

SERVICE QUALITY OF BROADBAND INTERNET IN ETHIOTELECOM

A Thesis Submitted to the Graduate Program of the Department of Management and the College
of Business and Economics of Addis Ababa University

In Partial Fulfillment of the Requirements for the Degree

Master of Science Management

(TQM & OE)

By

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Addis Ababa University

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Signature Approval Form

This is to certify that, this thesis entitled as “*Service Quality of Broadband in Ethio telecom*”, submitted to the Graduate program of the Department of Management and the College of Business and Economics of Addis Ababa University in partial fulfillment of the requirements for the Degree Master of management (TQM & OE), done by **Daniel Mekuriaw** is an reliable work carried out by his under our guidance. The theme also embedded in this thesis has not been submitted earlier for the award of degree and any other diploma in our university to the best of our knowledge.

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Declaration

I, the undersigned, declare that this research project is my own work and effort and it has not been submitted anywhere for award. Where other sources of information have been used, they have been duly acknowledged. I have prepared autonomously except for guidance and suggestion of my thesis advisor. It produced for partial fulfillment of the requirements for the Degree Master of management (TQM & OE).

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Certification

This is to certify that Daniel Mekuriaw has carried out his research work on the topic entitled “service quality of broadband internet in Ethio telecom.” This study is an original work and is suitable for the submission for the reward of master of management degree (TQM & OE).

Dedication

I would like to begin thanks the almighty of god for happen this day and give knowledge and strength to carry out my research. I am dedicating this thesis to for my beloved mother Anchinalu Bishaw, for a great supporting that starting to learn MSC program through financial and moral support. I am dedicating my family member and best friends for a great contribute in my thesis without any hesitations.

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Acronyms & Abbreviations

ADSL.....	Asymmetric Digital Subscriber Line
ETC.....	Ethiopian Communication Corporation
SLA.....	Service Level Agreement
BBI.....	Broadband Internet
SERVQUAL.....	Service Quality Scale/ Model
MB/S.....	Mega Bite per Second
WIFI.....	Wireless fidelity
SOHO/SME.....	Small Office Home Office/ Small and Medium Enterprise
KB/S.....	Kilo Bite per Second
DSL.....	Digital Symmetrical Line
SDSL.....	Symmetrical Digital Subscriber Line
WLANS.....	Wireless Local Area Network
ITU.....	International Telecommunication Union

Abstract

The aim of this thesis was to assess the service quality of Ethio telecom broadband. In particular, the study deals about the broadband internet of enterprise customers of Ethio telecom, Addis Ababa City only. In this study was tried to investigate how is the performance of service quality of broadband in Ethio telecom, Addis Ababa. For the purpose of the study both primary and secondary data are used. The primary data are collected through distributed SERVQUAL instrument questionnaires and interview with enterprise customers of broadband internet in Ethio telecom. Secondary data are collected books, previous studies, unpublished data of Ethio telecom and broacher's. The research approach employed is deductive research approach. The research design employed is both descriptive and explanatory research design is utilize i.e. both qualitative and quantitative research design used to find out the performance of service quality of broadband internet in Ethio telecom. A sample of 399 was selected through using simple random sampling from the total population. The reliability of the five(5) service quality dimensions which are assurance, empathy, reliability, responsiveness and tangibility were used to analyze the overall service quality, overall customer satisfaction, gap model service quality analysis, and used to analyze independent variables influence on dependent variables of the study. As of the finding, all independent variables (assurance, empathy, reliability, responsibility and tangibility) influenced the dependent variables (customer satisfaction), and explained through linear regression analysis. There is a gap on the service quality dimensions form customer expectation and perception (the customer expectation exceeds actual performance of service). In the last chapter discussed the summery of findings, recommendations and limitations of the study.

Key words: Service Quality of Broadband in Ethio telecom

CHAPTER ONE: INTRODUCTION

This chapter includes background of the study, statements of the study, objectives of the study, research questions and significance of the study, delimitation of the study, limitations of the study and organizations of the study.

1.1. Background of the Study

In this competitive world, internet is more essential as other basic needs to communication and to do work efficiently and effectively in developed and developing countries. No modern economy runs without internet usage or integral information communication and telecom infrastructure. 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 the type of access or type of device used for internet access, or method of payment. Broadband internet technology used for fast growth of world economy and improve the life style of peoples through quality education delivering, health care and communication for all world users at low cost with high speed internet access (Dwived et al., 2007).

In the recent year wireless technology used by the society including our country Ethiopia and other traditional communication technologies are decreased such as dial-up service, radio spectrum, this means the communication technology rapidly growing in the world both developed and developing country. When we look our country Ethiopia is having low broadband usage habit with compare from other world (World Bank report).

According to Charles M. Davidson & Michel J. Santorelli, 2008; suggest that network operators are always invest huge amount of money and resources to build good internet infrastructure.

Wire- based network owners i.e. Telephone and cable companies invest high amount of money currently to upgrade their respective networks for customers with voice, video, and others broadband internet services (Charles M. Davidson & Michel J. Santorelli, 2008).

Broadband is high speed internet access technology that provided by a series of technologies give users to send received data through a greater speed over current traditional telephone lines (Angele A. Gilroy & Lennard G. Kruger, 2008).

In the recent years, wireless communication systems have developed rapidly. The various types of services provided by the wireless networks are growing significantly causing huge volume of traffic flow. This has resulted into the ever-increasing demand of wireless spectrum. So, the Radio Spectrum has now become a scarce resource. Today, most part of the existing usable spectrum has been already licensed. Hence, the task of accommodating the demand of bandwidth with such less available spectrum is challenging. When we compare Ethiopian broadband internet user with the other world it is very low due to low interest of users and inadaptability of the technology and the price of the broadband internet service. Fixed broadband Internet subscribers in Ethiopia were reported at 559, 000 in 2016, according to the World Bank collection of development indicators, compiled from officially recognized sources. As seen from the chart below, before 2012 fixed broadband internet user in Ethiopia has below 0.5% and after 2014 fixed broadband user increased.

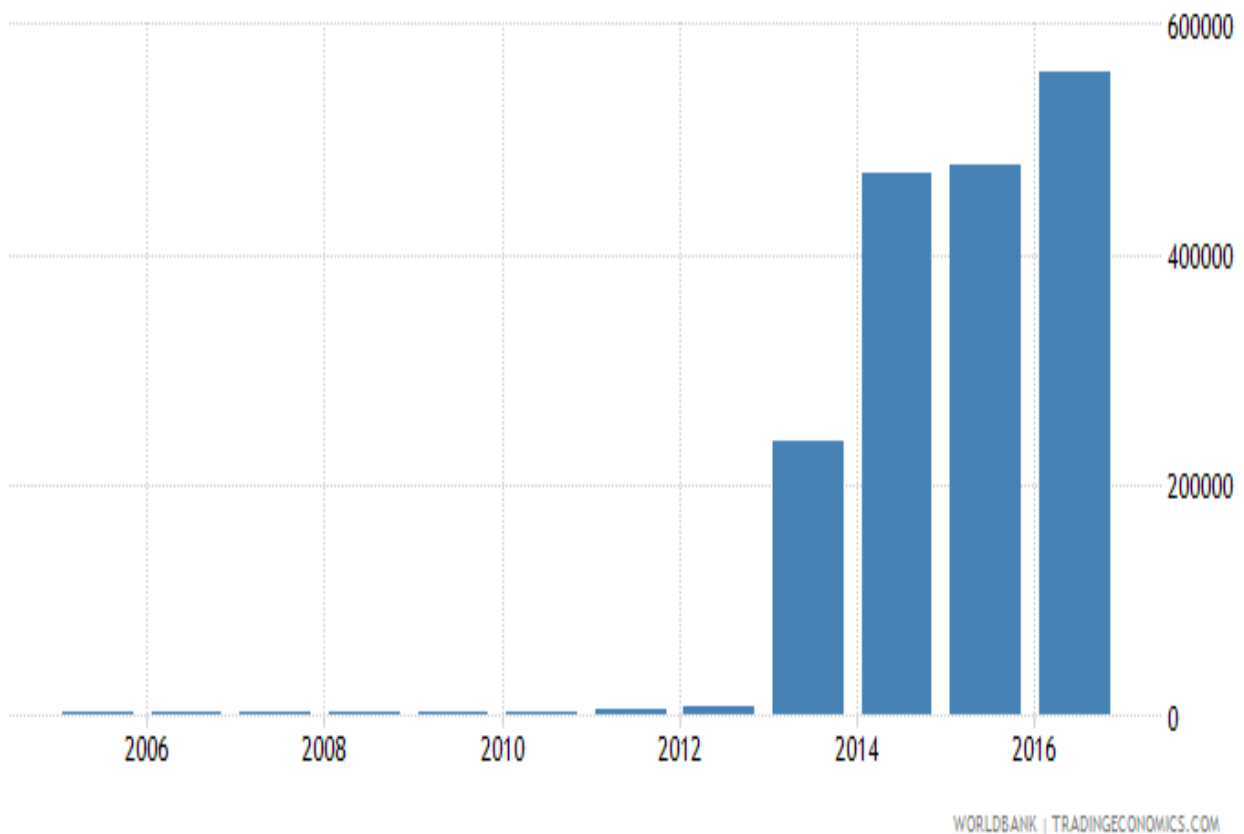


Figure 1: Number of internet user in Ethiopia (Source: TradingEconomic.com)

In Ethiopia, internet start at the time of Ethiopian Telecommunications Corporation (ETC), the country's only internet service provider, has announced it started providing broadband internet service as of march 2005. According to an ETC news release recently, the corporation has transformed the narrowband service, which has so far been in, to a broadband internet service.

The project, which was launched six months ago, has cost some 7 million birr (about 800,000 US dollars), the news release said. The previous service was inefficient and it was serving not more than 15,000 clients, it said, adding that the broadband internet service can provide quality and efficient service to some 100,000 customers. The news release said the corporation has worked out low price tariff to attract more customers and that the existing post-payment customers would be linked to the new pre-payment service to enable them get high quality services. It also said the broadband internet service would enable watch live or recorded transmissions of television and

radio programs, educational media transmissions, and attend exhibitions, meetings and forums apart from video and other services.

Fixed broadband internet users in Ethio telecom for last four years have been increasing. It is 11,110, 11,297, 14,172 in the years 2015, 2016 and 2017 in Addis Ababa. And enterprise customers of broadband internet users in Addis Ababa in 2018 were 7, 997. This year the customers of broadband users are decreased that means almost 6,175 customers already terminated the service from 2017.

1.2. Statement of the Problem

Internet is one of the basic things in our daily life in the modern world to activate works effectively and efficiently. It is used to functionalize a lot of things by using internet for communication. Most traditional communications media, including telephony, radio, television, paper mail and newspapers are reshaped, redefined, or even bypassed by the Internet, giving birth to new services such as email, Internet telephony, Internet television, online music, digital newspapers, and video streaming websites. Newspaper, book, and other print publishing are adapting to website technology, or are reshaped into blogging, web feeds and online news aggregators.

The Internet has enabled and accelerated new forms of personal interactions through instant messaging, Internet forums, and social networking. Online shopping has grown exponentially both for major retailers and small businesses and entrepreneurs, as it enables firms to extend their “brick and mortar” presence to serve a larger market or even sell goods and services entirely online. Business-to-business and financial services on the Internet affect supply chains across entire industries. From internet access uses, fixed broadband internet is the mostly used in Ethiopian enterprise customers to communicate and activate their works well.

Fixed broadband internet service is an Internet service with wired access. It can be provided through copper or fiber depending on the speed requested and other factors. Ethio telecom provides two types of broadband internet services:

Limited Fixed Broadband Internet: is a packaged service based on volume, mainly targeting residential customers. In the limited broad band internet it is a fixed broadband technology which

transmits digital information at a high bandwidth through copper wire lines to your home and business. The service is built based on your needs in three different monthly packages of 2GB, 4GB & 6GB. The service allows you to access both internet and fixed telephone services with one connection.

Unlimited Fixed Broadband Internet: It is unlimited in volume and sold with a fixed monthly rent with different access speed options. Unlimited fixed broadband internet service is available for residential customers with speed options starting from 512Kbps up to 10Mbps.

Despite the aforementioned roles of internet services in socio-economic development of one's country, internet penetration is too limited. This is due to different factors that affect broad band internet, customers is one 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). In Ethio telecom, there are many studies and survey results which stated internet users dissatisfaction.

Service quality is considered an important tool for a firms struggle to differentiate itself from its competitors (Ladhari, 2008). According to (William M. Pride, 2001), service is an intangible product involving product a deed, performance, or effort that cannot be physically possessed. Characteristics of services are intangibility, inseparability of production and consumption, perishability, heterogeneity, client based relationships and customer contact (William M. Pride, 2001).

An assessment of how well a delivered service conformance to the clients expectations. Service quality focuses on meeting and exceeding of the user needs and experiences for the user to satisfy the customer expectations (Gronroos, 1982, & Haffman & Basteson, 2001).

The delivery of high quality services is one of the most important and most difficult tasks that any service organization faces (William M. pride, 2001).

Service quality is difficult to measure. Service has been described as heterogeneous, intangible and inseparable (Bebko, 2000). According to Sachader and Verma, 2004, can assessment of quality measurement dimensions in service providers have two service quality measurements;

internal and external. Service quality is defined as customers perception of how well a service meets or exceeds their expectations. Service quality is not judged by the organization other than customers. The difference is critical because of forces service marketers to examine their quality from user's point of view (William M. pride, 2000). Perceived service is the outcome of the consumer's view of the service dimensions, which are both technical and functional in nature (Gronroos, 1984).

Ethiotelecom has done change management structure in Dec 2010 due to in ability to get good result from the previous Ethiopian telecommunication corporation which was owned by France Telecom. Ethiotelecom was managed, on a management contract arrangement from 2010 to 2013 June, by France Telecom, and was required to comply with Ethiopian Government orders. The government said, it outsourced the management as ETC was not able to meet the demands of the fast-growing country. It also said that telecommunications services would not be privatized, at least not in the near future. Ethiotelecom generates revenue of over US\$ 300 million for the Ethiopian government, and was dubbed a "cash cow" by the previous Prime Minister Hailemariam Desalegn. At the time, the Ethiopian telecommunication corporation (ETC) was unable to satisfy customers that render of service of the company as other international telecom company. But the company's revenue is high without any good service of product or network and other.

As result, Ethiotelecom after change management structure is initiated to do to enhance customer satisfaction of enterprise customer. The company build new strategy, sales promotion strategy, communication strategy (SMS and 994), customer service strategy and new product, service strategy and service assurance strategy. However, as to knowledge of the researcher, after structural management changes witnessed the customer are not satisfied by the company's service delivery. Particularly, broadband internet service customers are presenting their complains due to problem of broadband service quality, low speed, network quality, network infrastructure, maintenance service problem and connectivity problem after sale of the product. In this study, problem of the study the researcher tries to observe the service quality of broadband internet of Ethiotelecom in Addis Ababa. At the end of the study, the researcher determines the service quality of broadband internet service of enterprise customers in

Ethiotelecom using the SERVQUAL instrument (tangibles, reliability, responsiveness, empathy, assurance) given by Parasuraman, et al. (1988).

1.3. Research Questions

This study has the following research questions.

How is the performance service quality of broadband internet service in Ethiotelecom, Addis Ababa?

Are SERVQUAL dimensions have significance influence on the performance of broadband internet service quality in Ethiotelecom, Addis Ababa?

What are the factors affecting the service quality of broadband internet service in Ethiotelecom, Addis Ababa?

1.4. Objectives of the Study

1.4.1. General Objective

The general objective of this study is investigating service quality of broadband internet in Ethiotelecom.

1.4.2. Specific Objectives

The specific objectives of this study are to:

- To investigate the broadband internet service quality of enterprise customers in Ethiotelecom, Addis Ababa.
- To measure the influence of SERVQUAL dimensions of on broadband internet service quality.
- To examine reliability of service quality of broadband internet is at time of failures in Ethiotelecom.
- To investigate the performance of broadband internet service quality in Ethiotelecom of enterprise customers, Addis Ababa.

1.5. Significance of the Study

The study is meant to investigate the service quality broadband internet service of enterprise customer. Many researchers did not conduct studies on service quality of broadband internet in Ethio telecom, which also initiated the researcher to undertake the study. Therefore, the results of the study will help to identify the factors affecting the service quality of broadband internet. The study can help the company get insight about its important services quality dimension and customers satisfaction. In addition from this study the company can observe network quality and price level of internet, and allocate their resource to give quality internet service for the customer.

1.6. Delimitation of the Study

In this study was only included broadband internet service quality of only enterprise customer of Ethio telecom, Addis Ababa. Enterprise customers such as government organization, NGO, financial institutions, industries, service and product manufacturing and ; SOHO customers such as internet café, other small enterprise customers why because due to time, cost and data limitation So this study will include only enterprise customers of broadband internet in Ethio telecom not include residential customers of the company.

1.7. Limitation of the Study

Recently broadband internet is not fully implemented sine it is a recent phenomenon and not largely used for economical and other purposes due to lack of technological adaptation and allocation of resource for internet uses. As result, the researcher and government not conducted the role of internet for socio-economic activates.

But internet is one of the basic things for our daily life at recent time it used for shopping, communication internal and abroad and for other personal uses. In our country, due to lack of knowhow and high price the customer used internet not a lot. Therefore, the researcher faced difficulty to get their finding of all customers the service quality of broadband internet in Ethio telecom due to difficult of demographic, limitation of cost and time.

1.8. Organization of the Study

The study is organized in to five chapters. The first chapter presents background of the study, statement of the problem, research questions, and objectives of the study, significance of the study, limitation of the study, delimitation of the study and organization of the study. The second chapter is about review related literatures. While, chapter discussed methodology of the study chapter four is about data presentation, data analysis, and interpretation. Lastly, chapter five stated the finding, conclusions and recommendation of the study.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

In this chapter the researcher deals about concepts of broad band, importance of broad band, training and development for employees customer- oriented concept, service concept, concept of quality, service quality concept, customer satisfaction, relationship between service quality and customer satisfaction, customer expectations and performance theoretical analysis of service quality model, development and evolution of SERVQUAL mode gap model of service quality and conceptual framework.

2.1 The Concept of Broadband Internet

Broad band is one type of internet with high speed internet access it can use for every time and every hour and used to connect the internet for small and large business activities to all residential and organizations (Lee, 2007). Broadband internet can use the improvement of works efficiency, effectiveness and access a connection for all operation to execute their new and old business.

There is no unique definition available for internet that is acceptable by the world economy of users. From that one type of internet is broadband internet; which is high speed internet access technology to run out world economic activity. Broadband internet is always on internet access and fast downloads and uploads stream (Madakam, S., R. and Tripathi, S., 2015).

Information and Communication Technology (ICT) is an umbrella that includes any communication devices or application, encompassing, radio, television, cellular phones, computer and network hardware and software and satellite system (Chinecherem V. & AronIzang, 2015).

Broadband internet is high speed internet access that is faster than the traditional communication technology such as dial- up access. It includes several high speed transmission technology which are digital subscriber line (DSL), cable, fiber, wireless and satellite (Chinecherem V. & AronIzang, 2015).

The term “broadband” was initially introduced; it was by differentiation from dial – up service, and was typified by two distinct characteristics which are speed and always on (Ofcom, 2009).

Broadband is high speed networks, focus on fiber, capacity to support future applications, ubiquitous seamless connectivity, next generation connectivity and universal access and next generation plans (Ofcom, 2009).

Broadband gives efforts to foster a universally networked society connected over high capacity share the believe that moving to the next generation of networked communication will provide social, economic, environmental and cultural benefits (Christing Zhen-Wei Qiang& Carlo Rossotto& Kaoru Kimura, 2009).

According to international communication union (ICU) suggested that broadband internet can access the internet connection speed of 256kb/s and higher speed for both download and upload streams.

Broadband internet technology used for fast growth of world economy and improve the life style of peoples through quality education delivering, health care and communication for all world users at low cost with high speed internet access (Dwived et al., 2007).

In the recent year wireless technology used by the society including our country Ethiopia and other traditional communication technologies are decreased such as dial-up service, radio spectrum, this means the communication technology rapidly growing in the world both developed and developing country. When we look our country Ethiopia is having low broadband usage habit with compare from other world (World Bank report).

According to Charles M. Davidson & Michel J. Santorelli, 2008; suggest that network operators are always invest huge amount of money and resources to build good internet infrastructure. Wire- based network owners i.e. Telephone and cable companies invest high amount of money currently to upgrade their respective networks for customers with voice, video, and others broadband internet services (Charles M. Davidson & Michel J. Santorelli, 2008).

Broadband is high speed internet access technology that provided by a series of technologies give users to send received data through a greater speed over current traditional telephone lines (Angele A. Gilroy &Lennard G. Kruger, 2008).

According to (Angele A. Gilroy & Lennard G. Kruger, 2008); there are multi transmission media or technologies that can be used to provide broadband internet access such as:-

Cable: - the same cable network that currently provides television services to consumers is being modified to provide broadband internet access. Because of cable networks are shared by users, access speed can decrease during peak hours. Most cable networks support speeds comparable to DSL. These network improvements allow cable modem service to be able to support up to 30 Mbps (Angele A. Gilroy & Lennard G. Kruger, 2008).

Digital subscriber line: - is a modem technology used to convert existing copper telephone lines into two-way high speed data conduits. DSL speeds diminish as distance increases from the telephone company's central office. It uses existing copper phone lines to deliver download and upload broadband speeds typically of 1.5 Mbps to 7 Mbps. (Angele A. Gilroy & Lennard G. Kruger, 2008).

Wireless: - mobile or fixed wireless transmits data over the airways from towers or antennas to receivers (Angele A. Gilroy & Lennard G. Kruger, 2008). Wireless broadband connects a home or business to the Internet using a radio link between the customer's location and the service providers' facility. Wireless technologies using longer-range directional equipment provide broadband service in remote or sparsely populated areas where DSL or cable modem service would be costly to provide or fiber network installations may be too capital intensive (Robert, 2005).

Fiber: - it is another broadband technology from optical fiber to the home (FTTH). Optical cable, already used by business as high speed links for long distance voice and data traffic and has tremendous data capacity (Angele A. Gilroy & Lennard G. Kruger, 2008).

Satellite: - it is a broadband technology but not offered all operators. Satellite broadband internet service offered by three network providers: Hughes Network system (Direc way), Starband (sepaenetinc) and wild Blue. Downstream and upstream speeds for satellite broadband depend on several factors, including the provider and service package purchase, the consumer's line of sight to the orbiting satellite, and the weather. Speeds may be slower than DSL and cable modem, but the download speed is still much faster than the download speed with dial-up Internet access. Like other broadband technologies satellite is shared medium. But it can easily be disrupted in bad weather (Angele A. Gilroy & Lennard G. Kruger, 2008).

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.

There are a myriad of competing technologies which can provide the bandwidth required to 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.



Figure 2: competing Broadband technologies (Left fixedlineandright wireless)

Source: Corning's Broadband Technology Overview 2019

2.2 Importance of Broadband Internet

Technology is impacting every part and parcel of our daily life in our rapidly changing world from where and how we contact work for economically, socially, environmentally politically and so on. Broadband is an accelerated advancement technology having an access to affordable and abundant technology becoming quickly for building good infrastructure for all our time as like transportation, electricity, and water (Diane Kruse, 2016).

According to federal communications commission (FCC) in 2015 defined as broadband having the ability to download at 25mb/s and upload speeds of 3mb/s.

Broadband internet is better to enrich our life style and entertainment such as enriched education, world class health care, improved public services and safety, internet on things and telework (Dwived et al., 2007).

Broadband is important to get a solution for managerial and regulatory obstacles (Cane, 1992). In developing countries there are three barriers for wider distribution of internet such as government policies, laws and habits or adoptions of internet (Goodman, press, Ruth & Rutkowski, 1994). There are a lot of factors for internet development in the countries level such as government regulatory policies, local capacity, domestic and foreign investment in ICT, self-sufficiency and degree of privatization of telecom sector or monopolization (Mbarika & Byrd, 2009).

For instance the technological adoption of our country Ethiopia is low when compare from other world countries. Because of telecom sector and other technological sectors owned by government only or monopolized. So there is no option to select the best technology company.

2.3 Training and Development for Employees

Training is a type of activity which is strategic, regular and it results in enhanced level of skill, knowledge and competency that are necessary to perform work effectively (Anderson 1993). Development is abroad ongoing multi-faceted set of activities (training activities among them) aimed at bringing someone or an organization up to another threshold of performance, often to perform some job or a new role in the future (Mc Namura, 2008).

Training is the best profession in the world. The training professional touches almost every one every day. Training is an organized way that the organizations provide employee enhance to build employee quality. Employees are new and existing. Training is a systematic approach of learning for growth of knowledge. It used to develop individual, teams and groups (Goldstein & ford, 2002).

Training is used to improve technical and non-technical skills of employees of the organization. Due to this can build service quality for the customers (Manju & Suresh, 2011). Through training can develop the acquisition of new knowledge and skills for the purpose of growing their mind and thinking ability (Sheri-Iynne, 2007). Organization can improve the knowledge of employees

through plans development programs to increase the capacity of employees of the organization (Khawaja & Nadeem, 2013). The productivity of employees can measure units of output (Rohan & Madhumita, 2013). Training is valuable for productivity of the organizations (Ekaterini & Constantinos- Vasilios, 2009).

Many communities in Colorado find they are lacking adequate Internet service do not have access at all, creating a “digital divide” among those with access and those without. The digital divide typically exists between those in cities and those in rural areas. Rural areas are costlier and difficult to provide advanced broadband networks. However, even in Colorado’s metropolitan areas, many citizens lack access to abundant, affordable and reliable advanced broadband services. For businesses, robust bandwidth is the foundation for innovation as well as the key infrastructure needed to succeed and capitalize on the Internet’s applications and benefits. Research demonstrates a direct correlation between businesses use of Internet applications and revenue growth and productivity. With today’s economy more dependent on innovation and connectivity to survive and thrive, providing businesses with high speed Internet is critical to keep businesses competitive.

2.4 Necessary of Training for Quality Service

Training plays an important role in developing a productive work force and finally tuning processes to increase profits. Training also helps people and organizations manage change. Because organizations are continuously changing techniques, goals, equipment, people and locations, all members of the workforce require training to support these changes. According to (Tessin, 1978) suggest training used to not only employees, it also used to organizations to achieve objectives effectively and efficiently. Training is used for individual to improve their knowledge gap and having a confidence. Trainers are involved in providing services that address all these aspects. If you are a beginning trainer, you will most likely start with interventions that deliver knowledge and new skills. It used to for organizations to fill the gaps of employees and prepare procedures for daily activities (Tessin, 1978).

Every year, most organizations budget money for training-over \$ 70 billion in the United States and over \$ 130 billion worldwide. The volume of money and effort suggests that corporations believe training is important. What do they know about training that justifies this much

investment? For starters, training plays an important role in developing a productive work force and finally tuning processes to increase profits. Training also helps people and organizations manage change. Because organizations are continuously changing techniques, goals, equipment, people and locations, all members of the workforce require training to support these changes. There are four critical aspects of a coordinated comprehensive training approach. In most efficient organizations, the four are aligned toward the same corporate goals.

Introduce new skills to experienced employees change career paths due to job elimination. But would not trainers run out of people to train? Not likely. Organizations are required to continually make changes. Technology advances continue to influence how trainers do their jobs. The skilled labor pool continues to shrink worldwide. Thousands of new employees enter the work force or change jobs every week. That keeps at least a few trainers busy. (Elaine Biech).

Technical training is the process of teaching employees how to more accurately and thoroughly perform the technical components of their jobs. Training can include technology applications, products, sales and service tactics, and more. Technical skills are job-specifics of opposed to soft skills, which are transferable (Neil Kokemuler).

In Ethio telecom many trainings gives to employees to enhance employees and achieve the organizational goals.

But for this study in Ethio telecom gives Technical and advanced training. After take training the employees of the company can give quality of service for customers and by satisfying the customers of the company can achieve the organizational goals. After transfer +-training for employees according to their profession and department the company's training division evaluates the trainees through after test training and questionnaires distribute to the employees when doing how the trainees execute their work after training.

2.5 Customer-Oriented Concept

Customer-oriented is paying a great attention to the need and opinions of customers. And the needs for all companies to have a strong customer focus.

Customer focus is increased completion means companies are taking a new look at the way they do business. The more successful companies today improve their on customer focus, spending

more time satisfying their customers in order to ensure they leave favorable reviews and become repeat customers. Many customer-focused companies are more concerned with customer relationships than they are with immediate sales numbers (Victoria Bailey).

2.5.1 Customer Orientation

Customer orientation is a group of actions taken by a business to support its sales and service staff in considering client needs and service staff in considering client needs and satisfaction their major priorities. Business strategies that trend to reflect a customer orientation might include; developing a quality product appreciated by consumers; responding promptly and respectfully to consumer complaints and queries; and dealing sensitively with community issues.

In the company of Ethio telecom has given attention to customer focus and customer orientation. The company employee has trained-based employee in all division of company's structure and gives technical and advanced training for employee to give a modern and talented service and product according to customer experience and customer needs. Ethio telecom takes techniques of customer-centric means the company's focus on customer needs through invented products and service by cheap price and quality product to satisfy the customers. Ethio telecom take ideas and complains from customer and make research on product and service analysis after that select a good idea and needs from customer experience to give quality of service as international telecom company.

2.6 Service Concept

A study carried out by (Johns, 1998, p.954) defined that a word service have a lot of manages. Service can explained intangibility, perishability, variability, performance, expectation, and inseparability (Muide & Pirrie, 2006).

Service is any one acts an activities or performance that gives for other users. Service can be defined as intangibility (Kotler, 2006).

Service quality is an abstract and indefinable concept the well-known features intangibility, perishability, heterogeneity, inseparability, of production and consumption. Why because those service features, definitions of quality can vary from person to person and from condition to condition (Johns, 1998, p. 954).

Service is admittedly the distinction between goods and services is not always perfectly clear (K. Douglas & John E. G. Bateson). Services are an activities that given by person to person. In the exchange of experience, professional skills, and efforts for others not included physical involvement (Lovelock & Wirtz, 2007).

Services are intangible and heterogeneous, at the same time being judged by the performance, expectation and experience of those who use them (Parasuraman, Zeithaml & Berry, 1985). In fact, providing pure service is difficult, if not impossible. A pure service would contain no tangible elements. In reality, many services contain at least some tangible elements, such as the menu selections at a rain forest café, the bank statement from internal banks, or the written policy from an insurance company (K. Douglas, John E.G. Bateson).

In understanding of service quality, the service provider must understand what the users look for and how to come quality of service. For understanding service quality (Gronroos, 1982) describes service quality have two distinguishing elements:-

A clear conception of service quality- it describes how the end users perception the quality of service and

An understanding of how service is affected and influenced and which type of resources are useful for building quality of service.

A defining characteristic of a pure service is intangibility. That is, pure service cannot be seen, touched, held, or stored-they have no physical manifestation. Purchasing a pure service does not result in anything that can because of their intangibility, pure services are essentially processes that are experience: "service yield psychological experiences more than the yield physical possessions" (Schneider & Bowen, 1995, p. 19). Of course, not all services are "pure services," and many have tangible components. That is, services are not all intangible, but rather are arranged on a continuum of intangibility.

2.7 Concept of Quality

Quality can be defined for physical products and with less precision for service (Antony Oodan, K. Ward, 2003).

Defining quality in service is especially difficult because of the intangible nature of the service offering (Stephen W. Brown). And also can be defined as quality may vary from person to person and situation to situation.

To understand the total quality, we must first understand quality (David L. Goetch). Customers that are business will define quality very clearly using specifications, standards, and other measures. This makes the point that quality can be measured and defined. Quality does not exist simply without any measurement (Irons, 1997). Quality only measured from customer expectation and perception of service and goods. The value should be drive factors and experience of the customers (Iron, 1997). Although few customers could be defined quality if asked, all known it when they see it. This makes the critical point that quality is in the eye of the beholders. With the total quality approach, customers ultimately define quality (David L. Goetch, Stanley B. Davis). According to W. Edward Deming has to say about quality “quality can be defined only in terms of representative”. Quality has many criteria and the criteria deference continuously those peoples value various criteria.

Quality is the extent to which the customers or users filling or value of goods and services of expectations are matched (Gitlow et al. 1989).

Quality is done for conformation to requirements (Philp B. Crosby). A degree to which exceed customer expectation and requirements (W. Edwards Deming). Quality is a degree to which a set of characteristics to fulfills the quality requirements (J. Johnson, 1995). In order to satisfy customers needs and expectations, a service provider must do the following things (J. Johnson , 1995):-

Determine what the user wants are and expected from those service providers and agreed from to meet or exceed a specification of customers.

Ensure that service providers must do to conform to agreed specification.

According to (David L. Goetsch S. Davis) quality differs from other traditional way of doing business, how can achieve objectives efficiently and effectively. The distinguishing features of quality are customer focus (internal and external).

Customer focus on:-

Measure: - statistical process control, benchmarking and quality control.

People: - quality is built in, quality is expected, is not inspected and employees are empowered.

Processes: - continuous improvement and “good enough” never good enough.

Measure, peoples and processes are the legged stool of total quality (David L. Goetsch S. davis).

Now that we have discussed what we mean by services, we will turn to a discussion of what we mean quality. While defining quality many seem easy at first glance, it difficult to establish a single, universal definition for it. “Quality is an ambiguous term. On the one hand, everyone knows (or thinks they know) what quality is on the other hand, formulating a comprehensive and uniform definition is a big if not insurmountable problem” (Kasper, Van Helsdingen, de Vries, 1999, p. 184). As described below, there are several different ways to approach the definition of quality: the philosophical approach, the technical approach, and the user-based approach (Schneider, Benjamin, & Susan S. white, 1998 cited).

Philosophical Approach

First, there is a philosophical approach to quality (Kasper et al., 1999; oliver, 1997). This perspective roles that quality is synonymous with innate excellence (e.g., attainment of superiority, achieving desirability, or becoming useful; Oliver, 1997, p. 1966) and that it cannot be defined or analyzed further than that under this approach, people know quality when they see it, but they cannot define quality further (seconds like the definition of pornography to us!). While this view of quality might have its supporters, it is useless from either a research or practice perspective to consider quality as unknowable and immeasurable (Schneider, Benjamin, & Susan S. white, 1998 cited).

Technical Approach

In this approach defining quality is in stark contrast to the first, and considers quality from an objective and absolute perspective. Alternatively called manufacturing based quality, objective quality, or conformance quality, this approach to quality is concerned with the extent to which a product conforms to technical standards (Kasper et. al., 1999; Oliver, 1997). In this approach, quality is often measured objectively in terms of number of deviations from these standards or number of defects (Schneider, Benjamin, & Susan S. white, 1998 cited).

User-Based Approach

In this approach to defining quality is the user based one, in which the quality of a product is determined by its user. This definition of quality takes the view that quality is subjective and things on the individual perceptions of customers. The quality of a product is high when customers say it is and this is not always when the product conforms to technical criteria. This user-based view toward quality has been particularly appealing in trying to define quality in the realm of services. The user based view of quality is attractive for service quality because of the nature of service delivery. First, the increased intangibility of service delivery means in the extreme that people can not physically touch services but can only perceive them in their minds. Thus measuring the quality of service delivery as perceptions of the user is particularly appropriate for assessing the quality of services (Schneider, Benjamin, & Susan S. white, 1998 cited).

The five service quality dimension (Parasuraman et al. &Zeithaml, 1985).

Reliability: - represents the service provider's ability to perform service dependably and accurately: this includes such qualities as dependability, consistency, accuracy, right the first time! And so on.

Responsiveness: - represents the willingness to help customers and provide prompt service in a timely manner; this includes helpfulness, friendliness, warmth, willingness, openness, and so on.

Empathy:- involves the caring personal attention which the firm offers its customers; this includes ease of approach and contact, jargon free, understandable communication, an understanding of the customers' needs and so on.

Assurances:- reflect the knowledge and courtesy of employees and their ability to inspire trust and confidence in the customer; this includes competence, experience, qualifications, skills, courtesy, politeness, credibility, trust worthiness, honesty, and security of all types (physical, financial, confidentiality, and so on).

Tangibles: - consist of the appearance of physical facilities, equipment, personnel and communication materials used.

2.8 Service Quality Concept

According to (William M. Pride, 2001), service is an intangible product involving product a deed, performance, or effort that cannot be physically possessed. Characteristics of services are intangibility, inseparability of production and consumption, perishability, heterogeneity, client based relationships and customer contact (William M. Pride, 2001).

An assessment of how well a delivered service conformance to the clients' expectations. Service quality focuses on meeting and exceeding of the user needs and experiences for the user to satisfy the customer expectations (Gronroos, 1982, &Haffman & Basteson, 2001).

The delivery of high quality services is one of the most important and most difficult tasks that any service organization faces (William M. pride,2001).

Service quality is difficult to measure. Service has been described as heterogeneous, intangible and inseparable (Bebko, 2000). According to Sachader and Verma, 2004, can assessment of quality measurement dimensions in service providers have two service quality measurements; internal and external. Service quality is defined as customer's perception of how well a service meets or exceeds their expectations. Service quality is not judged by the organization other than customers. The difference is critical because of forces service marketers to examine their quality from user's point of view (William M. pride, 2000).

The most common used measurement of service quality gap is SERVQUAL approach (Hoffam and Bateson, 2001). The main aiming giving quality of service is to satisfy customers of the company and for the reason of entrant new customers. And used to judge the service good or not according to customers wants and expectations (Haywood, 1988).

According to Negi, 2009, suggested that users perceived quality of service from service provider that is the attention of customers increased due to high contribution of business competitiveness and developing customers satisfaction. It also used to made quality of service build to understand by service firms. It also used to measure it and made necessary improvement for the gap between perception and expectations. The customers who has developed the perception of service quality and increase the demand and less tolerant of assumed in a service quality or product (Douglas and Connor, 2003).

Service providers can able to deliver quality of service for the customer, then the customer satisfaction level became increased (Ghylin et al, 2008). The firms must understand the basic features of service that are inseparable, intangible, perishable, and heterogeneity , that is service quality can be easily measured (Parasuraman et al, 1985). Service quality can be measured according to customer's expectation from firms and customers perception, and the firms can understand from those gaps (Parasuraman et al, 1985).

In Ethio telecom, there is a need to understand customer's expectation regarding service quality. Different researchers have developed models in order to get a better understanding of service quality.

Service firms executes may not always what features cannot high quality to customers in advance, what features a service must have in order to meet customer needs, and what levels of performance on those features are needed to deliver high quality of service. The firms not always predict what types of services are expected from the customers (Parasuraman et al., Zeithaml, 1982).

2.9 Customer Satisfaction

Customer satisfaction is meaning based on customer expectation from firms and customers experience from past on a specific service (Cronin & Taylor, 1992). Customer satisfaction can measure from the overall assessment of service based on customer experience (Jones & Suh, 2000). In Ethio telecom, there is a relationship between users and service firms based on the assessment of different service perceived and contact. According to (Cronin & Taylor, 1992), customer satisfaction can measure how products and services provided by firms to meets customers expectation and can defined as a total number of customer satisfaction. Customer

satisfaction can define as the assessment of the service and products by the customer in terms of the products and services has meet customers wants and expectations (Zeitaml&Bitner, 2000). According to (Holbrook, 1994), customer satisfaction is one of the best goals of marketing movement and can used to clarify essential elements of marketing anxiety. In this study, customers are used to assess the service quality of Ethiotelcom through considering numerous importance service quality measurements, which is the company provides a lot of service for customers. This means customers can measure a service quality by considering specific service quality dimensions in order to find which aspects are satisfying the users.

2.10 Relationship between Service Quality and Customer Satisfaction

According to (Parasuraman et al, 1985), when the customer perceived quality of service from their firms high, then customers satisfaction will became increased. Saravanan&Rao, 2007, and Lee et al, 2000, who are admit that customer satisfaction based on the level of service quality that provided by the firms. According to Ngi, 2009, the relation between customer satisfaction and service quality take an extensive time. The quality of service has become an aspect of customer satisfaction. Different studies are shows in relation of service quality and customer satisfaction more specific about the definition and measurements of service quality and satisfaction. Satisfaction has wider concept whereas service quality has focuses on service quality dimensions but customer satisfaction and service quality have certain common things (Wilson et al., 2008, p. 78). And also other factors such as price and products can affect customer satisfaction, and if the customer perceived quality of service from their firms it is a component of customer satisfaction (Zethaml et al., 2006, p. 106-107).

Also, they pointed out that service quality is more abstract than customer satisfaction because, customer satisfaction reflects the customers feelings about many encounters and experiences with service firm while service quality may be affected by perceptions of value (benefit relative to cost) or by the experiences of others that may not be as good.

2.11 Customer Expectations and Performance

How do consumers choose among various service offerings, and how do they evaluate the quality of the service offerings they receive? When purchase a physical goods, consumers employ various tangible cues to ascertain quality. These include style, color, hardness, feel,

package, brand name, price and so on. In contrast, when purchasing a service, consumers are forced to rely on a smaller number of available cues. Customer expectations are which beliefs about service delivery used to as abases of which performance of service judged. It is customer's hopes from service companies (kalidas. M.G, 2007).

Understanding customer expectations is a prerequisite for delivering for superior service. Customers compare perception with expectations when judging a firms service. And service expectations can be categorized into five service quality dimensions such as assurance, reliability, responsiveness, empathy and tangibility. Customer service expectations are dual-leveled and dynamic which are desired and adequate (A. Parasuraman, Leonard L. & Berry Valarie A. &Zeithaml, 1985).

In many cases, tangible evidence is limited to the service provider's physical facilities, equipment and personnel. In a service where personal experience of quality is a high priority, consumers who are attempting to evaluate service before purchase seek and rely on information from personal (such as word-of mouth or social media) sources rather than from non-personal sources (such as advertisements). Customers can make judgment about the actual service performance that release from service company (Kalidas. M. G, 2007).

2.12 Theoretical Analysis

2.12.1 Service Quality Model

As described earlier, service quality has been a lot of definition by different researcher and in different articles and different people gives as his own understanding. It is difficult to conclude by few definitions. According to (Parasuraman et al., Leonard L. Berry &zeithaml, 1985), service quality is more difficult to evaluate. Quality is a comparison between expectation and performance. Service quality is a measure of how well the service level delivered matches customer expectations (Lewis & Booms, 1983).

SERVQUAL model is used to measure a service quality of products and services (Parasuraman et al., Berry &zeithaml, 1985). SERVQUAL model is used through focus group interview, 22 service quality questions and executive interviews. Service quality has become a great difference because of measure based on service providers. Service quality is abstract and elusive concepts because of well-known characteristics are intangibility, perishability, heterogeneity and

inseparability. In service quality, comparing customer expectation and performance, conformation and disconfirmation of expectations and meeting or exceeding customer expectations (Gronroos, 1982).

SERVQUAL and SERVPERF scales are used to measure the service quality direct comparison of the two measurement scale. SERVQUAL scale is used to service quality gaps of customer expectation and perception. SERVPERF scale is used to measure the performance of service quality of service firm (Parasuraman et al., Zeithaml & Berry, 1990).

According to (Cronin J., Joseph, Jr, Taylor & Steven A., 1992), SERVPERF scale can used to measure service quality of the forms. It measured according to the perception of the service deliver for the customers. The term SERVQUAL scale found and proposed by Parasuraman et al., Zeithaml and Berry, 1985 & 1988; with satisfaction maintain in related to the size and direction of disconfirmation of a person experience. Based on empirical work, they identified 22 service quality dimension questions construct to measure the service quality of customers with gaps expectation and perception.

2.13 Development of SERVQUAL Model

The gap model of service quality was developed by (Parasuraman et al., Berry & Zeithaml, 1985) but recently (Zeithaml and Berry, 2003) described. A Service quality dimension refers to psychological dimensions that form the basis of a customer's perceived quality of service. SERVQUAL scale is the most often used approach for measuring service quality gap, it has been compare customer expectation before delivering the service and customer perception after delivered the service (Gronroos, 1982 & Lewis and Booms, 1983 & Parasuraman et al., 1985). SERVQUAL scale is the predominant method used to measure customer perception of service quality. Parasuraman et al., 1985 first proposed 97 attribute to measure a service quality of customer perceptions. After that make a refinement of attribute of service quality dimensions, this means which are the best dimensions used to measure service quality and after that come to ten dimensions such as tangibility, reliability, responsiveness, communication, credibility, security, competence, courtesy, understanding, knowing, customers, and access. After that the second consolidation stage has become on concentrated dimensionally and reliability. The last

decisions made in to five dimensions of service quality (Parasuraman et al., Berry & Zeithaml, 1985). The five service quality dimensions are: -

Assurance: - is knowledge and courtesy of employees and their ability to convey trust and confidence. This dimension is likely to be particularly important for the services that the customer perceives as involving high risk and about which they feel uncertain about the ability to evaluate. Trust and confidence may be embodied in the person who likes customers to the company. According to mean of assurance; the researcher used SPSS version 24 from all respondents.

Empathy: - it means to caring individualized attention the firm provides its customers. In some countries, it is essential to provide individual attention to show to the customer that the company does best to satisfy his or her needs. Empathy is an additional plus that the trust and confidence of the customers and the same time increase the loyalty. In competitive world the customers' requirements are rising day after day and it is the company's duties to their maximum to meet the demands of customers, else customers who do not receive individual attention will search elsewhere.

Reliability: - it is ability to perform the promised service dependably and accurately. Reliability means that the company delivers on its promises-promises about delivery, service provision problem resolutions and pricing customers want to do business with companies that keep their promises, particularly their promises about this service outcomes and core service attributes.

Responsiveness: - is willingness to help customers and provide prompt service. In this dimension emphasis attentiveness and promptness in dealing with customers' requests, questions, complaints and problems. Responsiveness is communicated to customers by length of time they have to wait for assistance, answers to questions or attentions to problems. Responsiveness also captures the notion of flexibility and ability to customize the service to customer needs.

Tangibility: - since services are intangible customers derive their perception of service quality by comparing the tangible associated with service provided. It is the appearance of the physical facilities, equipment, personnel and communication materials.

2.14 Gap model of service quality

The gap model of service quality (aka the customer service gap model or the 5 gap model) is a framework which can help us to understand customer satisfaction. The model shows the five major satisfaction gaps that organizations must address when seeking to meet customer expectations. The model was first proposed by Parasuraman, Valarie Zeithaml, and Leonard L. Berry in 1985. In the Gap Model of Service Quality, customer satisfaction is largely a function of perception. If the customer perceives that the service meets their expectations then they will be satisfied. If not, they'll be dissatisfied. If they are dissatisfied then it will be because of one of the five customer service gaps.

Gap1- Not knowing what user wants to receive:-

This gap also provider gap and the difference between customer expectations and customer perception .customer expectations are standards or reference points that customers bring to the service experience, whereas customer perceptions are subjective assessments of actual service experiences. Customer expectations often consist of what a customer believes should or will happen. For example, when you visit an Ethio telecom shop, you expect a high level of service, one that is considerably superior to the level you would expect in a company. Closing the gap between what customers expect and what they perceive is critical to delivering quality service; it forms the basis for the gaps model. To close the all-important customer gap, the gaps model suggests that four other gaps – the provider gaps – need to be closed. The provider gaps are shown below.

Gap 2: Not selecting the right design of the service and established standards:-

Standards signal to contact personnel what the management priorities are and which types of performance really count. When service standards are absent or when the standards in place do not reflect customers' expectations, quality of service as perceived by customers is likely to suffer. When standards do reflect what customers expect, the quality of service they receive is likely to be enhanced. Management, sometimes believe that customer expectations are unreasonable or unrealistic One of the most important ways to avoid provider gap is clearly to design services without oversimplification, incompleteness, subjectivity and bias.

Gap 3: Not delivering the standard service:-

It relates to the actual performance of service in the face of previously established specifications. When service standards are absent or when the standards in place do not reflect customers' expectations, quality of service as perceived by customers is likely to suffer.

This gap is the discrepancy between development of customers-driven service standards and actual service performance by company employees. Even when guidelines exist for performing services well and treating customers correctly, high-quality service performance is not a certainty. Standards must be backed by appropriate resources (people, systems and technology) and must be enforced to be effective – that is, employees must be measured and compensated on the basis of performance along those standards.

Gap 4: Not marrying performance with promises:-

It relates to the service actually provided and external communications (service specifications announced in the media or other communication channels). Not matching the actual performance to promise in this gap shows Promises made by a service company through its media advertising, sales force and other communications may potentially raise customer expectations, the standards against which customers assess service quality. The difference between actual and promised service therefore has an adverse effect on the customer gap. Broken promises can occur for many reasons such as over-promising in advertising or personal selling, inadequate coordination between operations and marketing, and differences in policies and procedures across service outlets.

Gap 5: Established according to the four previous gaps (gap 1, gap 2, gap3 and gap 4)

This gap established the functions of the above four gaps such as

Gap 1- Not knowing what users want to receive

Gap 2- Not selecting the right design of the service and established standards

Gap 3- Not delivering the standard service

Gap 4- Not marrying performance with promises

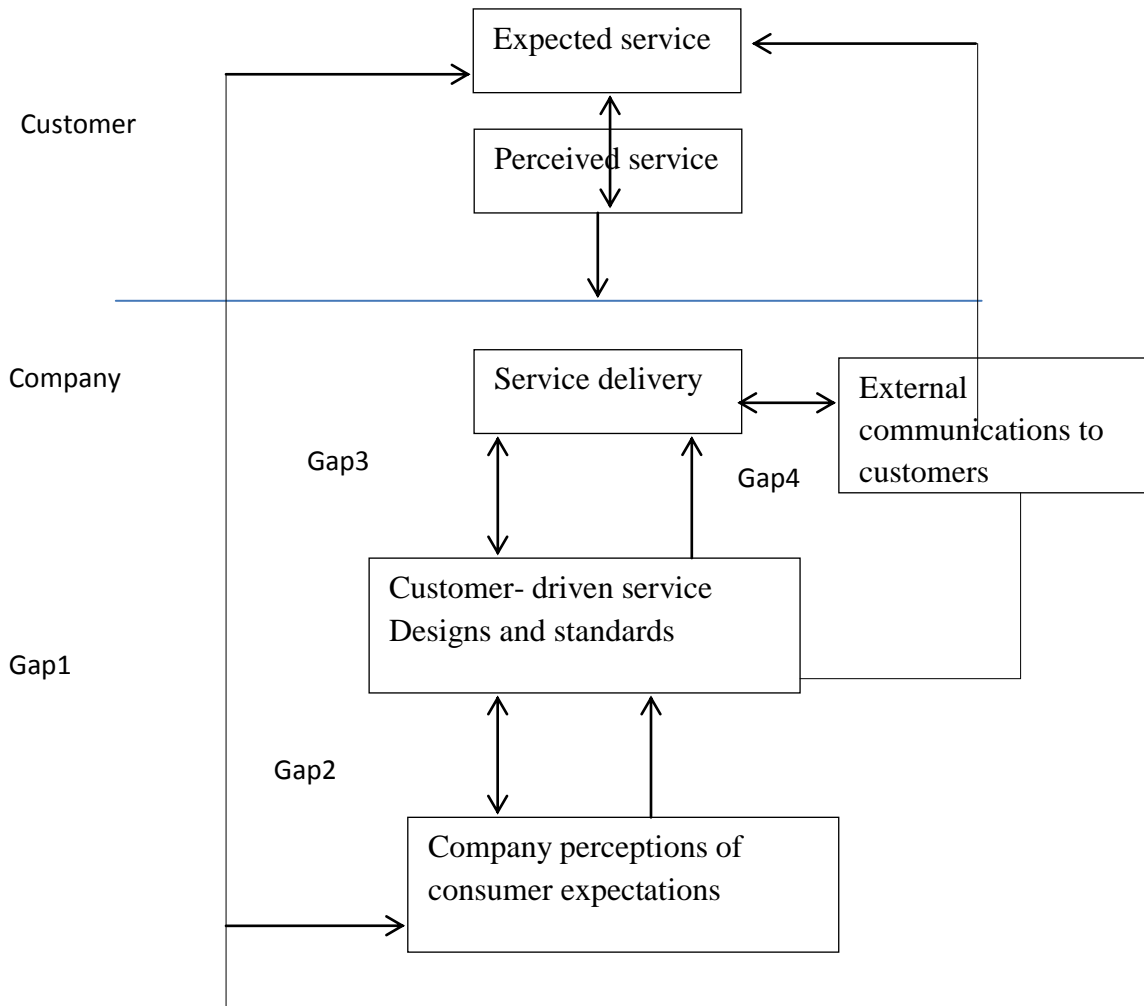


Figure3:Gap models of service quality

2.15 Conceptual Framework

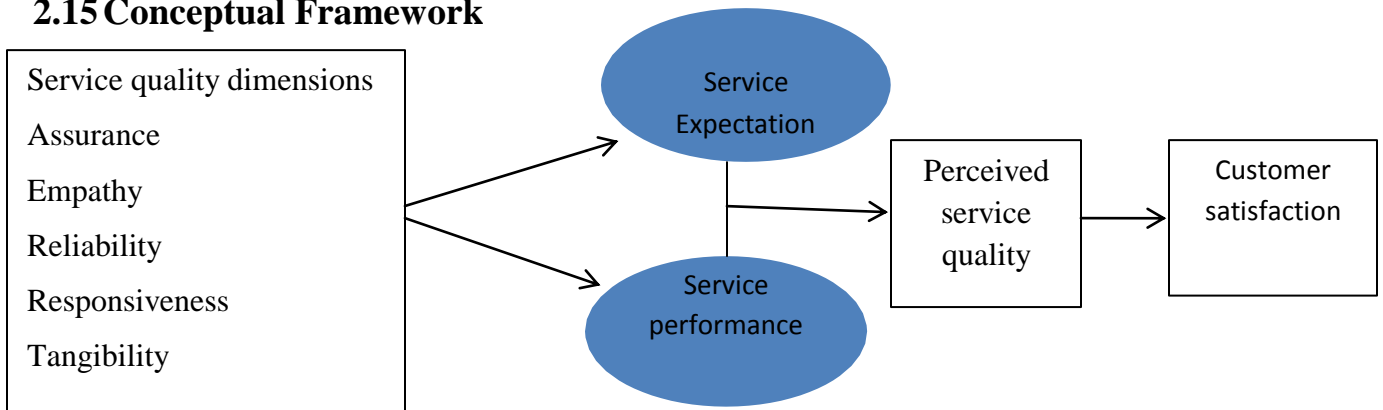


Figure4.SERVQUAL the gap model

CHAPTER THREE: RESEARCH METHODOLOGY

In this chapter the researcher included research design and approach, data collection method, population of the study, sampling method sample size determination, methods of data analysis, research instruments research hypothesis and regression analysis

3.1 Research Design and Approach

In this study the researcher used deductive research approach- an approach which goes from theories to data and applying. Observing lots of theories and collect valuable data, express the hypothesis operationally, test the operational hypothesis, examine a specific outcome of enquiry and modified the theory were well noted.

The researcher used a mix of both qualitative and quantitative research designs; in particular the study used both explanatory and descriptive research designs. In descriptive research the researcher provide additional information (finding) about the topic and more used lot of data and used for higher order of level research. Explanatory research explains the relationship between variables, and established causal relationship between variables.

The reason for the researcher use of both quantitative and qualitative research designs is to explain the relationship between variables and compare the service quality dimensions one by one quantitatively, and to assess the satisfaction of the customers that cannot be measured in quantity, but through looking of finding of the research and measured the overall satisfaction of enterprise customers of broadband internet of Ethio telecom in Addis Ababa.

3.2 Data Collection Method

This study has used both primary and secondary sources of data. Primary data were collected from enterprise customers of Ethio telecom that users of broadband internet through self-prepare questions and self-observation about the services quality and performance of broad band internet. The research questions developed based on likert scale questions to investigate the services quality of broad band internet for enterprise customers of Ethio telecom. Likert scale type use fixed choice response format and are designed to measure the attitude and opinions of the

respondent towards the given sentences which explain the factors (Bowying, 1997; Burns & Grove, 1997).

Secondary data were collected from Ethio telecom data base internet and report, research journals and articles, unpublished materials of Ethio telecom. Data regarding to the background or history of Ethio telecom the price level, network coverage and quality and speed, and the overall price factors and network stability of the company were collected from secondary data sources.

3.3 Population of the Study

The general population of the study was the broadband users or customers of Ethio telecom in Addis Ababa. Broad band internet customers in Ethio telecom have four categories based on the company services level agreement (SLA). The company's categorization is based on the revenue generated and due to the customers' ability to use the package.

3.4 Sampling Method

All customers of broadband internet subscribers of Ethio telecom defined as enterprise customers of broadband internet users of Addis Ababa in Ethio telecom that is key account (KA) and small office and home office and small micro enterprise (SOHO/SME). In this study stratum technique is employed. From stratum sampling simple random sampling is used. The reason for the use of simple random sampling is in this study is due to the subjects are randomized and the best ways to give assurance that results are unbiased. Also, it is less expensive and easy to use simple random sampling.

In this study the current population through time series of broad band users of enterprise customers of Ethio telecom in Addis Ababa were defined as of 7,997 and the sample is planned at 95% of confidence level and 5 is error of margin. The respondents were almost 5% or from the total population of enterprise customers of broadband internet were 399 respondents. This is based on recommended sampling plan developed by (issue and Micheal, 1981; Smith, MF, 1983).

3.5 Sample Size Determination

As try to describe above, the company's total population of enterprise broadband customers of Ethio telecom in Addis Ababa is 7,997. Based on this distribution the researcher choose stratified

sampling method and based on their proportionate size the total sample size became 399 at (95% of confidence level) and (5% of it error) in which the researcher used 5% of sample size from the total population to proportionate the sample size.

3.6 Methods of Data Analysis

The researcher used qualitative and quantitative technique of research methods. And in this research the researcher used summarized the reliability of SERVQUAL dimensions first reliability test.

3.6.1 Reliability Test

To measure the consistence of scale by using Cronbach's Alpha coefficient the researcher employed two cases i.e., by small cases and by test the overall valid cases reliability of the item. The researcher first test 40 valid cases by selecting randomly from the total and the second test of 365 valid cases to show the overall consistency of dimensions.

3.6.2 Descriptive Analysis

In this study the research used descriptive analysis to summarize a given data set mean, standard deviation, frequency distribution to investigate or assess the services quality of broadband internet of Ethio telecom in Addis Ababa.

As described above, study used both quantitative and qualitative analysis techniques and to measure the descriptive statistics applied a measure of frequencies command to determine quartiles, percentiles, tendency (mean, medium, mode), measure of dispersion (standard deviation, variance, minimum and maximum value and measure of Kurtosis and Skewness by using the statistical package for social science (SPSS) version 24. SPSS was used after the collect data from respondents through distribute of questionnaires in terms of seven (7) dimension items (assurance, reliability, empathy, responsiveness and tangibility).

Descriptive statistics (frequency distribution) was applied to assess the service quality of broadband internet and customer satisfaction and consist analysis of SERVQUAL and SERVPERF dimensions analyzed by using linear and multiple regression and the researcher used statistical tools to identify the service quality gap, mean of each SERVQUAL items through computed both customers expectation and perception.

The study has dependent and independent variables. The dependent variable is customer satisfaction and the independent variables are assurance, empathy, reliability, responsibility, tangibility, price and network. So, customer's satisfaction depends on 7 independent variables:

Customers satisfaction denoted by “y”

Independent variables denoted by “x”

Error term (residual value) denoted by “Ui”

Independent variables affect the result of dependent variables

$$Y = a + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5 + B_6X_6 + B_7X_7 + U_i$$

Y= customer satisfaction

X₁ (assurance), x₂ (empathy), x₃(reliability), x₄(responsiveness), x₅ (tangibility) U_i= error term (residual value) = unpredictable or unknown factors of dependent variables

B= coefficient

3.7 Research Instrument

The researcher used to collect the data from respondents and secondary data from the company data base and world band reports and other different books that more valuable for this study. The data was collect from respondents by distributing questionnaire (five point likert scale questions) to enterprise customers. The questions that ranges from one (1) up to five (5) which means (1) for strongly disagree, (2) disagree, (3)neutral, (4) agree, (5) strongly disagree to investigate the services quality of broad and internet of enterprise customers of Ethio telecom in Addis Ababa. The secondary data that collected as try to describe in the above from database of Ethio telecom and directly contact from concerned employees and divisions of the company after getting permission from the company and other published and unpublished literatures.

The researcher used in this study that as try to discuss in above the questions prepared based on SERVQUAL and SERVPERF models of measurement of service quality that are five dimensions of service quality. In measuring service quality, foundation theory has been created by (Parasuraman, Zethiaml and berry (1988). Who suggested five (5) dimensions of services

quality i.e. assurance, empathy, reliability, responsiveness and tangibility are as important factors to measure the services quality. In this research the researcher asked respondents to evaluate the service quality of broadband internet services of Addis Ababa Ethio telecom enterprise customers. The questionnaires item has designed to score likert scale type. Thus, respondents are required to choose (1) for strongly disagree, (2) for disagree, (3) for neutral, (4) for agree, and (5) for strongly agree. So the respondents give their own answer by using circle from their customer perception and actual performance of broad band internet of Ethio telecom.

Table 3.1 Service quality instruments

Dimensions	Code	Items
Assurance	AS1	Employees who instill confidence in customers.
	AS2	Making customer's feel safe in their transactions.
	AS3	Employees who are consistently courteous.
	AS4	Employees who have the knowledge to answer customer's questions.
Empathy	EM1	Giving customer's individual attention.
	EM2	Employees who deal with customers in caring fasten.
	EM3	Having the customer's best interest at heart.
	EM4	Employees who understand the needs of their customer's.
	EM5	Convenient business hours.
Reliability	REL1	Providing service as promised.
	REL2	Dependability on handling customer's service problems.
	REL3	Performing service correctly the first time.
	REL4	Providing service at the promised time.
	REL5	Maintaining error-free records.
Responsiveness	RES1	Keeping customer's informed about when service will be performed.
	RES2	Prompt service to customers.
	RES3	Willingness to help customers.
	RES4	Readiness to respond to customer's questions.
Tangibility	TAN1	Modern equipment.
	TAN2	Visually appealing facilities.
	TAN3	Employees who have a neat and professional appearance.
	TAN4	Visually appealing materials associated with the service.
	TAN5	Employees who have a good smiling smart dressing and good customer reception

3.8 Research hypothesis

In this study the following hypothesis were formulated and tested based on the research questions and findings.

H1: There is a positive significant relationship between the SERVQUAL dimensions and the overall service quality of and broad band internet customers satisfaction.

H1:1: Assurance has significant positive effects on broad band internet customer's satisfaction in Addis Ababa.

H1:2: Empathy has significantly positive effect on broad band internet for enterprise customers of satisfaction in Addis Ababa.

H1:3: Reliability has significantly positive effects on broadband internet for enterprise customer's satisfaction in Addis Ababa.

H1:4: Responsiveness has significantly positive influence on broad band internet for enterprise customer satisfaction in Addis Ababa.

H1:5: Tangibility has significantly positive effective on broad internet for enterprise customer's satisfaction in Addis Ababa.

Ho: There is significantly positive relationship between the overall services quality dimensions and broad band internet for enterprise customer's satisfaction in Addis Ababa.

3.9 Regression Analysis

Regression analysis is a set of statistical processes for estimating the relationships among variables. It includes many techniques for modeling and analyzing several variables, when the focus is on the relationship between a dependent variable and one or more independent variable (or predication). More specifically, regression analysis helps one understand how the typical value of the dependent variable (criterion variable) changes when any one of the independent variables is varied, while the other independent variables are held fixed. And it also used to understand which among the independent variables are related to the dependent variable, and to explore the forms of the relationships. The performance of regression analysis methods in practice depends on the form of the data generating process, and how it relates to the regression.

CHAPTER FOUR: DATA PRESENTATION AND ANALYSIS

In this chapter includes background of the respondent, overall service quality of the respondent, correlation analysis between service quality dimensions and customer satisfaction, reliability analysis measurement, descriptive analysis of service quality dimensions, the overall regression analysis and service quality gap analysis.

4.1 Background of the Respondents

A demographic profile of the 365 respondents who participate in this research is categorized by 11 groups such as (Gender, age, education, level, employee status, position, experience, years of broadband user, customer category, types of broadband internet, broadband internet speed, and broadband internet user computer access. Table 4.1 shows the demographic characteristics of 365 respondents by using SPSS version 24 of analysis through descriptive statistics analysis of frequency.

Table 4.1 Demographic background of Respondents

Demographic background or variables		Frequency	Percent	Cumulative per cent
Gender	Female	90	23.9	27.1
	Male	275	72.9	100
Age	20-25 years	20	5.3	8.5
	26-30 years	55	14.6	23.1
	31-35 years	99	26.3	49.3
	36-40 years	107	28.4	77.7
	41 years and above	84	22.3	100
Education Level	1 st degree	295	78.2	81.4
	2 nd degree	45	11.9	93.4
	certificate	5	1.3	94.7
	diploma	20	5.3	100
Employee Status	NGO and other	7	1.9	5
	Private Employee	148	39.3	44.3
	Public employee	65	17.2	61.5
	Self-employee/PLC	71	18.8	80.4
	Service company	74	19.6	100
Position of Employee	It head	85	22.5	25.7
	Management member	64	17.0	42.7
	Network administrator	171	45.4	88.1
	Staff	45	11.9	100

Experience	¼ 4- years	65	17.2	20.4
	4-7 years	158	41.9	65.3
	8-11 years	131	34.7	23.3
	12 years and above	11	2.9	100
Years of Broadband User	1-4 years	152	40.3	43.5
	5-7 years	128	34.0	77.5
	8 years and above	85	22.5	100
Customer Category	Key account	164	43.5	46.7
	SOHO/SME	205	53.3	100
Types of Broadband Internet	ADSL (Wired)	365	96.8	100
	ADSL (Wireless)	-	-	-
Broadband Internet Speed	10 mb/s	85	22.5	25.7
	2 mb/s-4mb/s	35	9.3	35.0
	512kb/s	75	19.9	54.9
	6mb/s-8mb/s	170	45.1	100
Broadband Internet Users Computer Access	1-5 computers	20	5.3	8.5
	11-15 computers	115	30.5	39.0
	16-20 computers	75	19.9	58.9
	21 computers and above	90	23.9	82.8
	6-10 computers	65	27.2	100

Source: survey result (2019)

It presents the descriptive frequency, percentage and commutative percentage of the respondents of gender, age, education level, employee's status, position of employees, experience, years of broadband user, customer category, types of broadband internet, broadband internet speed and users of broadband internet computer access are the demographic characteristics of variables.

The researcher shows from table 4.1, 27.1% of respondents were Female and 72.9% of respondents were Male, thus the major percent of questionnaires respond by male when compared with female. Regarding to age, thus from 20-25 years of respondents are contributed 5.3% from 26-30 years of respondents were respond 14.6%, from 31-35 years of respondents were 26.3% respond, from 36-40 years of respondents were respond 28.4% and last respondents were from 41 years and above respondents were given 22.3% from the total respondents from under age groups from 36-40 years highly respondents when compared from other group and followed by from 31-35 years group.

The educational backgrounds of respondents were grouped into four educational levels. The educational level of respondents were certificate diploma, 1st degree and 2nd degree and above. From those educational level background 78.2% if respondents were 1st degree and 11.9% of

respondents were 2nd degree and above and 1.3% of respondents were diploma. From educational level, thus the 1st degree respondents were highly participate in this study followed by 2nd degree and above respondents and the companies employees were more recruit available 1st degree and above. Status of employees such as NGO, private public employee, self-employee (PLC) and service company (banks, Hotel, airline) are included from those respondent ,39.3% of private employees, 1.9% of respondents are NGO and other, 17.2% of respondent were public employees and the remaining respondents were 19.6% of respondents are service firm companies are contributed. From those respondents, private employees are more respondent (39.3%) followed by 19.6% of respondents are service companies. The positions of respondents were it head, management member, network admin, and staffs are included. From those respondents were it head 22.5% are respond, 17.0% of respondents are management members, 45.4% high and the first more participant followed by it head (17.2%) respondents were responded the distributed questionnaires. The researcher is happy because of network admin and it head are more knowledgeable about BBI service and directly related.

The experiences of respondents were grouped in to from ½ - 3years, 8-11 years and 12 years and above. From those respondents 17.2% of respondents were from years' experience ½ - years, 41.9% respondents were from 4 -7 years, 34.7% respondents were years of experience from 8-11 years and the remaining 2.9% respond by the years of experience 12 years and above. Those respondents from years of experience 4-7 years of respondents were highly participate followed by years of experience from 8-11 years 34.7%. From those 40.3% of respondents were years of BBI user from 1-4 years, 34.0% of respondents were get from 5-7 years and 22.5% of respondents were given from 8 years and above. Those respondents of BBI users 1-4 years were highly participate followed by from 5-7 years BBI users by 34.0%. The customer category of respondents were divided by two, thus categories are key account and SOHO/SMEI. From those respondents 43.5% of were key account customers and the remaining 53.3% of were SOHO/SME are participate. Regarding to BBI types of respondents were only given by ADSL (Wired) user respondents. As researcher revealed that, respondents were included unlimited broadband internet (ADSL Wired) customers only. The BBI speed of respondents is 10mbls and above, 2 mbls-4mbls, 512 kb/s and 6mls-8 mb/s were included. From those response 22.5% of respondents were BBI speed from 10 mb/s and above, 9.3% of respondent were respond from users of BBI speed 2mbls-4mbls, 19.9% of respondents were get BBI speed users 512 kb/s and

the remaining respondents were BBI speed included 6mbps-8mbps. The BBI speed of respondents is highly participate from 6mbps-8mbps followed by BBI speed user 512kbs (19.9%). The last demographic characteristics of respondents have broadband internet user computer access. The BBI user computer access the respondents were respond by 5.3% that is from 1-5 computers are used and 30.5% of respondents were used from 11-15 computers and 19.9% of respondents used from 16-20 computers, 23.9% of respondents were used 21 computers and above and the remaining respondents were computer used from 6-10 computers by 17.2%, thus 30.5% of respondents were highly participate followed by BBI computer access from 21 computers and above (19.9%).

4.2 Reliability and Validity of Measurement

In this research the reliability of the scale was under are liability of SERVQUAL dimensions (Assurance, reliability, responsiveness, empathy and tangibility) test check whether a collected data are free from error or not and the SERVQUAL and SERVPERF dimensions are reliable model for this research. 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. To test the pilot test structured questions are used in this research. The questions are developed under five (5) SERVQUAL dimensions that is reliability, assurance, tangibility, responsiveness and empathy to investigate the service quality of broadband internet of enterprise customers of Ethio telecom in Addis Ababa. To test the fitness of the SERVQUAL and SERVPERF instruments for these research 40 respondents were selected randomly.

According to Frey, et.al. Collected data recorded in accurate and reliable way, and for among measurement to be valid. It must first demonstrate reliability (Frey, Botan, and Kreps, 2002). To assess the reliability or internal consistency of asset of scale or test items.

In other words, the reliability of any given measurement refers to the extent to which it is a consistent measure of a concept, and Cronbach's alpha is one way measuring the strength of that consistency. Cronbach's alpha is computed by correlating the score of for each scale item with the total score for each observation usually individual survey respondents or test takers, and then comparing that to the variance for all individual item scores. Cronbach's alpha can also defined is thus a function of the number of items in a test, the average covariance between pairs of items,

and the variance of the total score as a researcher described in the above to test the fitness of instruments through selected randomly 40 respondents.

Table 4.2 reliability test

Number of valid cases	Cronbach's Alpha	Number of items
40	.692	23

Source: survey 2019

As the researcher reveal from table 4.2, coefficient on reliability value is 0.692. As Cronbach's Alpha function coefficient reliability ranges from 0 to 1 in providing this research over all investigation of measurement is reliability. As many researchers say that the standards for what make a good coefficient are entirely arbitrary and depend on our theoretical knowledge of the scale in question, many methodologists recommend a minimum coefficient between 0.65 and 0.8 coefficients that less than 0.5 are usually unacceptable. In this research, the researcher show from above the results of cronbach's Alpha 0.692.

This indicates high consistency of among survival instruments used for data collection and reliability of the model for this research.

Table 4.3 Overall reliability test

Number of valid cases	Cronbach's alpha	Cronbach's alpha shown on standardized	Number of items
365	.704	.711	23

Sources: survey result (2019)

As the researcher show from table 4.3, the overall reliability test of SERVAUAL instruments are high list consistencies of among the overall valid cases. The result of Cronbach's alpha is 0.704 so as researcher shown the result of Cronbach's 0.704 it highly internal consistence of mat conducted the total number of cases of 365 valued cases.

4.3 Descriptive Analysis of Service Quality Dimension Measurement

In this research the researcher used to measure the perception of customer of the services quality of broad band internet Ethio telecom. The enterprise customers directly measure the services quality actual performance and perception from all respondents of that used them distributed questionnaires based on five SERVPERF dimension measurements such as tangibility, assurance, reliability, responsiveness and empathy.

4.3.1 Assurance

Table 4.4. Mean score of assurance

	Assurance 1	Assurance 2	Assurance 3	Assurance 4	Assurances average
N	365	365	365	365	305
valid					
missing	0	0	0	0	0
mean	3.1699	3.52	2.48	3.638	3.21

Sources: survey result 2019.

Assurance is knowledge and courtesy of employees and their ability to convey trust and confidence. This dimension is likely to be particularly important for the services that the customers perceives as involving high rising and about which they feel uncertain about the ability to evaluate. Trust and confidence may be embodied in the person who likes customers to the company. According to the mean of assurance through used to SPSS version 24 from all respondent

According to mean of assurance from all respondents were 3.21 this means the employees of Ethio telecom in broadband internet service were a good knowledge, politeness and confidence to transfer a service for customers.

4.3.2 Empathy

Table 4.5 Mean score of empathy

	Empathy 1	Empathy 2	Empathy 3	Empathy 4	Empathy 5	Empathy average
N	365	365	365	365	365	365
valid						
missing	0	0	0	0	0	0
mean	3.57	3.30	3.11	3.17	3.41	3.32

Sources: survey result 2019

Empathy it means to caring individualized attention the firm provides its customers. In some countries, it is essential to provide individual attention to show to the customer that the company does best to satisfy his or her needs. Empathy is the trust and confident of the customers and the same time increase the loyalty. In competitive world the customers' requirements are rising day after day and it is the company's duties to their maximum to meet the demands of customers, else customers who do not receive individual attention will search elsewhere. According to mean of empathy result 3.32 the employees of the company care the customer and give attentions to each individual Ethio telecom customers.

4.3.3 Reliability

Table 4.6 Mean of reliability

	Reliability 1	Reliability 2	Reliability 3	Reliability 4	Reliability 5	Reliability average
N	365	365	365	365	365	365
valid						
missing	0	0	0	0	0	0
mean	2.5	3.7	3.5	3.2	3.1	3.2

Source: survey result 2019

Reliability is the ability to perform the promised service dependably and accurately. Reliability means that the company delivers on its promises-promises about delivery, service provision problem resolutions and pricing customers want to do business with companies that keep their

promises, particularly their promises about this service outcomes and core service attributes. According to mean of reliability result 3.2 Ethio telecom perform the service to enterprise customers of broad band internet according to their services level agreement of the company.

4.3.4 Responsiveness

Table 4.7 Mean score of responsiveness

	Responsiveness 1	Responsiveness 2	Responsiveness 3	Responsiveness 4	Responsiveness average
N valid	365	365	365	365	365
missing	0	0	0	0	0
mean	3.17	3.45	2.5	3.7	3.2

Sources: survey result 2019

Responsiveness is willingness to help customers and provide prompt service. In this dimension emphasis attentiveness and promptness in dealing with customers' requests, questions, complaints and problems. Responsiveness is communicated to customers by length of time they have to wait for assistance, answers to questions or attentions to problems. Responsiveness also captures the notion of flexibility and ability to customize the service to customer needs. According to mean of responsiveness result 3.2 employees of Ethio telecom has willingness to help the customer and give quick service for enterprise customers of broad band internet.

4.3.5 Tangibility

Table 4.8 Mean score of tangibility

	Tangibility 1	Tangibility 2	Tangibility 3	Tangibility 4	Tangibility 5	Tangibility average
N valid	365	365	365	365	365	365
missing	0	0	0	0	0	0
mean	3.57	3.23	3.06	3.19	3.47	3.30

Sources: survey result 2019

Tangibility since services are tangible customers derives their perception of service quality by comparing the tangible associated with these services provided. It is the appearance of the physical facilities, equipment, personnel and communication materials. According to mean score of tangibility 3.30 Ethio telecom has made a good kept of personal data of customer's good conduct of employees and have a good communication materials for enterprise customers of broad band internet of Ethio telecom.

4.3.6 Overall Mean Value of SERVQUAL Dimensions

Table 4.9 Overall mean of service quality dimensions

	Assurance	Empathy	Reliability	Responsiveness	Tangibility
N	365	365	365	365	365
valid	0	0	0	0	0
missing	3.21	3.32	3.2	3.2	3.0
mean	1.055	1.1144	1.0851	1.6352	1.1158
std. D					

Sources: survey result 2019

As the researcher shown from table 4.9, the overall mean result of assurance, empathy, reliability, responsiveness, tangibility, price and network (3.21, 3.32, 3.2, 3.2 and 3. respectively 50 employees of Ethio telecom caring individualize for the customer and give attention for those and more satisfactory when compare from other. Assurance, reliability, responsiveness and tangibility of the company are good for the customer.

4.4 Over all Service Quality

As the researcher discussed in the chapter two service qualities is an assessment of how well a delivered service conforms to the client's expectation. Service business operators often assess the service quality provided to their customers in order to improve the service, to quality provided to their customers in order to improve the service, to quality identify problems, and to better assess client information. Service quality is considered an important tool for a firm struggle to differentiate itself from its competitors Ladhari (2008). First while different people may rate of individual dimension of service in the same way, they also interpret rating differently. In this research over all service quality indicates a need to measure customers over all interpretations of scores as well as scores themselves (Oviver, 1997), and argues against overage together ratings on individual service quality dimensions to reflect an overall evaluation. To analysis the overall

service quality of broadband internet service of Ethio telecom of enterprise customers in Addis Ababa applied descriptive statics frequency. And to assess the in Ethio telecom was classified in six (6) points of scales. That is very poor, poor, neutral, good and very good based on the overall respondent's response through distributed questionnaires.

Table 4.10 Overall Service Quality

overall BBI Service Quality	Likert Scale	Frequency	Valid Percent	Cumulative Percent
Very poor	1	65	17.8	17.8
Poor	2	144	39.5	57.3
Neutral	3	11	3.0	60.3
Good	4	95	26.0	86.3
Very good	5	40	11.0	97.3
Excellent	6	10	2.7	100
Total		365	100	

Source: - Survey result (2019)

As the researcher shown from table 4.10, 17.8% (65) respondents from 365 suppose that the service quality of Ethio telecom broadband internet of enterprise customers is very good. 39.5% (144) of respondents from 365 were supposed that the service qualities of broadband internet in Ethio telecom of enterprise customers are poor. And from the total respondents that is from 365, 11(3%) respondents suppose the service quality of broadband internet of Ethio telecom of enterprise customers were moderate. 26% (95) respondents from the total of 365 suppose the service quality of broadband internet of Ethio telecom of enterprise customers were good. 11% (40) respondents from the total respondents 365 the service quality of broadband internet of Ethio telecom of enterprise customers were very good. And 2.7% (10) respondents from the total 365 suppose the service qualities of broadband internet of Ethio telecom of enterprise customers are excellent.

4.5 Correlation Analysis between Service Quality Dimensions and Customers Satisfaction

To find out the relationship between two variables correlation is mostly used commonly. "Correlation" refers to a process for establishing whether are not relationships exit between two variables. In this analysis shows how to calculate and interpret correlation coefficients for ordinal and internal level scales. The correlation coefficient is 795 796 usually given the symbol r and it

rangers from -1 to 1 correlation coefficient quite close to 0, but either positive or negative, implies little or no relationship between the two variables. A correlation coefficient close to plus 1(+1) means positive relationship between two variables, with increases one of the variables being associated with increases in the other variable. A correlation coefficient close to -1 indicates a negative relationship between two variables, with an increase in one of the variables being associated with a decrease in the other variables. In this study Pearson's correlation coefficient used to find out the relationship between service quality dimension and customer satisfaction.

Pearson correlation coefficient, also called Pearson's R, to a statically calculation of the strength of two variables relationships. In other words, it is measurement of how dependent two variables are on one another. The Pearson correlation coefficient is measured of the strength of a linear association between two variables and is denoted by r. basically a Pearson product moment correlation attempts to draw a line of best fit through the data or two variables, and the Pearson correlation coefficient, r, indicates how far away all these data points are this line of best fit (i.e., how well the data points it's this new model/line of the best fit). The Pearson correlation coefficient, r, can take arrange of values from +1 to -1. A value of 0 indicates that there is no association between the two variables. A value greater than 0 indicates a positive association; that is as the value of the other variable a value less than 0 indicates a negative association; the value of the other variable decrease. The relationship between two variables is generally considered strong when their r is larger than 0.7. The correlation r measures the strength of the linear relationship between two quantitative variables. Person "r" values or r near to 0 indicate a very weak linear relationship. If the coefficient value is positive, then the dependent variable will move in the same direction as of the independent variables; if the coefficient value is negative, then the dependent variable will move in the opposite side of as of independent variables. Hence in this research both direction and the level of relationship between service quality dimension and customer satisfaction are conducted by using Pearson's correlation Coefficient. From below table show the result of correlation analysis made by using bivariate correlation.

Table 4.11 Pearson correlation

	Assurance	Empathy	Reliability	Responsiveness	Tangibility	Customer satisfaction
Assurance : Pearson Correlation Sig. (2-tailed) N	1 365					
Empathy Pearson correlation sig. (2-tailed) N	-.003 .961 365	1 365				
Reliability Pearson correlation sig. (2tailed) N	.146 .005 365	.479 000 365	1 365			
Responsibility Pearson correlation sig. (2-tailed) N	.006 .913 365	.416 .000 365	.428 000 365	1 365		
Tangibility Pearson correlation sig. (2-tailed) N	.006 .000 365	.916 .000 365	.489 .000 365	.423 .000 365	1 365	
Overall customer satisfaction Pearson correlation sig. (2-tailed) N	.321 .000 365	.836 .000 365	.759 .000 365	.689 .000 365	.844 .000 365	1 365

Source: Survey result (2019)

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

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

As the researcher show the Pearson correlation in the above table 4.11 tangibility have strong correlated to customer satisfaction (0.844) and followed by empathy have strong correlated to customer satisfaction (0.836) and followed by reliability have strong correlation to customer satisfaction (0.759) and followed by responsibility have moderate correlated to customer satisfaction (0.659) and followed by assurance has moderate correlated to customer satisfaction (0.32). From the above correlation assurance has weak correlation with customer satisfaction. When researcher look at the above Pearson correlation table between the service quality dimension inter correlation as the researcher can see there is a positive and some of negative correlation and significance ($p=.000$) and for negative inter correlation significance ($p=0.003$), empathy with assurance have negative correlation. There is strong positive inter correlation tangibility with empathy by (0.916) followed by tangibility with reliability by (0.486) and negative correlated empathy with assurance. Generally as the researcher observation, there is positive correlated all service quality dimensions with customer satisfaction. It means if the dependent variables moves the same direction as of its independent variables. But there is some negative inter correlation in the service quality dimensions. Which implies that the change made in one of negatively correlated service quality dimensions will negatively change the other service quality dimensions, this only for inter correlated negatively.

But when the researcher can be others positively inter correlated service quality dimensions can made change one of the service quality dimensions will positively motivate the other service quality dimensions, this for inter positively correlated service quality dimensions. Hence any improvement in one of the service quality dimensions will positively contribute in enhancing the customer satisfaction.

4.6 Over all Regression Analysis

In this research show the overall regression the researcher can see the relationship between dependent variables with independent variables. Regression analysis is asset of statical processes for estimating the relationship among variables. It includes many techniques for modeling and analyzing several variables, when the focus is on the relationship between a dependent variable and one or more independent variables (or 'predictors'). More specifically, regression analysis helps one understand how the typical value or the independent variable (or 'criterion' variable') changes when any one of the independent variables, is varied, while the other independent

variables are held fixed. Regression analysis is also used to understand which among the independent variables are related to the dependent variable, and to explore the forms of these relationships. For this study we can see independent variables positive relationship means can independent variables (Assurance, Empathy, Reliability & Responsiveness and Tangibility) can predict the independent variable (customer satisfaction) or service quality of Broadband internet service of Ethio telecom.

Table 4.12 Regression model summary

Model	R	R-square	Adjusted R-square	Std- Error of the estimate	Change statistics	Sig.	Durbin Watson
1	.84 ^a	.71	.70	5.36	1	.000	
2	.93 ^b	.87	.86	3.61	1	.000	
3	.94 ^c	.88	.87	2.44	1	.000	
4	.97 ^d	.91	.91	1.18	1	.000	
5	.87 ^e	.73	.72	4.34	1	.000	1.13

Source: Survey result (2019)

Predictors: (constant), tangibility

Predictors: (constant), tangibility, reliability

Predictors: (constant), tangibility, reliability, responsiveness

Predictors: (constant), tangibility, reliability, responsiveness, assurance

Predictors: (constant), tangibility, reliability, responsiveness, assurance, empathy

Dependent variable: customer satisfaction.

Note:- (a, b, c, d, e) are independent variables (h) dependent variable

As the researcher show from the above table 4.12 which dials about R-square; whether the model is nicely fitted or not? R^2 is a statistical measure of how close the data are to the fitted regression line. It also known the coefficient of determination, or the coefficient of multiple determinations for multiple regression. The definition of R-squared is fairly straight-forward; it is the percentage of the response variable variation that is explained by a linear model.

R-squared = explained variation/total variation

R-squared is always between 0 and 100%:

0% indicates that the model explains none of the variability of the response data around its mean.

100% indicates that the model explains all the variability of the response data around its mean. In general, the higher R-squared, the better the model fits our data.

As the researcher can see the result from table 4.12 R^2 is all above 71% for all independent variables which means customer satisfaction can be explained by our independent variables such as: Assurance, Empathy, Reliability, Responsibility, Tangibility, Price and Network can explain customer satisfaction. That means from 100% - 71% = 29% and below 29%, thus only 29% and below goes to error term. Therefore the model is nicely fit and we are happy about model.

To we check whether our model has serial correlation or not?

To check the residual has serial correlation or not, this is checked from Durbin Waston statistics. Durbin-Waston must be between 0 and 4.

If the DW= value is close to zero (0) meaning that there is strong positive serial correlation.

If the DW = value is close to 4, there is strong negative correlation. So both positive and negative correlation is not desirable.

When DW-value close to 2, means there is no serial correlation. Also we accept of DW-value is 1.5 to 2.5 no serial correlation is the guide line. Thus the result of in this research DW shows 1.13 which means the model has no serial correlation and the model still fit.

4.7 Independent variables Regression analysis

In this research as researcher show the relationship between dependent and independent variables. Means the researcher reveal (Assurance, Empathy, Reliability, Responsibility, and Tangibility, Price and Network) has positive or negative relationship with dependent variable (customer satisfaction).

4.7.1 Assurance

Table 4.13 Linear Regression Analysis of Assurance

Model	Unstandardized Coefficients		Standardized Coefficients	t	sig.	95% Confidence interval for B	
	B	Std. error	Beta			Lower band	Upper band
Assurance	.143	.000	.190		.000	.143	.143
Constant	.0129	.000			.000	.143	.143

Source: Survey result (2019)

As the researcher show from linear regression of assurance analysis; assurance has positive relationship with customer satisfaction. Means the knowledge and courtesy, politeness of employees and their ability to inspire trust and confidence of company’s employee is satisfactory for the customer. So can the researcher conclude that assurance can positively explained/ influence/ the dependent variable (customer satisfaction). R-squared value (71%) thus dependent variable has explained by independent variables (Assurance). The beta (0.143) coefficient for assurance in the table shows that at p-value sign 0.000 level of significance.

Assurance positively influences the customer satisfaction of enterprise customers of board band internet of Ethio telecom. And when independent variables kept constant that customer satisfaction increased by 14%, this high employee politeness, trust and confidence seen in the company’s employee to satisfy the customer.

4.7.2 Empathy

Table 4.14 Linear regression analysis of empathy

Model	Unstandardized Coefficients		Standardized Coefficients	t	sig.	95% Confidence interval for B	
	B	Std. error	Beta			Lower band	Upper band
Empathy	0.658	0.14	0.928	47.351	0.000	.143	.143
Constant	0.955	0.047		20.415	0.000	.143	.143

Source: Survey result (2019)

As the researcher shown from linear regression of empathy analysis has positive relationship independent variables (Empathy) with dependent variable (customer satisfaction). The researcher

can see the result from model summary table R^2 result of empathy (0.87), thus empathy 87% affects the independent variable positively and the employees of the company give caring and individualized attention that a firm provides to its customers (Zeitham; p. 26). And as we can see the result of B (0.658) from table 4.18, thus independent variable and the significance level has positively significance. The customer expectation through caring and individual attention has already satisfied by (0.6851%). Hence when one unit changes from empathy other independent variables constant that increases the customer satisfaction by 0.658%.

4.7.3 Reliability

Table 4.15 Linear regression analysis of reliability

Model	Unstandardized Coefficients		Standardized Coefficients	t	sig.	95% Confidence interval for B	
	B	Std. error	Beta			Lower band	Upper band
Reliability	0.151	0.002	0.208	-3.530	0.000	0.174	0.155
Constant	0.22	0.006		78.227	0.000	.034	0.010

Source: Survey result (2019)

As researcher shows from linear regression model analysis of reliability the result of R^2 (0.88%) independent variable (Reliability) positively explained the dependent variable (customer satisfaction). And positively affected the dependent variable for those the service provider (Ethiotelecom) have ability to well perform the committed service dependably and accurately for those enterprise customers of broadband internet and as we can see the above table 4.19 the result of B (0.151) thus the independent variable (Reliability) change one unit and other independent variable constant the dependent variable increase by 0.151% and the customers expectation already meet by 0.0281% so the customers satisfied by those of independent variable (Reliability).

4.7.4 Responsiveness

Table 4.16 Linear regression analysis of responsiveness

Model	Unstandardized Coefficients		Standardized Coefficients	t	sig.	95% Confidence interval for B	
	B	Std. error	Beta			Lower band	Upper band
Responsiveness	0.221	0.012	0.297	18.846	0.0000.0	0.198	0.244
Constant	0.572	0.039		14.655	00	0.495	0.649

Source: Survey result (2019)

The Linear regression analysis of responsibility model reveals the R-squared value (0.91%), thus the researcher shown from the result 91% which can be explained by independent variable (responsiveness). Those Ethio telecom has willingness to stay with customers and provide prompt services for enterprise customers of broadband internet. As we can see the value of Beta (0.221), thus the independent variable one unit changes others independent variables kept constant and the independent variable of significance. The customer of Ethio telecom of broadband internet users has satisfied by through expected beta value 0.297% of responsiveness.

4.7.5 Tangibility

Table 4.17 Linear regression analysis of tangibility

Model Source: Survey result (2019)	Unstandardized Coefficients		Standardized Coefficients	t	sig.	95% Confidence interval for B	
	B	Std. error	Beta			Lower band	Upper band
Tangibility	0.096	0.007	0.141	14.079	0.000	0.082	0.109
Constant	0.04	0.005		0.784	0.000	0.014	0.006

Source: Survey result (2019)

The linear regression analysis of Tangibility model reveals the R-squared value (0.73%), which means dependent variables (customer satisfaction can be explained by independent variable (Tangibility) and p. value of (0.000) the independent variable has significant to explain (influence) our dependent variable which is customer satisfaction. The habit of Ethio telecom which is appearance of physical facilities, equipment, personnel and communication materials were good for those enterprise customers of broadband internet.

As the researcher show the result of Beta (0.096), thus independent variable change one unit others independent variables kept constant and dependent variable can also increase by Beta value (0.096%). Customers also satisfied through service quality broadband internet that expected beta value of 0.141%.

4.8 Service Quality Gap model Analysis

The service quality model gap analysis used to which can help to understand customer satisfaction by service quality of the organization. The model shows the five major satisfaction gaps that organizations must address when seeking to meet customer expectations. The model was first proposed by (A. Parasuraman, Valarie Zeithaml, and Leonard L. Berry in 1985. In the gap model service Quality, customer satisfaction is largely a function of perception. of the customer perceives that the service meets their expectations then they will be satisfied. If not, they will be dissatisfied then it will be because of one of the five dimensions of service quality and show the result on below table. Hence to know the gap score of customer expiation and perception is the difference between the customer expect from service provider firm before delivering the service and the actual performance of service that perceived by the customer. If the value of emerges (perceptions exceed expectations), the service provider firm has achieved the expectation of service by the customer (Disend, 1991 as cited in Mussie, 2011). Service quality gap model analysis shows by using descriptive frequency statistics through SPSS version 24 that includes the customer expectation and perception and the final result of gap score those by difference between 365 respondents were expectation and actual perception of the service quality from Ethio telecom.

Table 4.18 Gap score service quality

Dimensions	Actual Performance (perception)	Customer expectation	Gap score perceived-expected
As ₁	3.1699	4.1918	-1.0219
As ₂	3.5233	4.1890	-0.6658
As ₃	2.4822	4.1671	- 1.6849
As ₄	3.6822	4.1753	- 0.4932
Em ₁	3.5726	4.1973	- 0.6247
Em ₂	3.3041	4.1945	- 0.8904
Em ₃	3.1178	4.1753	- 1.0575
Em ₄	3.1699	4.1534	- 0.9836
Em ₅	3.4493	4.2247	- 0.7753
Rel ₁	2.5068	4.1753	- 1.6685
Rel ₂	3.7068	4.2274	- 0.5205
Rel ₃	3.5479	4.1726	- 0.6247
Rel ₄	3.2548	4.1589	- 0.9041
Rel ₅	3.0932	4.1918	- 0.0986
Res ₁	3.1699	4.1890	-1.0192
Res ₂	3.4493	4.1863	- 0.7330
Res ₃	2.5068	4.2493	- 1.7425
Res ₄	3.7068	4.1671	- 0.4603
Tan ₁	3.5726	4.1808	- 0.6082
Tan ₂	3.2301	4.2000	- 0.9699
Tan ₃	3.0685	4.1836	- 1.1151
Tan ₄	3.1945	4.1616	- 0.9671
Tan ₅	3.4740	4.2329	- 0.7589

Source: Survey result (2019)

As the researcher shown from the above table 4.18 there is abbreviated words of dimension and to know the abbreviated word which is (As) describes Assurance, (EM) describes Empathy, (REL) describes Reliability, (RES) describes Responsiveness and (TAN) describe Tangibility. As researcher show score of gap from the above table (As₁) employees of Ethiotelcom has trust worthy but not fully satisfied the customer's expectation. The customer expectation through trust worthiness of employee (4.1918) and perceived value of customer is (3.1699), so there is a lot gab between them by (-1.0219). There for the result of gab score attribute shows, the customers expectation exceeds than their perceived of customer through trust worthiness of the employees of company. (As₂) in Assurance₂ the customer expected from employees of the company should be busy too help the customers and safe their feeling of the transaction with the stores of employees and the customers perceived of the score of gap in Assurance₂ is less than the

expectation the customer expectation through employees busy too help customers has (4.1890) and customers perceived score of (3.5233), thus customer expectation exceed than their perceived by the score value (.6685). (As₃) Assurance₃ indicates the politeness of employees which is the customer expectation has (4.1671) and perception of customers has (2.4822) so, there is a great difference between them. Score of expectation exceed than their previewed, so there is dissatisfied by the employees politeness when give a service to the customers of the company. (As₄) Assurance₄ contribute employees of the company give to the customer adequate support and knowledgeable job. In this dimension the score of expectation exceed than their perception by (0.4932), so there is some knowledge gap and inadequate of employees of the company. (EM₁) Empathy₁ in this result score of gap the customer expectation greater than their perception of the customers by value (0.6244). There is some problem in the company expectation give to the individual attention for the customer. (EM₂) Empathy₂ the customer expectation is exceed them perception by score (0.890₄), thus there is a gap of employees give individual attention to the customer. (Em₃) Empathy₃ shows the customers expectation greater than their perceived which means the understanding of employees of their needs of the customer has not really known by employees (Em₄) Empathy₄ has contribute having customers best interest heart, thus the customers expectation greater than perceived value by (0.9836). So there is some gaps of customers and company is known the interest heart of the customer. (Em₅) empathy shows convenient operating hours of all customers. In this dimension shows there is score of gaps (0.775₃) which means the customer expectation exceed than their perceived. (REL₁) reliability₁ reveals expectation greater than perception. The company miss their promise that the customers expected from there service level agreement. As researcher observation there is greater customer expectation due to unavailability of BBI network for 24 hours daily. (REL₂) reliability₂ attributes when the service fail and the company reassure the service for their customers. But as we can see from the table result the customer expectation is greater than their perception. Which means the company's not reassure when the services fail or not recover the service. (REL₃) Reliability₃ the company must be dependable on their customers. But not meet this attributes by the company which is the score of gap is (0.6247), thus Ethio telecom has not taken the experience of their customers. (REL₄) reliability₄ shows the company's should provide the score of gap between customer expectation and perception by the value of (0.9041). This is customer expectation greater than their perceived. There is service level agreement between

Ethiotelecom and enterprise customer of the company and so when the internet is happens familiarity, thus the company not maintain as promised to provide a service.

(REL₅) reliability₅ reveals Ethiotelecom should keep accurate data records of the customer. But as researcher looks the value of score of gap between customer expectation and perception has greater expectation value by (1.0986). Which is in the companies has a problem when to record data for evidence and file memory. (RES₁) responsiveness₁ has telling when service to be performed. In this dimension score of gaps of service quality has difference through a greater customer expectation than perception value (1.0192). There is a gap when company's employees tell to the customer service performed to start internet availability. (RES₂) responsiveness₂ shows the completion of promised tasks. As researcher can see the value of gap score is customer expectation is exceed than their perception value (0.7370). Thus there is little difference of satisfaction that the customers expected completion time of promised services by the company so; the company not finishes their works according to promised to the customers. (RES₃) responsiveness₃ contributes the employees of Ethiotelecom willingness to solve the customer's problem. Score of gap shows expectation exceed than their perception value (1.7425). Which means there is lack of willingness of employees of Ethiotelecom to solve a customer's problem accurately and timely so due to this problem the customers not satisfied by the service quality of Ethiotelecom.

(RES₄) responsiveness₄ has employees having too busy to respond customer request promptly. As researcher can see the value score of gap of customer expectation and perception which is expectation greater than perception value (0.4603). This means employees of Ethiotelecom have good habit to help customers and give response for customers request promptly. But there is little unsatisfied customer due to time spent to solve the problem. (TAN₁) tangibility₁ should have up-to-date equipment. Gap score is (0.6082), thus expectation of customers is exceed than their perception. But as researcher can see from the result there is almost up-to-date equipment supplies to customer by Ethiotelecom and some customers are unsatisfied through quality of equipment due to their guarantee. (TAN₂) tangibility₂ physical facilities should be visually appealing for the customer. Score gap value (0.9699). In this dimension customers expectation exceed than their perception. Which is the visualize part of equipment is not easy for some percent of customer eyes. But as researcher shows the result from table there is good physical

facilitation of equipment. (TAN₃) tangibility₃ employees should be well dressed and appear neat. There is a big gap between customers expectation and perception value (1.1151). Which is the dressing code and appearance neat of employees has not smart and customers not satisfied.

(TAN₄) tangibility₄ shows appearance of physical facilities should be in keeping with type of service provided. There is some gaps of customer expectation and perception through greater expectation value (0.9671). And customers have some not satisfied through physical appearance facilities with keeping service provided. (TAN₅) tangibility₅ having necessary equipment to customers as researcher show the result of score of gap value (0.7589). There is some equipment shortage to solve customers' complain.

4.9 Hypothesis Testing

Hypothesis testing is based on p value and standardized coefficients beta value. This hypothesis testing used to know whether the independent variables have positive and significance effect on dependent variable. The hypothesis is rejected means independent variables have not positive and significance effect on the dependent variable and the hypothesis is accepted, these show independent variables have positive and significance effect on the dependent variables. The researcher reveal hypothesis tested based on linear regression analysis as follows.

Hypothesis1

H1. Assurance has significant positive effects on broad band internet customer's satisfaction in Addis Ababa.

H0. Assurance has not significant positive effects on broad band internet customer's satisfaction in Addis Ababa.

The linear regression result revealed that p value <0.01 and standardized beta value 0.19 at 95% confidence interval. It indicates the null hypothesis is rejected and it's accepted that, assurance has positive and significance effect on customer satisfaction.

Hypothesis 2

H1. Empathy has significantly positive effect on broad band internet for enterprise customers of satisfaction in Addis Ababa.

H0. Empathy has not significantly positive effect on broad band internet for enterprise customers of satisfaction in Addis Ababa.

The linear regression result revealed that p value <0.01 and standardized beta value 0.928 at 95% confidence interval. It indicates the null hypothesis is rejected and it's accepted that, empathy has positive and significance effect on customer satisfaction.

Hypothesis 3

H1. Reliability has significantly positive effects on broadband internet for enterprise customer's satisfaction in Addis Ababa.

H0. Reliability has not significantly positive effects on broadband internet for enterprise customer's satisfaction in Addis Ababa.

The linear regression result revealed that p value <0.01 and standardized beta value 0.21 at 95% confidence interval. It indicates the null hypothesis is rejected and it's accepted that, reliability has positive and significance effect on customer satisfaction.

Hypothesis 4

H1. Responsiveness has significantly positive influence on broad band internet for enterprise customer satisfaction in Addis Ababa.

H0. Responsiveness has not significantly positive influence on broad band internet for enterprise customer satisfaction in Addis Ababa.

The linear regression result revealed that p value <0.01 and standardized beta value 0.297 at 95% confidence interval. It indicates the null hypothesis is rejected and it's accepted that, responsiveness has positive and significance effect on customer satisfaction.

Hypothesis 5

H1. Tangibility has significantly positive effective on broad internet for enterprise customer's satisfaction in Addis Ababa.

H0. Tangibility has not significantly positive effective on broad internet for enterprise customer's satisfaction in Addis Ababa.

The linear regression result revealed that p value <0.01 and standardized beta value 0.141 at 95% confidence interval. It indicates the null hypothesis is rejected and it's accepted that, tangibility has positive and significance effect on customer satisfaction.

Table 4.19 Summary of hypothesis testing

Statements of hypothesis	Testing results
Assurance has significant positive effects on broad band internet customer's satisfaction in Addis Ababa.	P value<0.01 & B=0.19 H1, accepted
Empathy has significantly positive effect on broad band internet for enterprise customers of satisfaction in Addis Ababa.	P value<0.01 & B=0.928 H1, accepted
Reliability has significantly positive effects on broadband internet for enterprise customer's satisfaction in Addis Ababa.	P value<0.01 & B=0.21 H1, accepted
Responsiveness have significantly positive influence on broad band internet for enterprise customer satisfaction in Addis Ababa.	P value<0.01 & B=0.297 H1, accepted
Tangibility has significantly positive effective on broad internet for enterprise customer's satisfaction in Addis Ababa.	P value<0.01 & B=0.141 H1, accepted

Source: survey

As researcher revealed hypothesis testing result from the above table, all independent variables which are assurance, empathy, reliability, responsiveness and tangibility have positive and significance effect on dependent variable which is customer satisfaction.

CHAPTER FIVE: SUMMARY OF FINDING, CONCLUSION AND RECOMMENDATIONS

This chapter deals with the final findings such as summary, conclusion and recommendations. The researcher generalized the main ideas of this work, by way of presenting the finding of the thesis and finally recommended the solution of the problem faced.

5.1 Summary of Finding

This research conducted to investigate the service quality of broadband internet of Ethio telecom. In this study only included enterprise customers of broadband internet in Addis Ababa only. From finding result based on the result of independent variables regression analysis the five independent variables such as assurance, empathy, reliability, responsiveness and tangibility have positively influence and significantly explain the dependent variable which is customer satisfaction. From overall regression analysis result of $R_{\text{-square}}$ indicates that dependent variables which are customer satisfaction can be explained and influenced by independent variables which are assurance, empathy, reliability, responsiveness and tangibility. The model is nicely fit through minimum value of 86% of adjusted $R_{\text{-square}}$ means all independent variables value of adjusted $R_{\text{-square}}$ greater than 86%).

From the finding result of service quality gap score almost all independent variables which are assurance, empathy, reliability, responsiveness and tangibility have negative result. This means there is gap between customer expectation and customer perceived broadband internet service from Ethio telecom. From hypothesis testing result all independent variables which are assurance, empathy, reliability, responsiveness and tangibility have significantly and positively influence/ explain the independent variable which is customer satisfaction on service quality of broadband internet service.

5.2 Conclusion

This research conducted to investigate the service quality of broadband internet of Ethio telecom. The study included only enterprise customers of broadband internet of Ethio telecom in Addis Ababa. In this research used SERVQUAL model and questionnaires build stands from the model. The total respondents of the questionnaires were 365 respondents that prepared by using SERVQUAL dimension questions. According to questionnaires designed used seven (7)

dimensions which is assurance, empathy, reliability, responsibility, tangibility and a two other additional dimensions used that is price and network. The five (5) dimensions of service quality is already known and set on different books but other two additional dimensions used in this research which are price and network by referring different previous research and articles. The major reason of added the two dimensions has there are most used for to study the service quality of broadband internet of Ethio telecom as a technological company used. And other important data takes from company's database and magazines. To measure the reliability of independent variables Chornbach's alpha used. From Cronbach's alpha reliability test indicates that the seven service quality dimensions which is assurance, empathy, reliability, responsiveness and tangibility are consistently measure the dependent variable which is customer satisfaction.

So SERVQUAL dimensions are reliable for this study. To test the reliability of SERVQUAL dimensions take fourteen (14) respondents from the total by using simple random sampling. The perception of customers of service quality of broadband in Ethio telecom of enterprise customers measure through using descriptive statics analysis based on 365 respondents of SERVQUAL dimension questionnaires (assurance, empathy, reliability, responsiveness and tangibility. So tangibility is good in the company that followed by assurance, empathy, responsiveness. Those are the company has good physical facility; equipment and communication materials from tangibility and Ethio telecom have good habit of employee's politeness, knowledge and confidence to transfer service for customers. And the companies have a good experience of customer care and service that deliver according to promised time. Ethio telecom employees have a good willingness to help the customer. The overall service quality of broadband internet of Ethio telecom has from the total respondent that given by (65) respondents says company's service quality given to customers are very good and 144 respondents are says poor and (95) respondents are says Ethio telecom broadband internet service that given to customer has well. The least respondents say service quality of Ethio telecom is moderate.

The overall customer satisfaction of broadband internet of Ethio telecom has not good result that sown from finding. The most customers are not satisfied through service quality of Ethio telecom broadband internet service according to researcher observation and least customers are very satisfied by the service quality of broadband internet service of the company's. According to Pearson correlation coefficient results it indicated that there is positive and significance

relationship between dependent variables (customer satisfaction) and independent variables which is (Assurance, Empathy, Reliability Responsiveness and Tangibility). According to the result found that empathy has strong correlation with customer satisfaction. From empathy have the highest beta value and mean score value is 3.32 from finding survey result. So Ethio telecom have a good habit of customer care and give attentions to each individual for broadband internet customers and have high impact on customer satisfaction. The results of empathy implies that Ethio telecom customers more satisfied through customer care and individual attention so the company must continue to get new customers and wellness for future times and from the result found that there is strong and positive correlation between responsibility with assurance value of (0.998). As the result indicates that the change of one of independent variables and it becomes other independent variables positively affected. The correlation result indicates that price has weak correlation with customer satisfaction. Hence that when come to positively inter correlated service quality dimensions can made change one of the service quality dimensions will positively motivate the other service quality dimensions, this for inter positively correlated service quality dimensions. Any improvement in one of the service quality dimensions will positively contribute in enhancing the customer satisfaction. From the overall regression analysis found that R^2 is above 71% for all independent variables (assurance, empathy, reliability, responsiveness and tangibility).

As researcher observation of service quality gap, there is gaps between customer perception and expectation. The customer expectations are not completely satisfied from all dimensions of service quality which is assurance, empathy, reliability, responsiveness and tangibility. As finding result indicate that assurance and responsiveness, there is greater gap between customer expectation and customers perceived a service from company. The network quality of Ethio telecom and enterprise customers of broadband internet has service level agreement (SLA) when subscribed ADSL. But company not obey an agreement through when network failures happen, employees of Ethio telecom are not give urgent solution to customer and network not released after take service provision and quality of the network has not reliable and have no guarantee for service failures for the customer. As researcher observe from finding reliability dimensions are good except providing service as promised. The Dependability on handling customer's service problems, performing service correctly the first time, providing service at promised time and maintaining error-free records are almost good.

5.3 Recommendations

This research used to investigate service quality of broadband internet of Ethio telecom. The research included only enterprise customers of broadband internet in Addis Ababa. This research results has positive impact on service quality of broadband internet and customer satisfaction. The researcher given the following recommendations based on finding results. The recommendations are used to build for future that a quality of service renders by Ethio telecom to enterprise customers of broadband internet. The recommendations are based on gaps of service quality, overall service quality and overall customer satisfaction.

- ✓ Ethio telecom should be recruiting and appointed employees according to their profession to help and give answers for customer's questions promptly. Employees of the company should have confidence to serve customers, make consistently and keep the customers feeling.
- ✓ Ethio telecom should have good work habit to customers through take different workshops from other international telecom company that deals about how to care company customers, how to use experience of customers, how to make complain as a gift, and how build service quality and customer satisfaction. If the company use experience of customer and used complain as a gift, service of broadband internet comes good because customers experience and complains helps to invented new network generation and helps to solve the customer's questions with promised time.
- ✓ Ethio telecom should be taken to build quality of network. Why because the companies almost 75% revenues gets from enterprise customers. If network infrastructure is good for customer then customers work hard through using their BBI technology and get income as his or her wants.
- ✓ Equipment's and physical layouts of communications materials should be up to date or latest. All activities of BBI technologies depend on their equipment and physical layout of materials. If the equipment and communication materials are updated then network quality of broadband internet comes fast and active connection to the user.
- ✓ The maintenance service of broadband internet should be based on promised time. If maintenance service of broadband internet is delay then customers stop their work until

gets repairs service and their works happen pass their time and a lot of currency lost to customers and the economy status of customer and countries returns back.

- ✓ As researcher observation of customers a lot of complains raised from customers through network problem, so Ethio telecom should be done to build continuous network infrastructure without any interruption for 24 hours daily to customers.
- ✓ Ethio telecom should be increase the performance of broadband internet service for enterprise customers of the company according to customer experience and over meet the customer expectations.
- ✓ Generally, Ethio telecom should be done on employees to have deep knowledge through give technical and behavioral change training and employees should have confidence to serve customers based on customers want and done over expectation of customers. Ethio telecom should be give attention for individual, understand needs of customers, maintain error free records, provide services on time as promised and should be done supply of updated equipment's to provide quality service of broadband internet and customer satisfaction.

5.4 Limitation of the Study and Suggestions of for Future Research

In this research assess service quality of broadband internet of Ethio telecom. And the research includes only enterprise customers of BBI in Addis Ababa not included residential customers of the company due to shortage of time and resource. In this research the total respondents were 365 but others some respondents not give their response through lack of interest to help the researcher. There was shortage of money to done this research because of transportation costs and others expenses are high.

For future researcher suggestion, the researcher must include residential customers of broadband internet and should be planned time and costs to investigate the service quality of BBI without any limitation.

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Appendix

Addis Ababa University

School of Graduate Studies College of Business and Economics

MSC of Management (TQM and OE)

Questionnaires that to be filled by broadband internet users in Addis Ababa (Enterprise customers)

Dear Respondents,

I am post graduate student of MSC management from Addis Ababa University. This questionnaire are part of the research project that conducted for the fulfillment of master of MSC management (TQM). The general purpose of the survey is to investigate the service quality of broadband internet service in Ethio telecom.

As of below statements of your responses are great importance to my research project work and please you are kindly requested to response through thoughtful and honestly answer the following each research questions. And the information you will be treated as of confidential and used for only research purpose.

If you have any question or information about this please contact me by below address. Tel. 0930 07 13 12/ E-mail: danielmekuriaw123@gamil.com

Thanks for your cooperation

Daniel Mekuriaw

Please Note that:

- ✓ You are not expected to write your name.
- ✓ Use mark ✓ or ✗ for your answer in the available boxes.

Section I. Background Information

1. Sex Male Female
2. Age 20 – 25 26 – 30 31 – 35 36 – 40 And above
3. What is your level of education?
Diploma 1st Degree 2nd degree and above
Certificate

4. What is your occupation?
- Public employment
- Private employment
- Self employed/PLC
- Service companies (bank, hotel, university)
- NGO
- Others, specify _____
5. What is your position in your organization?
- Staff
- Network administrator
- IT head
- Management member
- Others, specify _____
6. How long you are working in your organization?
- ½ years – 3 years 4 – 7 years 8 – 11 years
- Above 11 years

Section II: In this section of the questionnaires are filled your experiences and preference with regardingto broadband internet service

1. How long you have been as users of broadband internet service in Ethio telecom?
- Less than 1 years 1-4 years 4-7 years
- 7 years and above
2. In which categories of customers as Ethio telecom company customer5 level?
- Small and medium enterprise (SOHO/SME)
- Key account
- Other, specify _____
3. Which type of broadband internet user in Ethio telecom?
- ADSL (fixed)
- ADSL (warless)
- Both
- Other, specify _____
4. If you are ADSL internet service user, which types of internet speed your are subscribe?
- Bg 512kb/s-1mb/s 6mb/s-8mb/s
- 2mb/s-4mb/s 10mb/s and above
5. For how many computers are used or share your internet subscription for the purpose of speed?
- 1-5 Computer 6-10 computers 11-15 computers
- 16 – 20 computer other, specify _____

	handling customer's service problems.										
12	The company's performing service correctly the first time.	1	2	3	4	5	1	2	3	4	5
13	Ethiotelecom providing service at the promised time.	1	2	3	4	5	1	2	3	4	5
14	The company's done to maintaining error-free records	1	2	3	4	5	1	2	3	4	5
	Responsiveness	SD	DA	N	A	SA	SD	DA	N	A	SA
15	Ethiotelecom keeping customer's informed about when service will be performed.	1	2	3	4	5	1	2	3	4	5
16	Employees of a company give prompt service to the customer.	1	2	3	4	5	1	2	3	4	5
17	Ethiotelecom employees having willingness to help customer's.	1	2	3	4	5	1	2	3	4	5
18	Employees of a company always ready to respond the customers questions.	1	2	3	4	5	1	2	3	4	5
	Tangibility	SD	DA	N	A	SA	SD	DA	N	A	SA
19	Ethiotelecom have up to date equipment's.	1	2	3	4	5	1	2	3	4	5
20	The company's equipment's are appealing visually facilities.	1	2	3	4	5	1	2	3	4	5
21	Employees of Ethiotelecom who have a neat and professional appearance.	1	2	3	4	5	1	2	3	4	5
22	The physical facilities (office layout, furniture, computer sit) are visually smart comfortable as a business center	1	2	3	4	5	1	2	3	4	5
23	Employees of a company have a good smiling smart dressing and good customer reception	1	2	3	4	5	1	2	3	4	5

If you have any ideas about broadband internet of Ethiotelecom _____

Section IV: the Overall quality and satisfaction of broadband internet service of Ethio telecom
(please circle as you select).

1. What is the overall service quality of broadband internet service of Ethio telecom?

1	2	3	4	5	6
Very poor	poor	Neutral	Good	Very good	Excellent

Thanks for your cooperation and give your time!!!