	1Mb/s - 2Mb/s	73	24.5	28.5
	3Mb/s - 4Mb/s	84	28.2	56.7
	6Mb/s – 8 Mb/s	78	26.2	82.9
	10 Mb/s and Above	51	17.1	100
Subscribed EVDO bundle	1GB	13	4.9	4.9
	2GB	107	40.7	45.6
	4GB	143	54.4	100
Average monthly Budget in Birr	Less than 1,000	18	5.6	5.6
	1,001 to 3,000	31	9.7	15.3
	3,001 to 5,000	38	11.9	27.2
	5,001 to 7,0000	64	20.0	47.2
	7,001 to 10,000	75	23.4	70.6
	Above 10,000	94	29.4	100.0
Number of computers shared the subscribed BBI	Less than 5 Computers	11	3.4	3.4
	6 to 10 Computers	16	5.0	8.4
	11 to 15 Computers	56	17.5	25.9
	16 to 20 Computers	89	27.8	53.8
	20 and above Computers	148	46.3	100.0

Source: Survey result, 2014

As shown in Table 4.3: Respondents characteristics, the respondents have diverse characteristics. Among the 320 respondents 67.2% (215) respondents male and the rest 32.8% (105) were female respondents. The educational background of the respondents is classified in to four categories. These are: certificate, diplomas, 1st degree and 2nd degree and above. Most (60%) of the respondents have 1st degree, followed by 20% 2nd degree and above and the least was registered with diploma (15%) and certificate (2.2%). Collectively most (81%) of the respondents have 1st degree and above.

Further, among the 320 respondents 32.2% (103) respondents are IT heads, 16.6% (53) respondents are from management members, 39.7% (127) respondents are Network Administrators, and the rest

37% respondents are staffs and others. Because it was assumed that the IT heads or network administrators of the enterprise customers (both the key accounts and SOHO/SME) represent their organization or Enterprise satisfaction level, it was planned to collect the data from them. However, some of the enterprise customers do not have IT heads or network administrators; therefore, the data was collected from Management members, staffs and others (like General facility, contact persons registered in Ethio telecom key account section). Most of the data was collected from IT heads and Network administrators' respondents, which is collectively 71.9% (230) of the total. The 72.9% (233) of the respondents have 4 years and above work experience in their current position. This shows that the data were collected from experienced respondents in using and/or facilitating broadband internet service in each of the enterprise customers.

As discussed above (chapter three) in ET enterprise division customers are categorized as KA & SOHO/SME and a proportionate sample were taken, distributed and collected from each of these categories. As a result 41.6% (133) of the respondents were from KA and the rest 58.4% (187) are SOHO/SME respondents. These customers are also subscribed for ADSL (wire) and EVDO (wireless) broadband internet from ET. As shown in the above table 4.3: majority of the respondents are subscribed for both service categories: i.e. 75.3% (241); and 17.8% (57) and 6.9% (22) of the respondents are subscribed only for ADSL and EVDO respectively. The ADSL subscribed speed varies from 256 kbps to above 10 mbps; so 4.0% (12) respondents are subscribed for 256 to 512kb/s, 24.5% (73) are 1Mb/s to 2Mb/s, 28.2 (84) are 3Mb/s to 4Mb/s, 26.2 (78) are subscribed for 6Mb/s to 8 Mb/s and 17.1 (51) are subscribed for 10 Mb/s and above. And majorities (95%) of the respondents are subscribed for 2GB and 3GB EVDO bundles. This shows most of the respondents are representative from customers which are higher speed broadband internet subscribers among the alternative service provided by ET.

And as one can see from the table above customers were asked for how many computers do they share the subscribed speed of broadband internet. As a result 3.4% (11) share the speed for less than 5 Computers, 5.0% (16) 6 to 10 Computers; 17.5% (56) 11 to 15 computers; 27.8% (89) share for 16 to 20 Computers and 46.3% (148) share the broadband internet speed for 20 and above computers.

Further customers were asked how much budget (ETB) do they spent (on average) for broadband internet. As a result 5.6% (18) respond they budgets less than 1,000; 9.7% (31) budgets 1,001 to 3,000; 11.9% (38) budgets 3,001 to 5,000, 20.0% (64) budgets 5,001 to 7,000; 23.4% (75) budgets 7,001 to 10,000 and 29.4% (94) budgets above 10,000. This shows that most of the enterprise

customers assessed in the study are among the customers who budgeted on average higher budget for broadband internet services.

4.2 Overall Service Quality Analysis

As discussed in chapter two service quality the most important factor to assess customer satisfaction. To analyze the service quality of broadband internet service of Ethio telecom descriptive frequency statistics was applied. Service quality was classified in five point scale, range from the lower: very poor to the higher: very good. Based on the analysis result, table 4.4 presents the quality of broadband internet service.

Table 4.3: Overall quality of broadband internet service

Overall Quality of ET's BBI Service *provisioning*	Frequency	Valid Percent	Cumulative Percent
1.00 very poor	36	11.3	11.3
2.00 poor	155	48.4	59.7
3.00 Neutral	97	30.3	90.0
4.00 Good	32	10.0	100.0
5.00 Very Good	0.0	0.0	100.0
Total	320	100.0	

Source: survey result

As shown in above table 4.4: 11.3% (36) respondents said the broadband internet of Ethio telecom is very poor, 48.4% (155) respondents said poor, 30.3% (97) respondents said moderate (neutral), 10% (32) respondents said good and none of the respondents said ET's broadband internet service provisioning is very good. Therefore, according to the finding a total of 59.7% of respondents said there is poor broadband internet service of Ethio telecom, 30.3% said moderate and only 10% said good service quality.

4.3 Overall Customer Satisfaction Analysis

The dependent variable (customer satisfaction) was analyzed with the descriptive statistics (frequency distribution). The customer satisfaction level was classified in five point's scale that ranges from the lower: Highly dissatisfied (1) to the higher: Highly satisfied (5). Table 4.4 presents the result of the analyzed overall customer satisfaction.

Table 4.4 overall customer satisfaction frequency distribution

Overall Customers Satisfaction

		Frequency	Valid Percent	Cumulative Percent
Valid	Highly Dissatisfied	51	15.9	15.9
	Dissatisfied	152	47.5	63.4
	Neutral	80	25.0	88.4
	Satisfied	37	11.6	100.0
	Highly Satisfied	0.0	0.0	100.0
	Total	320	100.0	

Source: Survey result

As shown in the above table the frequency of the overall broadband internet service satisfaction of the respondents shows that 15.9% (51) respondents are highly dissatisfied, 47.5% (152) respondents are dissatisfied, 25.0% (80) has a moderate satisfaction, 11.6% (37) respondents are satisfied, and none of the respondents are highly satisfied. Based on the above result the cumulative of 63.4% respondents are either highly dissatisfied or dissatisfied with the broadband internet services provisioning of Ethio telecom. And 25% respondents have moderate satisfaction and only 11.6% respondents are satisfied with the broadband internet services. Based on the expectancy disconfirmation theory discussed in chapter two, if the expectation matches perception the customer said to be satisfied therefore, the customers who have moderate satisfaction are considers as satisfied customers. Hence, 36.6% enterprise customers are satisfied with the broadband internet services of Ethio telecom. This result supports the previous studies conducted in Ethiopian Telecom customer satisfaction reported that about 57% of the customers are dissatisfied with the overall performance of the Ethio telecom services (Potluri & Mangnale, 2010).

4.4 Analyzing the Influence of Each SERVQUAL dimension on Customer Satisfaction

To investigate the relationship and influence of broadband internet service quality dimensions and customer satisfaction, a Pearson correlation test and multiple linear regression model analysis were applied (Regression analysis is widely used for predicting and for exploring the forms of relationships among the independent and dependent variables) Accordingly, the multiple linear regression is used to model the value of a dependent scale variable based on its linear relationship to one or more predictors. Hence, in this section the researcher has applied the Pearson's correlation test the relationship between the dependent and independent variables. And as we can see from

Appendix III; the Pearson Correlation shows there is positive (+) relationship between each modified SERVQUAL dimensions and the customer satisfaction. But to conduct the hypothesis test and to absorb the level of influence that each independent variable has on the dependent variable; the multiple linear analyses were applied. Further, regression analysis helps the researcher to understand how the typical value of the dependent variable changes when any one of the independent variables is varied, while other independent variables are held fixed.

However, the researcher before directly go to the regression analysis the necessary tests of the data's normality and the acceptance of the multiple linear regression assumptions has been undertaken.

As a result all the assumptions are within the accepted range. Table 4.6 below: presents the multiple linear regression analysis between the SERVQUAL dimensions and overall satisfaction. The value of "R^2" indicates that the proportion of the variation in the dependent variable explained by the regression. Therefore, the total satisfaction of ET enterprise broadband internet customers is an aggregation of tangibles, reliability, responsiveness, assurance, empathy, network aspect and price factors. And their influence is analyzed in below table:

Table 4.5: Influence of SERVQUAL dimensions on Overall customer satisfaction

Average value of SERVQUAL Dimensions	Coefficients of the independent Variables		t	Sig.	Overall Significance	Adjusted R Square	Level of Confidence
	B	Std. Error					
(Constant)	-1.598	.207	-7.704	.000			
Assurance	.227	.030	10.890	.000			
Empathy	.104	.029	7.096	.000			
Network Quality Aspects	.346	.032	12.589	.000	.000	R^2 = 0.902	95.0% Confidence
Price aspects	.201	.030	8.159	.000			
Responsiveness	.042	.052	1.785	.075			
Reliability	.051	.034	3.509	.001			
Tangibles	.025	.036	1.616	.107			

a. Dependent Variable: Overall satisfaction with broadband internet service
b. Predictors: (Constant), Overall Service quality dimensions (Tangibles, Responsiveness, Price, Empathy, Reliability, Assurance, Network Quality aspects)

Source: survey result

The results in the above table 4.6 indicate that about 90.2% (R^2=0.902) of the variance in the overall satisfaction is explained by the SERVQUAL dimensions. In addition, the results demonstrate that there is positive and statistically significant ($p<0.01$, $\alpha = .05$) relationship between the SERVQUAL

dimensions and overall customer satisfaction. Therefore, the seven SERVQAL dimensions (tangibles, reliability, responsiveness, assurance, empathy, network aspect and price factors) collectively are significant to broadband internet service customer satisfaction. However, as shown in the above table 4.5, the SERVQUAL dimensions separately have different significant levels. That is:

- There is a positive and statistically significant ($p< 0.01$, $\beta= 0.346$) relationship between network quality and overall customer satisfaction. Hence, hypothesis two (H2) is supported, that is: network quality has significant positive influence on customer satisfaction is supported. Moreover, among the seven service quality dimensions, network quality is the strongest predictor of overall satisfaction. This finding supports the study of Joshi et al., (2010); Negi (2009) and Wang & Lo (2002) that network quality is the best predictor of service quality in the telecom sector. The implication of this result, the availability of 7 days and 24 hours network connection without break, high and consistence speed of broadband internet service of Ethio telecom have a significant and positive influence on customer satisfaction.
- Table 4.6 above also shows that there is also positive and statistically significant ($p< 0.01$, $\beta= 0.227$) relationship between assurance and overall customer satisfaction. And next to network aspect, assurance is the second most predictor of overall customer satisfaction among the entire service quality dimensions used in this study. Thus, this finding confirms sub-hypothesis one of ($H_{1.4}$) that assurance has significant positive effect on customer satisfaction. The result indicates that, the attributes of assurance like ET employees do tell customers exactly when the requested broadband service be performed; when ET employees promise to do something by a certain time, they will do so; ET employees do have the knowledge to answer customers' questions and customers will feel assured that service requests are duly (properly) followed up have positive and significance effect on customer satisfaction. Further,
- The multiple regression result in table 4.5 also demonstrates that there is positive and statistically significant ($p < 0.01$, $\beta= 0.201$) relationship between price and overall customer satisfaction. And price is the third most predictor of overall customer satisfaction next to network quality and assurance. Therefore, this finding confirms hypothesis three (H3) that price has significant positive effect on customer satisfaction. The interpretation of this finding is that the service provider sets appropriate subscription (initial) fees for broadband services; the usage tariffs for broadband internet of the service provider are fair and worthwhile; ET has full of choice of different types of broadband internet access to subscribe at different levels of tariffs; and overall

the broadband internet services of Ethio Telecom are affordable have positive and significance effect on customer satisfaction.

- Further there is also a positive and significance relationship b/n overall customer satisfaction of broadband internet service and Empathy (at $p< 0.05$, $\beta= 0.104$) and Reliability (at $p< 0.05$, $\beta= 0.051$). And this means the attributes of Empathy (ET Employees will be consistently nice or courteous with customers, will give customer individual attention; further when a customer faces a problem, employees of service provider do show a sincere interest in solving it; and overall Employees of service provider do have their customer's best interests at heart) and Reliability (The behavior of ET employees creates confidence in customers; the broadband internet service is provided at the promised time; ET employees do understand the specific needs of their customers; and ET does keep its records accurately) have a positive significance influence on broadband internet customers' satisfaction of ET. And hence, sub-hypothesis one; i.e.: $H_{1.5}$ **and** $H_{1.2}$ are accepted.
- On the other hand, among the seven broadband internet service quality dimensions the other two dimensions (Tangibles & Responsiveness) also have a positive (at r value 0.196 & 0.301 respectively) but statistically insignificance relationship with overall customer satisfaction (for p value is > 0.05). This means that compare to the other factors, tangibles and responsiveness have no significant effect on broadband internet service satisfaction, in ethio telecom. Thus, sub-hypothesis one of $H_{1.1}$: tangibles have significant positive influence on customer satisfaction), and $H_{1.3}$: responsiveness has significant positive effect on customer satisfaction, are rejected at P value. This shows tangibles like having up-to-date equipments and materials, having visual appealed physical facilities, well dressed and neat employees may not have significant effect on broadband internet service customer satisfaction like the services in hotels, banks and hospitals. Moreover, the implication of this finding is that responsiveness items such as ET have operating hours convenient to its customers; employees who involve in the delivery of the service (such as Front line and sales persons) will give prompt service, will never be too busy to respond to customers' request promptly and are willing to help to customers have not significant effect on customer satisfaction of broadband internet service of ET. This result is expected because telecom services, specifically broadband internet services are purchased once and consumed remotely and doesn't need a continuous involvement of employees' throughout the delivery of the service. Therefore, tangible and responsiveness may not be significant to customers' satisfaction.

4.5 The effect of overall service quality on customer satisfaction

To analyze the relationship between overall service quality and customer satisfaction simple linear regression was applied. The following table 4.6 shows the effect of overall service quality of broadband internet service on customer satisfaction.

Table 4.6: The effect of overall service quality on customer satisfaction

Variable	Coefficients		t	Sig.	R^2	Level of
	B	Std. Error				
(Constant)	.510	.108	4.714	.000		95.0%
Overall quality of broadband internet service	.728	.043	17.672	.000	0.494	Confidence

a. Predictors: (Constant), Overall quality of broadband internet service
b. Dependent Variable: Overall Customers Satisfaction

Table 4.6 above shows the result of simple liner regression and it indicates that about 49.4% (R^2=0.494) of the variance in the overall satisfaction is explained by overall quality of broadband internet service. There is also positive and statistically significant ($p< 0.01$, $\beta= 0.728$) relationship between overall service quality and customer satisfaction. This result shows that overall service quality has a positive significant effect on customer satisfaction. Therefore, this finding supports hypothesis four (H4: there is positive relationship between overall service quality and customer satisfaction). The interpretation of this finding is that service quality of broadband internet services of Ethio telecom is significant to the assessment of the customer satisfaction. Therefore, enterprise customers' satisfaction towards broadband internet service of Ethio telecom will increase when the overall quality of the service increases. Furthermore, this finding answers the research question.

4.6 Expectations, Perceptions and Gap Scores Analysis

According to the concept of the Gaps Model of service quality discussed in chapter two, when what is delivered matches what is expected, customers find the service acceptable. If the service provided is better than what they expected that is when perception is better than expectation exceptional service materializes. Consequently, when expectations and perceptions are ranked on a scale, the gap is a number reflecting the difference between the two expectation rankings minus perception ranking. If there is a poor service gap, a minus number occurs. If the number is zero, service is acceptable (expectations match perceptions). If a positive value emerges (perceptions exceed expectations), the service organization has achieved exceptional service (Disend, 1991 as cited in Mussie, 2011)

Moreover, according to expectancy disconfirmation theory that has been discussed in chapter two, the higher the perception minus expectation scores, the higher is the level of perceived service quality (Positive disconfirmation). The (P-E) frame work suggests the highest service quality score for an attribute occurs when expectation score is 1 and perception score is 5, giving a score of 4 (5-1). Therefore, levels of quality increase as scores move from -4 to 4 (Jannadi and Al-saggaf, 2000). Hence, the issue of the research is based on the assessment of service quality and customer satisfaction using the expected disconfirmation theory (ED). And, the average value of each attribute of the SERVQUAL dimensions used in the study was computed by taking each scale/response of a respondent in to the SPSS software and calculating the mean value. As a result the following table (table 4.7) presents the mean value of each attribute and its corresponding Perception and Expectation gap scores, which in turn is calculated by the difference of average Perception and average Expectations (P-E).

Table 4.7: Service Quality Gap Scores

SERVQUAL Dimension	Perception (Mean Value)	Expectations (Mean Value)	Service Quality GAP (Per-Exp)
T1	2.81	4.57	-1.76
T2	3.45	4.48	-1.13
T3	3.47	4.39	-0.92
T4	2.58	4.53	-1.94
RL1	2.56	4.53	-1.97
RL2	2.43	4.43	-2.00
RL3	2.78	4.51	-1.74
RL4	2.78	4.50	-1.73
RES1	2.71	4.50	-1.79
RES2	2.60	4.45	-1.85
RES3	2.73	4.42	-1.69
RES4	2.69	4.57	-1.88
AS1	2.66	4.44	-1.78
AS2	2.76	4.44	-1.68
AS3	2.63	4.48	-1.86
AS4	2.52	4.49	-1.97
EM1	2.98	4.28	-1.30
EM2	3.14	4.21	-1.06
EM3	2.85	4.23	-1.38
EM4	2.82	4.31	-1.49
Pr1	2.41	4.47	-2.06
Pr2	2.42	4.46	-2.04
Pr3	2.58	4.61	-2.03
Pr4	2.50	4.47	-1.97
NW1	2.26	4.86	-2.61
NW2	2.57	4.67	-2.10
NW3	2.37	4.65	-2.28
NW4	2.08	4.67	-2.58
On Average	**2.68**	**4.49**	**-1.81**

Source: Survey result

*(Please note that the full explanation of the codes: **T1** through **NW4** is explained above in chapter three under* Table 3.1: Modified SERVQUAL dimensions and Question Items)

As shown in the above table 4.7 the range for expectation was from 4.21 to 4.86 on a five- point Likert scale. This means that enterprise broadband internet customers' expectation on broadband internet service quality on average is bigger (that is 4.49).

Respondents reported with the greatest mean expectation of network quality aspect (4.86) followed by price (4.61), tangibles (4.58), responsiveness (4.57), reliability (4.53), assurance (4.49) and empathy (4.42) respectively. Among the attributes that customers expecting high were NW3 and NW4 which says service provider has consistent speed of broadband internet service without major interruptions and there will not be significant delay over maintenance of broadband connection respectively than on the tangibles attributes T2 and T3 which says the physical facilities (such as office layout, furniture etc) visually appealing at the business centers of ET and employees (frontline, sales personnel and technicians) of the service provider are well dressed and appear neat respectively.

And the range for perceptions was from 2.08 to 3.47, respectively, for network quality and tangibles. It was observed from the study that ET performed best among the tangibles attributes on T3 (3.47) and T2 (3.45), which says: Employees (frontline, sales personnel and technicians) of the service provider are well dressed and appear neat and the physical facilities (such as office layout, furniture etc) visually appealing at the business centers of ET respectively.

In contrast, ET has the worst performance in the dimension of network aspects of NW4 (2.08) and NW1 (2.26); which says: There will not be significant delay over maintenance of broadband connection and ET provides network of 24hours a day and 7days a week without break. As suggested by Parasuraman et al. (1994) the gap analysis is accurate in identifying service short falls in an operation. This will help ET to identify which dimension need an improvement and which one is in a good position and need to maintain or keep up.

And for the Gap analysis, the study indicated that there is no service quality gap which shows positive and this means there is no dimension in which all customers or most customers whose perceptions are equal to or greater than expectation. The larger mean gap was identified for the dimensions of network quality aspect (-2.61) followed by price factors (-2.06) and reliability (-2.00). The smallest mean gap was identified for the dimension of tangibles (-0.92) followed by empathy (-1.06). Therefore, the higher service quality gap in broadband internet service quality dimensions were found in network aspect or network quality dimension i.e. (-2.61).

4.7 Customers comment/suggestion on overall ET's BBI service provisioning

Customer satisfaction is an important aspect of stability and growth of business; because maintaining an existing customer provides several economic benefits. Indeed, customer satisfaction has become a key goal for most service providing business. Businesses recognize that keeping current customers is more profitable than having to win new ones to replace those lost(Berry and Parasuraman 1991; Bowen and Chen 2001). As the aim of this study is to assess the factors that affect customers' satisfaction of ET; the respondents were asked an open ended (optional) question to give any additional information so as ET could use for improving its broadband internet service provisioning (See in Appendix; last part of the Questionnaire). As a result out of the total 320 collected questionnaire only 65 (20.3%) respondents had commented on the provided space. And please note that: though the response rate for this question is very limited; the researcher has summarized the important points raised by respondents under this study as follows:

- ✓ Long maintenance process: ET's way of solving maintenance problems takes a long process and is time and cost taking. Among the costs customers suggest they incur due to ET's maintenance or service provisioning delay include: office rent, employee salaries, salary for employees in contract and other running costs, such as material costs, etc...

- ✓ Customers suggested also that they go extra miles to get done their requests; the customer service is still by far behind customers' expectation. So ET has to improve the after sales services. For this the customers complained as: ET's employees do not keep their promises in delivering the service- they say they will deliver the service within a month; fortunately took several months. And this caused customers to incur different costs. Moreover, customers suggest that they sometimes are paying for not using the service at all.

- ✓ The reasons for high degree of network interruptions could be the poor quality of the broadband internet equipments, such as Customer premises Equipments (CPEs), MSAGs, EVDO, Cables, etc. so ET has to seriously followed up and modernizes its procurement process. The broadband internet service provided by EVDO is among the indicators of poor quality of equipments; the signal from EVDO internet is very poor. The other issue for network interruption is caused by due to human factors such as due to lack of enough

technical knowledge and mal administration (fiber cuts and the intentional need for corruption) has to be seriously analyzed and followed up.

- ✓ ET has to provide additional different types of products so as to customize different customers' needs and wants. The subscription fee, especially for fiber cable is too high. And, the signal from EVDO internet is very poor while the price for it is high. One of the respondents has explained this by comparing the wire and wirless technologies provided by ET as: "perhaps, broadband internet connection provided by the wired (ADSL) is not too bad in case of interruption; but ET has to focus on improving of the quality of wireless connection service".
- ✓ Nonetheless, ET service provisioning system, which is operational at this time, by far is good and even is better than some other governmental service providing organizations; but it still lacks flexibility and comprehensiveness by itself.
- ✓ As a solution the respondents suggested: ET has to provide d/t choice of broadband wireless internet services at an affordable price, since it is easy for use. Further, ET has to facilitate one shop for sales and maintenance and the Service Level Agreement (SLA) scheme has to be put under implement and or has to outsource some of the maintenance work for different organizations, so that the costs related with the broadband internet service provisioning will be managed and minimized.

CHAPTER FIVE
5 SUMMARY, CONCLUSIONS AND RECOMMENDATION

This chapter contains the Summary of findings, conclusions and recommendations of the study, and limitation and implications for further research.

5.1 Summary of Findings

The idea behind this study is to assess the factors that affect the satisfaction level broadband internet customers of ET in Addis Ababa. Thus this study intended to figure out the relationship and level of influence of the modified SERVQUAL dimensions as a independents variables (Tangibles, Reliability, Responsiveness, Assurance, Empathy, Network factors and Price factors) and dependent variable (broadband internet customer satisfaction) of ET in Addis Ababa.

- The study deploys both qualitative and quantitative data analysis techniques. To measure the descriptive and inferential statistics this study has applied some measures of central tendencies (frequencies distribution) and the Statistical Package for Social Sciences (SPSS) Version 20.0.
- After information was collected from different sources, the researcher organizes it in appropriate categories related to respondents view and in terms of the research variables. So using the descriptive statistics overall service quality and overall level of customer satisfaction were assessed; as a result a total of 59.7% of respondents said there is poor broadband internet service in Ethio telecom; and a cumulative of 63.4% respondents are dissatisfied with the broadband internet services provisioning of Ethio telecom.
- Further, the relationship and the influence of the broadband internet services quality dimensions and customer satisfaction were analyzed using linear and multiple regression models. As a result the SERVQUAL dimensions separately have different significant levels. Means among the seven service quality dimensions, network quality is the strongest predictor of overall satisfaction. And among the entire service quality dimensions used in this study next to network aspect, assurance is the second most predictor of overall customer satisfaction and followed by price factors and Empathy.
- The other two dimensions also have a positive but insignificance relationship with overall customer satisfaction. These are, responsiveness and tangibles have not statistically significant influence on the overall customer satisfaction (for p value is > 0.05). This means that tangibles and responsiveness have no significant effect on broadband internet service satisfaction. And

the result of simple liner regression indicates that there is also positive and statistically significant (at $p< 0.01$, and $\beta= 0.728$) relationship between overall service quality and customer satisfaction. This result shows that overall service quality has a positive significant effect on customer satisfaction. And the hypothesis testing is summarized in the below table:

Table 5.1: Summary of findings

Hypothesis		Statement of the hypothesis	Status
H1	There is a positive relationship between **each** SERVQUAL dimension and customers satisfaction; means:		
	$\mathbf{H_{1.1}}$	The tangibles have significant positive influence on customer satisfaction.	Rejected at $p> 0.05$, $r= 0.868$, & $\beta= 0.346$
	$\mathbf{H_{1.2}}$	Reliability has significant positive effect on customer satisfaction	Accepted at $p< 0.01$, $r= 0.868$, & $\beta= 0.346$
	$\mathbf{H_{1.3}}$	Responsiveness has significant positive effect on customer satisfaction	Rejected at $p< 0.01$, $r= 0.868$, & $\beta= 0.346$
	$\mathbf{H_{1.4}}$	Assurance has significant positive effect on customer satisfaction	Accepted at $p< 0.01$, $r= 0.868$, & $\beta= 0.346$
	$\mathbf{H_{1.5}}$	Empathy has significant positive link with customer satisfaction	Accepted at $p< 0.01$, $r= 0.868$, & $\beta= 0.346$
H2	Network quality has significant positive influence on customer satisfaction		Accepted at $p< 0.01$, $r= 0.868$, & $\beta= 0.346$
H3	The price factors have significant positive effect on customer satisfaction level of broadband services in Addis Ababa.		Accepted at $p< 0.01$, $r= 0.868$, & $\beta= 0.346$
H4 H4	There is positive relationship between overall service quality and broadband internet customers' satisfaction.		Accepted at a $p< 0.01$

Source: Survey result, 2014

And for the quality gap of the dimensions which is calculated by the difference between perception and expectation (P-E) has demonstrated a negative value for all dimensions. The highest negative margin of the gap is shown under the dimension of network quality. The study indicates the ET has not high and consistent speed of broadband internet service without break all the time and there is significant delay over maintenance of broadband connection that leads to customers feel dissatisfied. Thus, the relative low performance of ET has indicated in the network quality dimension of service quality; and the relative best performance of the ET has found in the tangibles and responsiveness dimensions of service quality.

Table 5.2 SERVQUAL dimensions Gap Summary

Variables	Expectations (Overall Mean Value)	Perception (Overall Mean Value)	GAP (Perception-Expectations)
Tangibles	4.49	3.08	-1.41
Reliability	4.49	2.64	-1.86
Responsiveness	4.48	2.68	-1.80
Assurance	4.46	2.64	-1.82
Empathy	4.45	2.95	-1.50
Price	4.50	2.48	-2.03
Network Quality	4.71	2.32	-2.39

Source: Survey result, 2014

As we can see from the table above on average there higher expectation (4.71) on overall network quality aspects and lower expectations (4.45) from empathy factors of broadband internet were scored in enterprise customers of ET; and for the perception values the highest and lowest overall scores were found from tangibles (3.08) and network quality aspects (2.32) respectively.

Implication: The performances of ET on broadband internet service are above average for all dimensions except for network quality and assurance. But since customers' expectations for all dimensions are also above average and above perception, there is no dimension with positive result. Network quality dimension scores with the highest service quality gap (-2.39) followed by price (-2.03). Therefore, respondents are dissatisfied with all dimensions.

Though the performance or average perception for the SERVQUAL dimensions (except for network quality and assurance) is above average; the overall customers' expectations for all dimensions are above average and exceeds the perception's correspondent average value. As a result there is no dimension with positive gap value. Means ET's broadband internet service provisioning does not meet its customers' expectations.

Network quality dimension scores with the highest service quality gap (-2.39) followed by price (-2.03). Therefore, respondents are dissatisfied with all dimensions and their service quality gap derived from perception minus expectation shows negative for all dimensions.

5.2 Conclusions

This part includes the researcher's own thinking about different patterns in the result. The researcher connects the result to the research questions, aim and theory.

The aim of this research was to assess the main factors that affect the customer satisfaction towards broadband services subscribers of Ethio Telecom in Addis Ababa. The study's focus was on addressing the following major research questions: What are the major factors that affect the satisfaction of broadband internet users in Ethio telecom? And the other questions focus on how do the modified SERVQUAL dimensions affect the satisfaction of broadband internet users of ET, in Addis Ababa? The SERVQUAL scale is the measures of service quality based on the gap between expectation and performance. And with minor modification, the model can be adapted to any service organization. This modified model is adopted after assessing different studies.

In investigating the effect of service quality factors on broadband internet customers' satisfaction of ethio telecom through the framework of modified SERVQUAL model the researcher had conducted questionnaire survey on enterprise customers in Addis Ababa. Altogether the responses out of the distributed questionnaire (378) were 84.6% (320) respondents in Addis Ababa have been analyzed in this study. Accordingly 63.4% of the enterprise (key account and SOHO/SME) broadband internet service customers are dissatisfied with the broadband internet services of Ethio telecom, 36.6% customers are satisfied in which their perceptions equal or greater than their expectations.

The finding demonstrated that there is positive significant relationship between the combinations of broadband internet services modified SERVQUAL dimensions and customer satisfaction. This means that the overall service quality dimensions have significant effect on customer satisfaction.

Among the seven SERVQUAL dimensions network quality aspects, assurance, price, reliability and empathy have significant and positive influence. On the other hand, the result also demonstrates that two dimensions (tangibles and responsiveness) do not have significant influence/ effect on customer satisfaction in the case of broadband internet users of ET.

And for the case of gap analysis; though the performance or average perception for the SERVQUAL dimensions is above average; the overall customers' perception is still less than the overall correspondent levels of expectation. The service quality gap is derived from perception minus

expectation. As a result there is no dimension, used in this study to assess the expected service quality and the actual perceived performance of ET broadband service provisioning, with positive gap value. This means that overall ET's broadband internet service provisioning do not meet its customers' expected service quality levels. And as a result of the service quality gap analysis of ET, the gap varies from lower among the tangibles attributes to higher among the network quality attributes.

To conclude, according to the findings of the study, the network quality aspects are the major predictors of all the other broadband internet services attributes in case of Ethio Telecom. This finding confirms the previous researches done by other researches that the network quality aspect strongly affects broadband internet customers' satisfaction.

5.3 Recommendations

Based on the above conclusions, the following recommendations can be forwarded:

- Ethio telecom should work hard to improve the broadband internet customers' satisfaction, since the overall customer dissatisfaction level is as high as 63.4%
- The quality gaps of the service dimensions are negative. The gap varies from -0.93 (Tangibles) to -2.86 (network quality). ET should improve specially the wider gaps in network quality (-2.86), Assurance (-1.82) and price factors (-2.03), since these factors are also the main factors that influence the customers' satisfaction level negatively and significantly if not improved.
- Network quality is also the most predictor of service quality and customer satisfaction Therefore, ET should improve its network areas of providing 24 hours and 7 days available network without break, high and consistence speed, because it is the network quality in which customers are complaining.
- The other dimension with a wider gap is assurance and it is also the second most predictor of customer satisfaction. ET should improve the assurance of its broadband internet service provisioning; this is related with how ET's performance in creating assurance for customers by showing whether their requests are duly/properly followed up. This can be done by improving the knowledge, motivation and commitment of its employees, especially these who involve directly or indirectly in the provisioning of broadband internet; where by providing different training or incentive schemes. Furthermore, from my own experience the

one constraint that hinders front line employees to keep their promise to provide a service is that the work and process in the back office. Therefore, ET should improve the integration and coordination between the works of the front line employees and work in back office.

- Price of broadband internet is also the third dimension, having significant effect on customer satisfaction. As per the analysis most of the enterprise customers are subscribers of higher bandwidths of amongst the ET's provisioning. And according to the customers comments and suggestions the higher bandwidths were/are expensive for them to subscribe. Even after subscription due to different reasons the customers do not get the level of bandwidth they subscribed for; though at the end of each month they have to pay the total amount of monthly fees. Further as we see above since ET does not tell the customers the exact time when the ADSL broadband internet service will delivered to the customers; they are exposed for different costs related with office rentals and employment and other resources related costs. Therefore, to improve its customer satisfaction ET should work on the price aspects: setting appropriate subscription (initial) fees for broadband services, providing choice of different types of broadband internet access to subscribe at different levels of tariffs and more importantly ET has to facilitate the broadband internet provisioning process (shorten the time spam) so as help its customers save related costs.
- Regarding to the Reliability and empathy dimensions, since these two factors have also significant effect on determination of customer satisfaction, ET has to give a due attention on improving the issues that affect them. This can be done by improving resources management related to recording and documentation systems and simplify or modernize its bill payment and scratch cards distribution systems.
    - ET has to minimize customer-to-employee contacts so as to minimize problems related with employee behaviors, this also can be improved by modernizing and improving its customer care and service processes, easing the accessibility to its toll-free numbers and websites for customers for clarification of problems and to know account status.
    - In addition to improving its records management and customer problem handling process, ET should also simplify or modernize its bill payment systems and scratch cards distribution systems.

- Tangibles followed by responsiveness dimension have a relatively small quality gaps but still below expectation.
    - To meet or exceed the customer tangibles dimension expectation, ET should use up-to-date materials and equipments used for delivery of the broadband internet service.
    - To meet the customers' expectation of responsiveness, ET should develop clear process of the service delivery and train its employees on customer care, since it is related to the behaviors of employees who involve in the delivery of the service (such as Front line, customer care, sales persons and technicians) has to give prompt service and be always willing to help customers.

5.4 Limitations and Implications for further research

This study assessment focused on the factors that affect the satisfaction level of enterprise (key account and SOHO/SME) customers of Ethio Telecom broadband internet service in Addis Ababa. Means the study is limited to key account and SOHO/SME customers in Addis Ababa and not all broadband internet user of Ethio telecom has participated in this study. Next, since the broadband internet service, in Ethiopia is a recent phenomenon there are very few empirical studies focusing on the level of customer satisfaction. Moreover, time and resources constraint are another limitation that the researcher faced in this study. This study was conducted in a short time frame so insufficient resources and scope has limited the ability of researchers to analyze more findings from different perspectives. Hence, it is difficult to say all the enterprise customers of ET are satisfied or dissatisfied based on this study because this study does not include all the customers of Ethio telecom and all types of service provide by Ethio telecom. So, with respect to future projects, since this study focused only on some of the enterprise customers; a further study with different scopes can be done by targeting other Enterprise customers, such as the residential or individual customers and those broadband internet users who are in regions.

Bibliography

Ahmed, I. N. (2010). effect of Service Quality on Customers Satisfaction: Empirical evidence from telecom sector of Pakistan. *Interdisciplinary Journal of Contemporary Research in Business, 1(12)*.

Andaleeb, S. &. (2006). Customer satisfaction in the restaurant industry: an examination of the transaction-specific model. *Journal of Services Marketing, 20(1),* 3–11.

Anderson, B. G. (2002). Domesticating broadband-what consumers really do with flat rate, always-on and fast Internet access. *BT Technology Journal, 20 (1),* 103-114.

Atalik, O. &. (2009). A Study to Determine the Effects of Customer Value on Customer Loyalty in Airline Companies Operating: Case of Turkish Air Travelers. *International journal of business and management, 4 (6),* 154-162.

Becta ICT Research (2008). What the Research says about Network Technologies in Teaching and Learning. Accessed October, 16 2013 @ http://www.becta.org.uk/page_documents/research/wtrs_network.pdf,

Bowling 1997, Burns & Grove, (1997) Research Methods for Attitude measuring. Open University Press, Buckingham.

Buttle K.E.Kurtz, (1995) "Marketing Research: Methodological Foundations", *5the ed.* The Dryden Press, Hinsdale IL. Orlando, FL: Chicago, IL

Carillat, Ekinci, Y. (2007). "A Review of Theoretical Debates on the Measurement of Service Quality: Implications for Hospitality Research", *Journal of Hospitality & Tourism Research*, Volume 26(3), P. 199-216

Caruana, A. M. (2000). Service quality and satisfaction: the moderating role of value. *European Journal of Marketing, 34 (11/12),* 1338-1352.

Chaudhuri A., K. F. (2005). An Analysis of the Determinants of Internet Access,. *Telecommunications Policy 29* , 731-55.

Christing Zhen-Wei Qiang and Carlo Rossotto (2009), with Kaoru Kimura, Economic effects of Broadband, in Information and Communications for Development: Extending Reach and Increasing Impact, *World Bank*, July, 2012.

Dwivedi. Y. K., K. K. (2007). Factors affecting consumers' behavioral intention to adopt broadband in Pakistan. . *Emerald Journal, Vol. 1, No. 3,* .

Fernandez-Gonzalez, A. &. (2007). Measurement and analysis of customer satisfaction: company practices in Spain and Portugal. . *International Journal of Productivity and Performance Management, Emerald Group Publishing Limited, Vol, 56* , 500-517.

Fowler, F. J. (1997 and 2002). *Survey research methods.* London: SAGE Publications Inc.

Frey, L. R. (2002). *Investigating communication: An introduction to research methods, 2nd edition, .* Boston: Allyn and Bacon.

Garcia-Murillo. (2005). The impact of unbundling.Communications and Strategies . *International broadband deployment: Vol, 57* , 83-108.

Gowan, M. S. (2001). Service quality in a public agency: same expectations but different perceptions by employees, managers, and customers,. *Journal of Quality Management, vol. 6,* , 275-291.

Gustafsson, A. J. (2010). The Effects of Customer Satisfaction, Relationship Commitment Dimensions, and Triggers on Customer Retention", . *American Marketing Association: Journal of Marketing, Vol. 69,* , 210–218.

ITU, 2003a. Promoting broadband: Background paper for workshop on promoting broadband. Electronic document at http://www.itu.int.

International Telecommunication Union (ITU). (2009) "ICT Infrastructure, Access Indicators in Ethiopia". Retrieved on October 18, 2013 from www.itu.int/md/dologin_md.asp?lang=es&id=D06-DAP2B.1

Isaac Smith, (1981) and Michael, M. 1. (1983). *Good Survey Design is A Matter of Good Planning*. Retrieved September 22 , 2013, from Good Survey Design is A Matter of Good Planning: http://www.pearsonncs.com/research-notes/sample-calc.htm

Jannadi, O. A.-S. (2000). Measurement of Quality in Saudi Arabian Service Industry, *International Journal of Quality and Reliability Management, Volume 17(9),* 949-965.

Joshi, S. K. (2010). o Service Quality in Telecom Sector: A Study of Telecom Service Providers of Chandigarh, Panchkula and Mohali. *International Journal of Management and Marketing Research, 1(1). Sri Krishna International Research*, 97-128.

Kangis, P. &. (2007). Awareness of service charges and its influence on customer expectations and perceptions of quality in banking. *Journal of Services Marketing, vol. 11 (2)* , 105-117 .

Kotler, P. &. (2006). *Marketing management (12thed).* New Jersey: Pearson Education, Inc., Upper Saddle River.

Muzammil Hanif, M. H. (2010). Factors Affecting Customer Satisfaction. . *International Research Journal of Finance and Economics. Vol, 60* , 44-52.

Mussie, D. (2010). Assessment of Service Quality and Customer satisfaction towards the Mobile Services of Ethiopian Telecommunications Corporation; the case of Addis Ababa. Unpublished.

Ogawa, H. (2005) R&D on wireless broadband communication systems: new generation ubiquitous mobile network (Invited Paper) [6776-02] National Institute of Information and Communications Technology (Japan)

Parasuraman, A. Z. (1985). A conceptual model of service quality and its implications for future research,. *Journal of Marketing, vol. 49,* , 41-50.

Parasuraman, A. Z. (January, 1994). Reassessment of expectations as a comparison standard in measuring service quality: implications for further research,. *Journal of Marketing, vol.* , 111-124.

Parasuraman, A. Z. (1988). SERVQUAL: A Multi Item Scale For Measuring Consumer Perception of Service Quality. *Journal of Retailing, V. 64,* , 12-40.

Peter Lange. (2010). *An Introduction to Visual Communication: From Cave Art to Second Life, (6th edition).* London.

Potluri, R. M. (2010). An Assessment of Ethiopian Telecom Customer Satisfaction. . *Global Journal of Management and Business Research, 10(4)* , 10-15.

Robert W. (2005). *Competition and Chaos: U.S. Telecommunications Since The 1996 Telecom Act.* DC: Washington, The Brookings Institution Press.

Rust & Zahorik, 1., & Anderson and E.W., F. C. (1994). Customer satisfaction, market share, and profitability: findings from Sweden. *Journal of Marketing, Vol. 58,* , 53-66.

Singh, R. &. (2010). SERVQUAL and Model of Service Quality Gaps: A Framework for Determining and Prioritizing Critical Factors in Delivering Quality Services. *International Journal of Engineering Science and Technology, 2 (7),* , 3297-3304.

Taylor, K., D. Kridel, L. Dunny-Deno, and J. Alleman. . (2003). *"Residential Demand for Access to the Internet." International Handbook of Telecommunications Economics, Vol. II, ed. G. Madden,.* Cheltenham: Edward Elgar; Cheltenham, UK.

Teicher, J. H. (2002). "E-government: a new route to public service quality", . *Managing Service Quality, vol. 12(6),* , 384-93.

Uebersax, John S.(2006); "Likert Scales: Dispelling the Confusion." Statistical Methods for Rater Agreement. Accessed September 162013<http://ourworld.compuserve.com/homepages/jsuebersax/likert.htm>.

Wang, Y. &. (2002). Service quality, customer satisfaction and behavior intentions: Evidence from china's telecommunication industry. . 4(6), 50-60.

Wisniewski, M. &. (2007). "Measuring service quality in the public sector: the potential for SERVQUAL", . *Total Quality Management, Vol. 7(4),* , 357-365.

Yongsoo Kim, Tim Kelly, and Siddhartha Raja, Jan. 2012, Building broadband: Strategies and policies for the developing world.

APPENDIX

Appendix I: Sample Size Determination

Recommended sample sizes for two different precision levels

Adapted from: Isaac and Michael, 1981; Smith, MF, 1983

Sample Size Selection Chart		
Population size	95% Confidence Level	90% Confidence Level
10	10	_
50	44	_
80	66	
100	81	51
125	96	56
150	110	61
200	122	64
250	154	72
300	172	76
400	201	81
500	222	83
1000	286	91
2000	333	95
3000	353	97
5000	370	98
7000	378	98
8000	381	99
9000	383	99
10000	385	99
15000	390	99
20000	392	100
25000	394	100
50000	397	100
100000	398	100

Table 4: **Recommended sample sizes for two different precision levels**

Adapted from: Isaac and Michael, 1981; Smith, MF, 1983

Appendix II: Reliability Test

1) Pilot Test reliability Test results

Reliability Statistics

Number of Valid cases	Cronbach's Alpha	Number of Items
20	.844	29

Item-Total Statistics

Description	Scale Mean	Scale Variance	Corrected Item-Total Correlation	**Cronbach's Alpha if Item Deleted**
Sex of Respondents	91	97.368	0.132	0.85
Age of Respondents	89	90	0.373	0.846
Education of Respondents	89	91.368	0.671	0.839
Type of Occupation	90.25	86.618	0.547	0.838
Job Position of respondents	90.3	102.011	-0.199	0.87
Work Experience	89.2	88.905	0.394	0.845
broadband internet user Experience	89.05	94.05	0.223	0.85
Customer Category	91.25	98.724	0	0.851
Service Category	89.25	98.724	0	0.851
Speed of ADSL service	88.7	84.011	0.538	0.839
Speed of EVDO service	89.75	90.408	0.689	0.838
Budget Monthly budget for BBI	87.45	89.418	0.387	0.845
No. of Computers shared the BBI Speed	88.05	83.945	0.609	0.835
Average Expectations on Assurance	87.8	95.853	0.261	0.848
Average Perceptions on Assurance	89.7	90.958	0.496	0.841
Average Expectations on Empathy	88	99.158	0.071	0.853
Average Perceptions on Empathy	89.25	85.882	0.761	0.832
Average Expectations on Network Quality Aspects	87.45	98.997	0.054	0.853
Average Perceptions on Network Quality Aspects	90	86.421	0.732	0.833
Average Expectations on Price factors	87.6	96.884	0.166	0.85

Average Perceptions on Price factors	89.85	90.029	0.568	0.839
Average Expectations on Responsiveness	87.8	99.221	0.075	0.854
Average Perceptions on Responsiveness	89.5	97.211	0.15	0.85
Average Expectations on Reliability	87.45	97.418	0.14	0.85
Average Perceptions on Reliability	89.55	88.05	0.667	0.835
Average Expectations on Tangibles	87.8	96.905	0.155	0.85
Average Perceptions on Tangibles	88.8	94.168	0.434	0.844
Overall Quality Evaluation	90.2	87.011	0.716	0.834
Overall Level of Satisfaction	90	83.579	0.86	0.827

2) Overall Reliability Test

Table 4.2 overall reliability test-result of Expectations, Perceptions and Overall satisfaction

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Average Expectations on Assurance	51.7656	30.230	.182	.857
Average Expectations on Empathy	52.0688	31.061	.031	.858
Average Expectations on Network Quality Aspects	51.5594	30.567	.139	.854
Average Expectations on Price factors	51.7156	30.267	.184	.856
Average Expectations on Responsiveness	51.8219	31.169	.005	.860
Average Expectations on Reliability	51.6813	30.544	.136	.857
Average Expectations on Tangibles	51.6719	31.262	-.005	.859
Average Perceptions on Reliability	53.6125	25.298	.728	.825
Average Perceptions on Responsiveness	53.5344	29.102	.439	.853
Average Perceptions on Tangibles	53.1094	27.997	.499	.839
Average Perceptions on Price factors	53.8438	25.907	.684	.858
Average Perceptions on Empathy	53.3250	26.088	.656	.860
Average Perceptions on Network Quality Aspects	54.0125	24.420	.806	.868
Average Perceptions on Assurance	53.7875	24.651	.755	.852
Overall Quality Evaluation	54.1938	24.928	.741	.823
Overall Satisfaction	54.0625	23.093	.898	.810

Appendix III: Correlation (Pearson: Two-Taild)

Correlations: Overall Perception of Factors								
Description	**OvSat.Lvl Overall Customers Satisfaction**	**Assurance**	**Empathy**	**Price aspect**	**Network Aspect**	**Responsiveness**	**Reliability**	**Tangibles**
Assurance	.846**	1	.589**	.643**	.733**	.278**	.391**	.157**
	.000		.000	.000	.000	.000	.000	.005
Empathy	.722**	.589**	1	.505**	.640**	.213**	.380**	.108
	.000	.000		.000	.000	.000	.000	.054
Price aspect	.755**	.643**	.505**	1	.618**	.256**	.435**	.193**
	.000	.000	.000		.000	.000	.000	.001
Network	.868**	.733**	.640**	.618**	1	.232**	.464**	.133*
	.000	.000	.000	.000		.000	.000	.017
Responsiveness	.301**	.278**	.213**	.256**	.232**	1	.141*	.006
	.000	.000	.000	.000	.000		.011	.918
Reliability	.523**	.391**	.380**	.435**	.464**	.141*	1	.172**
	.000	.000	.000	.000	.000	.011		.002
Tangibles	.196**	.157**	.108	.193**	.133*	.006	.172**	1
	.000	.005	.054	.001	.017	.918	.002	
Overall service quality Evaluation	.704**	.627**	.408**	.579**	.593**	.282**	.348**	.179**
	.000	.000	.000	.000	.000	.000	.000	.001
Total Items	320	320	320	320	320	320	320	320

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

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

Appendix IV: Regression Assumptions and Analysis Results

1) Evaluate variables normality

Descriptive Statistics

	N	Mean		Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
Overall Tangibles Perception	320	3.7500	.02424	.43369	-1.160	.136	-.658	.272
Overall Reliability Perception	320	3.1063	.02943	.52638	.118	.136	.452	.272
Overall Responsiveness Perception	320	2.9281	.01752	.31347	-1.651	.136	6.031	.272
Overall Assurance Perception	320	2.5969	.04568	.81713	-.176	.136	-.451	.272
Overall Empathy Perception	320	3.0594	.04031	.72109	-.089	.136	-1.067	.272
Overall Network Quality Perception	320	2.3719	.04479	.80115	.222	.136	-.367	.272
Overall Price aspects Perception	320	2.5406	.04026	.72022	.136	.136	-.289	.272
Valid N (listwise)	320							

The skewness and kurtosis statistics for all the variables are within the acceptable range for normality (-1.0 to +1.0). Hence, the assumption of normality for Multiple regression is fulfilled.

2) Multicolliniarity

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	Overall Tangibles Perception	.809	1.054
	Overall Reliability Perception	.736	1.358
	Overall Responsiveness Perception	.890	1.101
	Overall Assurance Perception	.386	1.591
	Overall Empathy Perception	.548	1.826
	Overall Network Quality Perception	.364	1.750
	Overall Price aspects Perception	.505	1.979

a. Dependent Variable: Overall Customers Satisfaction

Multicollinearity exists when Tolerance is below .10 and VIF is greater than 2.5. In this case, all of the tolerance values are greater than .10 and the VIF is less than 2.5. Thus, it is possible to assume multicollinearity is not a problem. In addition, multiple regressions also assume the range of variance for the dependent variable is uniform for all values of the independent variables. Hence, the researcher proceeds with the analysis assuming linearity and homoscedasticity are not a problem.

3) Regression Model

Regression Model: Variables Entered/Removed[a]							
Variables Entered	Overall Price aspects	Overall Tangibles	Overall Responsiveness	Overall Reliability	Overall Empathy	Overall Assurance	Overall Network Quality
Variables Removed	None						
Method	Entered						

a. Dependent Variable: Overall Customers Satisfaction

b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.951[a]	.904	.902	.27491	.904	420.150	7	312	.000	2.245

a. Predictors: (Constant), Overall Price aspects Perception, Overall Tangibles Perception, Overall Responsiveness Perception, Overall Reliability Perception, Overall Empathy Perception, Overall Assurance Perception, Overall Network Quality Perception

b. Dependent Variable: Overall Customers Satisfaction

Independent of residuals

Residuals are the prediction errors or differences between the actual score for a case and the score estimated by the regression equation. The Durbin-Watson statistic is used to test for the presence of serial correlation among the residuals. The value of the Durbin-Watson statistic ranges from 0 to 4 and as a general rule, an acceptable range is 1.50 - 2.50.

In this case, Durbin-Watson is 2.245 (above table) and within the acceptable range. Therefore, the researcher assumes independence of residuals.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	222.268	7	31.753	420.150	.000[b]
	Residual	23.579	312	.076		
	Total	245.847	319			

a. Dependent Variable: Overall Customers Satisfaction

b. Predictors: (Constant), Overall Price aspects Perception, Overall Tangibles Perception, Overall Responsiveness Perception, Overall Reliability Perception, Overall Empathy Perception, Overall Assurance Perception, Overall Network Quality Perception

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-1.598	.207		-7.704	.000
Overall Tangibles Perception	.025	.036	.021	1.616	.107
Overall Reliability Perception	.051	.034	.042	3.509	.001
Overall Responsiveness Perception	.042	.052	.033	1.785	.075
Overall Assurance Perception	.227	.030	.207	10.890	.000
Overall Empathy Perception	.104	.029	.101	7.096	.000
Overall Network Quality Perception	.346	.032	.316	12.589	.000
Overall Price aspects Perception	.201	.030	.193	8.159	.000

a. Dependent Variable: Overall Customers Satisfaction

Appendix –V- Questionnaire

ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

Questionnaire to be filled by Broadband internet users in Addis Ababa

Dear respondent,

I am post graduate student in MBA from St. Mary's University. This questionnaire is part of the research project conducted for the fulfillment of the requirements in Master of Business Administration. And the general purpose of this survey is to investigate the level of Ethio Telecom customer's satisfaction with regard to broadband internet services and to explore the factors that affect their satisfaction. This survey targeted on broadband internet users of Ethio Telecom only.

As your responses to the statements below are of great importance to my project work, hence you are kindly requested to give thoughtful and honest answer to each question. And be assured that all the information you provide will be treated with strictest confidentiality and is used only for research purpose.

Meanwhile, if you have any question(s) to ask please do not hesitate to contact me at any time through the following address: 0911 509859/tommhailu2007@gmail.com

Thank you for your cooperation,

Thomas Hailu

Please Note that:-

- ✓ you are not required to write your name
- ✓ Please mark ✓or **X** in the boxes available.

SECTION I - BACKGROUND INFORMATION

This section of the questionnaire refers to background of the respondent.

1. Sex: ☐ male ☐ female

2. Age: ☐ 20 – 25 ☐ 26 – 30 ☐ 31 – 35 ☐ 36 – 40 ☐ Above 40

3. What is you level of education?

☐ Certificate ☐ Diploma ☐ 1st Degree ☐ 2nd Degree and above

4. Occupational information; what is your occupation?

☐ Government Employee ☐ NGO Employed ☐ Self Employed &/or PLCs

☐ Service Companies (Bank, Ins., Hotel, college) ☐ Other, please specify _____

5. What is your position in your company?

☐ IT head ☐ Management member ☐ Network administrator

☐ Staff/ End user ☐ Others, please specify _____

6. For how long have you been working in the company?

☐ 1 to 3 years ☐ 4 to 6 years ☐ 6 to 8 years ☐ 8 to 10 years ☐ above 10 years

SECTION II: This section of the questionnaire explores your Experience and Preferences, if any, with regard to Broadband Internet.

1. For how long have you been a broadband internet services customer of Ethio Telecom?

☐ Less than 2 years ☐ 2 to 4 years ☐ 4 to 6 years ☐ 6 years and above

2. To which categories of the following Ethio Telecom customer are you belong to?

☐ Key Account (Big Enterprise) ☐ Small and Medium Enterprise (SOHO/SME)

☐ Other, Please specify _____

3. Which Broadband internet services are you subscribed in, from ET?

☐ ADSL (Wired) ☐ EVDO (Wireless) ☐ **Both** ☐ Other, Please specify _____

4. If you are an ADSL internet service user, what is the internet speed of your subscription?

☐ 256 to 512kbps ☐ 1-2mbps ☐ 3-4mbps ☐ 6-8mbps

☐ If **10mbps** and above, Please specify_____

5. If you are an EVDO internet service user, which broadband internet **bundles** are you subscribed?

☐ 1GB ☐ 2GB ☐ 4GB

6. How much is your (organization's average) **monthly budget** for Broadband Service (in Ethiopian **birr**)?

☐ Less than 1,000 ☐ 1,001 to 3,000 ☐ 3,001 to 5,000 ☐ 5,001 to 7,000

☐ 7,001 to 10,000 ☐ **Other**, Please specify_____

7. **For how many computers** do you use/share the speed that you subscribed?

☐ Less than 5 Computers ☐ 6 to 10 Computers

☐ 11 to 15 Computers ☐ 16 to 20 Computers

☐ **Other**, Please specify_____

Section III. SERVQUAL ITEMS

Based on your experience **as a customer of ET broadband internet service, please rank your** expectations **and your** perceptions **of the service provided by Ethio telecom. Given below is a list of statements rating on a scale of** 1 to 5 **and you can circle the number that reflects your feeling.**

Please Note that: *Strongly Disagree **(SD)=1** Disagree**(D)=2***
*Neutral (Neither Agree nor disagree)**(N)=3** Agree**(A)=4** & Strongly Agree**(SA)=5***

SERVQUAL statements		A. What are your expectations of ET's broadband service? (**your Expectations)**						B. How do you **actually found/feel with** ET's broadband internet services provisioning, **(Your Perception)?**				
	Tangibles	***SD***	***D***	***N***	***A***	***SA***		***SD***	***D***	***N***	***A***	***SA***
1	ET has up-to-date equipments to use for broadband internet service.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**
2	The physical facilities (such as office layout, furniture etc) visually appealing at the business centers of ET.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**
3	Employees (frontline, sales personnel and technicians) of the service provider are well dressed and appear neat.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**
4	Materials and equipments (such as modem, cooper, and fiber and customer premises equipment) will be in line with the type of services provided.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**

	Reliability	**your Expectations**						**Your Perception**				
5	The behavior of employees creates confidence in customers.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**
6	ET Employees will have the knowledge to answer customers' questions.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**
7	ET employees do understand the specific needs of their customers.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**
8	Service provider does keep its records accurately.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**
	Responsiveness	***SD***	***D***	***N***	***A***	***SA***		***SD***	***D***	***N***	***A***	***SA***
9	Employees who involve in the delivery of the service (such as Front line, customer care, sales persons and technicians) will give prompt service to customers.	1	2	3	4	5		1	2	3	4	5
10	Employees who involve in delivery of the broadband internet service will always be willing to help customers.	1	2	3	4	5		1	2	3	4	5
11	Service provider will have operating hours convenient to all its customers.	1	2	3	4	5		1	2	3	4	5
12	Employees of the service provider will never be too busy to respond to customers' request promptly.	1	2	3	4	5		1	2	3	4	5
	Assurance	***SD***	***D***	***N***	***A***	***SA***		***SD***	***D***	***N***	***A***	***SA***
13	The broadband internet service is provided at the promised time.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**
14	Employees of ET do tell customers exactly when the requested broadband service be performed.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**
15	When employees of the service provider promise to do something by a certain time, they will do so.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**
16	Customers will feel assured that service requests are duly (properly) followed up.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**
	Empathy	***SD***	***D***	***N***	***A***	***SA***		***SD***	***D***	***N***	***A***	***SA***
17	Employees of service provider will give customer individual attention.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**
18	ET Employees will be consistently nice or courteous with customers.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**
19	When a customer faces a problem, employees of service provider do show a sincere interest in solving it.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**
20	Overall Employees of service provider do have their customer's best interests at heart.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**

	Broadband internet Network Aspects	Your Expectation						Your Perception				
21	Service provider provides network of 24hours a day and 7days a week without break.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**
22	Service provider's broadband internet speed is high.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**
23	Service provider has consistent speed of broadband internet service without major interruptions.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**
24	There will not be significant delay over maintenance of broadband connection.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**
	Broadband internet Price aspects	***SD***	***D***	***N***	***A***	***SA***		***SD***	***D***	***N***	***A***	***SA***
25	The service provider sets appropriate subscription (initial) fees for broadband services.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**
26	The **usage** tariffs for broadband internet of the service provider are fair and worthwhile.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**
27	ET has full of choice of different types of broadband internet access to subscribe at different levels of tariffs.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**
28	Overall the broadband internet services of Ethio Telecom are affordable.	1	2	3	4	5		**1**	**2**	**3**	**4**	**5**

Section IV: Satisfaction and overall quality. (Please encircle the number of your answer)

1. How do you evaluate the ***overall quality*** of broadband internet services provided by ET?

Very poor	poor	Neutral	Good	Very good
1	**2**	**3**	**4**	**5**

2. Overall, ***how satisfied*** are you with the broadband internet services provided by ET?

Highly Dissatisfied	Dissatisfied	Neutral	Satisfied	Highly Satisfied
1	**2**	**3**	**4**	**5**

3. Dear respondent, in which area of broadband internet delivering process do you suggest Ethio Telecom has to improve **(most)**? (*Please use the space below for additional comment)*

_____
_____
_____
_____

Thank you for your Time!

DECLARATION

I, the under singed, declare that this thesis is my original work, prepared under the guidance of Dr. Tesfaye Debela. All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree. It is offered for the partial fulfillment of the degree of MA in Business Administration [MBA].

Name	**Signature & Date**

St. Mary's University, Addis Ababa

March, 2014

ENDORSEMENT

This thesis has been submitted to St. Mary's University School of Graduate Studies for examination with my approval as a university advisor.

_____ _____

Advisor **Signature & Date**

St. Mary's University, Addis Ababa

March, 2014