



**ST. MARY'S UNIVERSITY  
SCHOOL OF GRADUATE STUDIES**

**THE IMPACT OF SERVICE QUALITY ON CUSTOMER  
SATISFACTION: THE CASE OF ETHIO TELECOM CALL  
CENTER**

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SATISFACTION: THE CASE OF ETHIO TELECOM CALL CENTER

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A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY, SCHOOL OF  
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REQUIREMENTS FOR THE AWARD OF A MASTERS DEGREE IN  
MARKETING MANAGEMENT.

## Declaration

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

Name of the Participant: Lidya Seyoum:

Signature.....

Date.....

## Approval

The undersigned certify that they have read and here by recommend to the St. Mary's University to accept the Thesis submitted by Lidya Seyoum, and entitled the impact of service quality on customer satisfaction: the case of Ethio telecom call center, in partial fulfillment of the requirements for the award of a Masters Degree in Marketing Management.

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## **ENDORSEMENT**

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

**Getie Andualem (PhD)**  
**Advisor**

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**Signature & Date**

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## **ACCRONYMS AND ABBREVIATIONS**

**CRM:** Customer Relationship Management

**ET:** Ethio Telecom

**ETA:** Ethiopian Telecommunication Agency

**ETC:** Ethiopian telecommunications Corporation

**IPCC:** Internet Protocol Call Center

**KPI:** Key Performance Indicators

**PSTN:** Public Switched Telephone Network

**SERVPERF:** Service Performance Scale/model

**SERVQUAL:** Service Quality Scale/Model

**VPN:** Virtual Private network

## ***ABSTRACT***

*The main objective of this study was to assess the overall level of service quality and customer satisfaction in ethio telecom call center and to investigate the impact of service quality dimensions on customer satisfaction. A conceptual model of service quality dimensions was developed and hypothesized. The major tools used for data collection is, questioners for ethio telecom major customers in Addis Ababa who have access to use both 980 and 994 access numbers.400 respondents taken as a sample from 3,157 major customers The hypotheses were tested with the data collected through structured questionnaires from ethio telecom major customers in Addis Ababa. The collected data was analyzed using both descriptive and inferential statistical analyses techniques. The findings of the study show that service quality of ethio telecom call center is below average and customers are not satisfied with the service. Based on the finding all service quality dimensions have significant impact on service quality and customer satisfaction The study provides the empirical application of Parasuraman (1985) and Anton (1997) service quality model so that this study contributes ethio telecom to improve its call center service quality which leads to customer satisfaction. The study concluded that over all service quality of call center is not good and customers are not satisfied with the services of ethio telecom call center. The researcher recommended that ethio telecom should work hard on all these service quality dimensions to improve its service quality and customer satisfaction of call center.*

***Key words:*** *service quality, customer satisfaction, service quality dimensions*

## **CHAPTER ONE: INTRODUCTION**

This chapter contains the background of the study, background of the organization, problem statement, research questions, objective of the study, significance of the study, scope of the study, conceptual definition of terms and organization of the paper.

### **1.1 Background of the study**

Quality is an important source of competitive advantage in service sector. Service quality is used to differentiate and add value to service offerings and as a way to win strategic competitive advantage.

New managerial methods explain quality as the customer satisfaction, For that reason all the organizations have to recognize the high quality and quick service offering obstacles and solve them (Ghasemi, kazemi and Esfahani, 2012). During the past few decades service quality has become a major area of attention to practitioners, managers and researchers owing to its strong impact on customer satisfaction, business performance, customer loyalty, profitability and lower costs (Guru, 2003).

Customer satisfaction and Service quality are important concepts to academic researchers studying consumer evaluations and to practitioners as a means of creating competitive advantages and customer loyalty. Many industries are paying greater attention to customer satisfaction and service quality, for reasons such as increased deregulation and competition (Ghasemi, kazemi and Esfahani, 2012).

Satisfaction from service quality is frequently evaluated in terms of functional quality and technical quality (Gronroos, 1984). Regularly, customers do not have lot information about the technical phases of a service; therefore, functional quality becomes the main aspect from which to form perceptions of quality of service. Service quality may be described as customer perception of how well a service assembles or go over's their expectations. Service quality can be determined 2 in terms of customer expectation, customer perception, and customer attitude and customer satisfaction.

Providing excellent customer satisfaction and high service quality is the significant matter and challenge meeting the current service industry (Hung, 2003). Customer satisfaction and service quality

have been for this latest year's important topic both for the researches in the field of marketing and for the academic world (Ueno, 2010). The notice directed to these two theories, customer satisfaction and service quality is mainly due to the harsh competition among private businesses on the market, in addition to the pressure of biased factors and of the population, over organizations in the field of public administration (Ghasemi, Kazemi and Esfahani, 2012).

The competitive advantages are to deliver high-quality services, services that in switch will cause the customer satisfaction (Sureshchandar, 2002). The quick competition and development of quality of service, in both developing and developed countries has made this very significant for organizations to determine and estimate the service quality meets (Brown and Bitner, 2007).

For a company to gain competitive benefit it must use knowledge to gather information on market requires and exchange it between organizations for the aim of increase the service quality. Managers and researchers succeed for find out details about components of service quality in their organization of clear reasons of customer satisfaction, enhance profitability etc.

The call center is defined as a place where calls are placed in high volume for the purpose of sales, marketing, customer service, telemarketing, technical support or other specialized business activity' (Bodin and Dawson, 1999). Almost all call centers are active 24 hours a day, 365 days a year. Apart from this operational definition, call centers are considered to be one of the strategies for customer relationship management (Mitchell, 1998), with companies believing that the relationship with a customer should not end at the point of sale and that value is added to the transaction by maintaining access to the customer after the sale. Call center is among service encounters where customers experience negatively or positively.

Despite the importance of the call center industry, there is a lack of extensive and deep research on it. Many aspects of the field, such as call center agents' sales competence (Downing 2011), the relationship between job functions like content, variety autonomy and quality of work life (Zeenobyah& Vo 2011) and models of density forecasting on arriving calls (Taylor 2012), have been studied but often there is no enough research to give a fully comprehensive, accurate and reliable understanding of the phenomena in contact centers. More specifically, there is often plenty of research about the same or a similar phenomenon in a face-to-face service context but a lack in the contact center side.

Downing (2011) notes that the knowledge, skills and abilities of salespeople have been largely studied by scholars but much more in face-to-face situations than in mediated environments like call centers.

Cummaneand Conn (2000) make a notion stating that despite customer satisfaction has raised concerns in the contact center industry; empirical studies have mostly been conducted on staff dissatisfaction rather than customer satisfaction.

The relationship of service quality, service quality dimensions and customer satisfaction is also relevant in examining the conditions related to contact centers goals.

Moreover, according to Lywood, Stone and Ekinici (2009), the profitability of contact centers is influenced by customer experience. They further argue that companies should strive to treat their customers with greater empathy while also recognizing the need to have good control over the costs of calls to manage profitability. This means that although there seems to be a trend among companies to emphasize productivity, they should also manage customer service levels and customer satisfaction.

The modern Call center sector has emerged globally in the last few years around the globe and it is one of the most rapidly growing industries in the world. For instance, in India call center industry is a huge industry employing more than 330,000 people and worth about £3.2 billion a year and growing at a very fast rate of around 25% per annum “the Call Center Association, 1999”. Today, more than 500 companies of UK, USA and other developed countries are outsourcing their call center activities to India. But in Ethiopian context, the only well-known and highly accessed call center service in Ethiopia is ethio telecom’s call center.

## 1.2 Back ground of the company

The introduction of telecommunication in Ethiopia dates back to 1884. Ethiopian Telecommunication Corporation is the oldest public telecommunications operator in Africa. In those years, the technological scheme contributed to the integration of the Ethiopian society when the extensive open wire line system was laid out linking the capital with all the important administrative cities of the country. After the end of the war against Italy, during which telecommunication network was destroyed, Ethiopia re-organized the telephone, telegraph and postal services in 1941 (Company Profile, 2010).

According to same cite, originally a division of the Ministry of Post, Telephone and Telegraph, what would become the ETC was established as the Imperial Board of Telecommunications of Ethiopia (IBTE) by proclamation No. 131/52 in 1952. Under the DERG Regime, the IBTE was reorganized as the Ethiopian Telecommunications Service on October 1975, which was in turn reorganized on January 1981 as the Ethiopian Telecommunications Authority. On November 1996, the Ethiopian Telecommunications Authority became ETC by Council of Ministers regulation No. 10/1996. The subsequent Proclamation 49/1996 expanded the ETC's duties and responsibilities. For its international traffic links and communication services, ETC mainly uses its earth station at Sululta which transmits and receives to both Indian Ocean and the Atlantic Ocean satellites.

In late 2006, the ETC signed an agreement worth US\$1.5 billion with three Chinese companies, ZTE Corporation, Huawei Technologies and the Chinese International Telecommunication Construction Corporation, to upgrade and expand Ethiopian telecommunications services. This agreement increases the number of mobile services from 1.5 million to 7 million, land line telephone services from 1 million to 4 million, and expansion of the fiber optic network, from the 4,000 kilometers to 10,000 by 2010. It is part of a larger US\$ 2.4 billion plan by the Ethiopian government to France Telecom (Orange), the French telecom company, had taken over the management of the country's sole telecom provider, Ethiopian Telecommunications Corporation, as of December 2, 2011 up to December 1, 2013. Orange was managed ethio telecom for two years before leaving the job back to Ethiopians. Ethio-telecom has 12 divisions. These divisions are namely; finance, legal, human resource, sourcing and facilities, residential marketing and sales, customer services, enterprises, internal audit, Program Management Office/security/public relation, quality and process, information system, and network divisions. Each division has its own chief officer.



Ethio telecom's network coverage and type of services rendered are increasing from time to time. The same is true for its revenue. The annual gross profit growth rate is showing an increase from year to year.

Ethio telecom customers are segmented in to three levels based on their level of revenue generated to the company. These are residential, major and critical customers. This study is focused on major customers (Customer Service Division Plan, Strategy and Report, 2014).

### **1.3 Statement of the problem**

As communication technology is increasing rapidly and competition is high, improving service quality and customer's satisfaction has no option. Call Centers are used to provide various services which include customer support services, technical support services, sales and telemarketing services, customer relationship management, finance and accounting services etc. Since the formation of the ethio telecom in 2010, the company has taken many measures to improve its service quality and customer's satisfaction.

There are standardized set of call quality monitoring parameters and procedures to provide uniform services at every calls attempt. These call quality monitoring parameters and procedures are used to measure the quality of services provided by call center agents and level of customers' satisfaction.

But it is difficult for a call centers to make a balance between quality and efficiency while trying to achieve company's objectives. Customer's satisfaction is not fulfilled only by technical (physical performance of the offer) and there are so many after sales services request especially in telecom industry like ethio telecom. According to Shemwell et al., (1998) in today's world of intense competition, the key to sustainable competitive advantage lies in delivering high quality service that will in turn result in satisfied customers. The customer's overall satisfaction with the services of the organization is a function of all the encounters/experiences of the customers with that organization.

Similar to service quality, customer satisfaction can occur at multiple levels in an organization for example, satisfaction with the contact person, satisfaction with the core service and satisfaction with the organization as a whole. Majority of the services could be handled by call center agents in where

supportive systems and human elements are working together. Downing (2011) noted that the knowledge, skills and abilities of salespeople have been largely studied by scholars but much more in face-to-face situations than in mediated environments like call centers.

Call center service is one of the most important weapon to build good customer relationship management and customer retention (Bennington et al., 2000). But there is no enough study related to service quality and customer satisfaction on a phone service encounter (call center) unlike face to face service encounter more specifically in Ethiopia. In addition to this Customers are less satisfied with call center service compared with office based in person service.

The concept of call center service industry is new in Ethiopia and as specified in back ground of the company, ethio telecom call center is the only one which is handling averagely more than 270,000 customers per day who are requesting different services. Moreover the SERVQUAL model is mostly applied for face to face service encounter than for phone encounter like call center even though other researchers like (Anton, 1997) applied SERVQUAL model to phone encounter with little modifications. These are the main problematized statements of this study which is conducted to assess the impact of service quality dimensions on over all service quality of ethio telecom call center and customer satisfaction from which the company could take corrective actions based on the findings.

#### **1.4 Basic Research Questions**

Based on the identified research problems, this study tried to answer the following questions.

- What is the impact of service quality on customer satisfaction in ethio telecom call center?
- What is the relationship between service quality dimensions and service quality in ethio telecom call center?
- Which service quality dimensions have greater influence on customer satisfaction with ethio telecom call center?
- How is customer perception of service quality and customer satisfaction in ethio telecom call center

## 1.5 Objectives of the study

### 1.5.1 General Objective of the study

The main objective of this study was to assess the perception of service quality and customer satisfaction with ethio telecom call center.

### 1.5.2 Specific objectives of the study

The specific objectives of the study were:

- To investigate the impact of service quality on customer satisfaction in ethio telecom call center
- To analyze the relationship between service quality dimensions and service quality in ethio telecom call center.
- To discover which service quality dimensions have greater influence on customer satisfaction in ethio telecom call center.
- To evaluate customer perception of service quality and customer satisfaction in ethio telecom call center.

## 1.6. Definition of Terms

### 1.6.1. Conceptual definition

- **Service quality** - is the global evaluation or attitude of overall excellence of service. Therefore service quality is the difference between customers expectation and perception of service delivered by service firms.(parasuraman et al,1988,p.5).
- **Customer satisfaction**- the consumer's response to the evaluation of the perceived discrepancy between prior expectation and the actual performance of the product or service as perceived after its consumption. (Tse & Wilton, 1988, p.204).
- **Service encounter**-an instance of interaction between a server who is officially posted in some service area, that interacting being oriented to the satisfaction of the customer's presumed desire for some service and the server's obligations to provide that service.(Shostack,G.Lynn,1985,p.243).
- **Call center**-a place where calls are placed in a high volume for the purpose of sales, marketing, customer's service, telemarketing, technical support or other specialized business activity (Bodin and Dawson, 1999).

- **Contact center**-is the same with call center but in addition to using calls, contact centers use email, text chat and web interfaces to communicate with customer.
- **SERVQUAL** –is a service quality gap model which measures service quality by using the expectation and perception of customers. (Parasuraman et al., 1985, p.41-50).

### 1.7 Significance of the study

This study contributes the knowledge on service quality and customer satisfaction level, the relationship between service quality dimensions, service quality and customer satisfaction in call center industry.

The study finding also be relevant input to the management of ethio telecom and other companies which have call center services in identifying the existing strength and weaknesses of service quality delivery and level of customer satisfaction experienced by customers during their visit to the company's call centers. In addition, this study will help the company to focus on highly influential service dimensions of service quality and customer satisfaction for call center service.

At last, the concept of modern call center service is new particularly to Ethiopia and as this study is found on recent call center service literatures, it is essential for researchers who want to undertake further studies related to call center service.

### **1.8. Delimitation /scope of the study**

This study is conducted to evaluate the quality of services provided and the level of customer satisfaction. Ethio telecom is providing different services and has different customers, among those services and customers the scope is limited to ethio telecom call center major customers who have access to use both 980 and 994 access numbers in capital city, Addis Ababa. The finding of the study cannot be generalized to residential customers.

To make the study meaningful the important information is gathered as a form of questionnaires from selected major customers through probabilistic stratified random sampling technique.

### **1. 9. Organization of the paper**

This study is organized under five chapters. The first chapter is the introduction part of the study which contains; background of the study, background of the organization, problem statement, research questions, hypothesis of the study, objective of the study, significance and scope of the study. The next chapter, chapter two is mainly focus on existing literatures which covers conceptual and theoretical framework related to the study, finally to develop conceptual frame work from the theories and empirical studies. The third chapter discussed the methodology of the study. It includes research design, research methods, as well as data collection instruments and data analysis techniques. The content of chapter four is analysis of the study and its interpretations. The last chapter, chapter five includes conclusion, recommendations and; limitations and directions for further study.

## **CHAPTER TWO: LITRATURE REVIEW**

### **2.1.Chapter overview /Introduction**

The main contents of this chapter are review of theories and empirical studies related to services, service quality and customer satisfaction in call center and other service sectors. After critical reviews, the conceptual framework of the study is drawn.

### **2.2. Theoretical Review**

#### **2.2.1. Customer Expectation VS Perception of Service**

Customer expectations are beliefs about service delivery that serve as standards or reference points against which performance is judged. Customer expectation is what the customer expects according to available resources and is influenced by cultural background, family lifestyle, personality, demographics, advertising, experience with similar products and information available online. Because customers compare their perceptions of performance with these reference points when evaluating service quality, thorough knowledge about customer expectations is critical to service marketers. Knowing what the customer expects is the first and possibly most critical step in delivering quality service. Being wrong about what customers want can mean losing a customer's business when another company hits the target exactly. Being wrong can also mean expending money, time and other resources on things that do not count to the customer and even mean not surviving in a fiercely competitive market.

Customer perception is totally subjective and is based on the customer's interaction with the product or service. Perception is derived from the customer's satisfaction of the specific product or service and the quality of service delivery.

Perceptions are always considered in relation to expectations (Zeithaml, Bitner and Gremler 2009). Perceptions are formed through customers' assessment of the quality of service

Provided by a company and whether they are satisfied with the overall service (Zeithaml and Bitner, 2003). (Zeithaml, Bitner and Gremler, 2009) Zeithaml and Bitner (2003) argue that because perceptions may shift over time and therefore it is necessary for companies to continually assess customer perceptions (Zeithaml and Bitner, 2003).

#### **2.2.1.1 Service Encounters or Moments of Truth**

Service encounters are the building blocks for customer perceptions. Customers often base their perception of service on the quality of interaction with service personnel. Thus, service organizations give priority for quality service operation and attempt to exceed the expectations of customers at the execution. In this regard employees become a vital part of service delivery operation and there is a need to ensure that they can proficiently deliver the promise made to customers in all service delivery encounters. The front-line employee role has been defined as activity which links an organization with the organization within which it operates (Bateson and Hoffman, 1999).

There are different difficulties these front-line employees are faced on a daily basis ranging from technical fault to badly behaved customers. It is the manner in which these challenges are dealt with and the degree to which one can cope with the strain of boundary spanning roles, which distinguishes excellent service providers. Singh, et al. (1994) stated that personnel who are operating in boundary spanning roles are prone to high levels of emotional burnout and role conflict.

Regardless of whether contact points are visible or not, they constitute moments of truth- points in time during which customers are afforded the opportunity to gauge service quality.

There are three alternative types of service encounters.

**Remote Encounters:** This interaction between customers and employees (organization) occurs without any direct contact. Even though there is not any human contact where the transaction is mediated by technology; firms could strengthen customers' perception of service quality by managing the tangibles and technical aspect of the service.

**Phone Encounters:** This is the most frequent type of encounter between customers and employees in many organizations (utility firms and service organizations like telecommunication services.) Customers' judgment of service quality depends on tone of voice, employees' knowledge, politeness and their effectiveness /efficiency in handling customer issues.

**Face- To- Face Encounters:** It occurs between customers and employees in direct contact. Both verbal and nonverbal behaviors are important determinants of service quality perception and other tangible cues should be managed.

#### **2.2.1.2. Call Center Service**

Call centers are defined as a place where calls are placed in a high volume for the purpose of sales, marketing, customer service, telemarketing, technical support or other specialized business activity (Bodin and Dawson, 1999). Almost all call centers are all available 24 hours a day, 365 days of the year apart from this operational definition, call centers are considered to be one of the strategies for customer relationship management (Mitchell, 1998) when companies believe that the relationship with customer should not end at sales and customer access after the sales add value to the transaction.

In call center, human agents and/or automatic voice response machines handle telephonic communications with customers (Moon et al, 2004), like solving problems and resolving complaints, giving information answering questions and receiving feedbacks.



Call center is a best way of providing and controlling customer satisfaction (Anton, 1997) after providing services and products by meeting customer needs in an efficient, convenient and friendly way. On the other hand, it helps satisfaction recovery when a customer has a problem.

### **2.2.1. 3. Importance of Call Center Service**

In today's competitive market, customer service call centers have moved from back to the front office as customer satisfaction and retention strategy (Anton, 1997). The importance of call center is also paramount in telecommunication industry. All players have call centers as a proactive way to differentiate their services. They use call center to build, maintain and manage customer relationships by establishing direct communication with their customers that help the business do more with customers and attract new customers.

However, in reality call centers have failed to realize their potential in helping organizations achieve the goals of providing high levels of customer satisfaction. Customers are less satisfied with call center services compared with office-based in person services (Bennington et al, 2000). So, how to provide superior service to customers through call centers is extremely important for organization from the long term objective of customer retention.

It is important for all to understand why customers use call center service. From customers' perspective, the main call center benefits for customers are convenience, flexibility and customization (Bennington et al, 2000). It is customers who ultimately consume the services offered by call centers hence their perceptions count most.

In telecommunication industry, almost 90% of customers consumed the call center services are existing service subscribers, so call centers are a fundamental weapon for customer relationship management and customer retention in the industry.

### 2.2.2. Service Quality

Quality is the key word for the survival of organizations in the global economy. Organizations are undergoing a shift from a production-led philosophy to a customer- focused approach. Firms with high service quality pose a challenge to other firms given that service quality is considered an important tool for a firm's struggle to differentiate itself from its competitors (Landari, 2008). According to Lewis and Booms (1983) service quality is a measure of how well a delivered service matches the customer expectation.

Parasuraman et al. (1985) defined service quality as “the global evaluation or attitude of overall excellence of services”. Therefore, service quality is the difference between customers' expectation and perceptions of services delivered by service firms. Nitecki et al. (2000) defined service quality in terms of “meeting or exceeding customers' expectations” or as “the difference between customers' perception and expectations of service”.

Service quality in the management and marketing literature is the extent to which customers' perceptions of service meet and/or exceed their expectations for example as defined by Zeithaml et al. (1990), cited in Bowen & David, 2005,) Thus service quality can intend to be the way in which customers are served in an organization which could be good or poor. Parasuraman defines service quality as “the differences between customer expectations and perceptions of service” (Parasuraman, 1988). They argued that measuring service quality as the difference between perceived and expected service was a valid way and could make management to identify gaps to what they offer as services.

### 2.2.2.1 Service Quality Model

#### 1. SERVQUAL Model

One of the most useful measurements of service quality is the dimensions from the SERVQUAL model. In the creation of this model for the very first time, “Parasuraman et al. (1985) identified 97 attributes which were condensed into ten dimensions; they were found to have an impact on service quality and were regarded as the criteria that were important to access customer’s expectations and perceptions on delivered service (Kumar et al., 2009,).

The SERVQUAL scale which is also known as the gap model by Parasuraman, et al.(1988) has been proven to be one of the best ways to measure the quality of services provided to customers.

This service evaluation method has been proven consistent and reliable by some authors (Brown et al., 1993). They held that, when perceived or experienced service is less than the expected service; it implies less than satisfactory service quality; and when perceived service is more than expected service, the obvious inference is that service quality is more than satisfactory (Jain et al., 2004,). From the way this theory is presented, it seems the idea of SERVQUAL best fits the evaluation of service quality from the customer perspective. This is because when it is stated “perceived” and “expected” service, it is very clear that this goes to the person, who is going to or is consuming the service; who definitely is the consumer/customer. The original study by Parasuraman et al., (1988) presented ten dimensions of service quality namely:

Tangibles, Reliability, Responsiveness, Competence, Courtesy, Credibility, Security, Access, Communication and Understanding the customer. In first SERVQUAL model that came had 22 pairs of Likert-type items, where one part measured perceived level of service provided by a particular organization and the other part measured expected level of service quality by respondent. After refinement, these ten dimensions above were later reduced to five dimensions as below:

**Tangibility:** physical facilities, equipment, appearance of personnel and communication materials.

**Reliability:** It is consistently shown that it is the most important determinant of perceptions of service quality. It is the ability to perform the promised service dependably and accurately. The promise may include delivery, service provision, problem resolution and pricing.

**Responsiveness:** Is the willingness to help customers and provide prompt service. This dimension emphasizes attentiveness and promptness in dealing with customer request, questions, complaints and problems. It is all about length of time they have to wait for assistance, answers to questions or attention to problems. To truly distinguish themselves on responsiveness companies need well-staffed customer service department as well as responsive frontline people in all contact positions.

**Assurance:** knowledge and courtesy of employees and their ability to inspire trust and Confidence. This dimension is likely to be particularly important for services that customers perceive as high risk or uncertain about their ability to evaluate outcomes. Trust and confidence are embodied in the contact employee and the company itself.

**Empathy:** caring individualized attention the firm provides to its customers.

The aggregated sum of difference between perceptions and expectations from the five dimensions forms the global perceive quality construct.

Laroche et al. (, 2004,) following this view, customers' expectations were met through the outcome dimension (reliability) and exceed it by means of the process dimension (tangibility, assurance, responsiveness, and empathy).To confirm the validity of SERVQUAL model in the evaluation of service quality,Zeithaml et al (2006), stated that "service quality is a focused evaluation that reflects the customer's perception of reliability, assurance, responsiveness, empathy, and tangibles" (Zeithaml et al., 2006,). They added that among these dimensions, "reliability" has been shown consistently to be the most important dimension in service quality (Zeithaml et al., 2006,).

Rust et al. (1994) state that SERVQUAL is intended to describe the dimensions of quality common to all services and is therefore unlikely to encompasses the special properties of any particular service. In call centers, unlike face-to- face service encounters occurring in other service organizations like restaurants, banks, service encounters are phone encounters that happen every time a customer interacts with a company through call centers over telephone. In telephonic service encounters, tangible factors such as attire of employees, physical evidences do.

not contribute to service quality perceptions of customers. Keinigham et al. (2006) has shown that call center satisfaction has all the five dimensions as found in SERVQUAL except tangibility.

## **2. Gap model**

Parasuraman et al (1985) developed a service quality gap model, where he defined service quality as a function of the difference between the expectation and performance along quality dimensions. The various gap visualized in the model are:

**Gap 1: Consumer expectation – Management perception gap:** - The difference between customer's expectation and management perception of those expectations. I.e. not knowing what consumers expect.

**Gap 2: Management perception – Service quality specification gap:** - The difference between management perception of consumers' expectations and service quality specifications i.e. improve service quality standards.

**Gap 3: Service quality specifications – Service delivery gap:** - The difference between service quality specifications and service actually delivered i.e. the service performance gap.

**Gap 4: Service Delivery – External communication Gap:** - The difference between service delivery and communications to consumers about service delivery i.e. whether promises match delivery.

**Gap 5: Expected Service – Perceived Service Gap:** - The difference between consumer's expectation and perceived service. This gap depends on size and direction of the four gaps associated with the delivery of the service quality on the marketer's side.

### **3. Functional and Technical Dimension Model**

Other researchers saw the need of additional components of service expectations that is functional and technical dimensions. (Grönroos 1983) The idea was that, consumers make service evaluations based on the technical dimension that is what is delivered and on the functional dimension that is how, why, who, and when it is delivered. (Laroche et al., 2004 and Grönroos, 1983).

### **4. SERVPERF Scale**

Although the elements listed in SERVQUAL model have been proven to be the main method for evaluating service quality from the consumer's perspective (Brown et al., 1993), drawbacks in using SERVQUAL in measuring service quality has been the reason that the SERVPERF scale was proposed by Cronin & Taylor (1992, cited in Jain et al. (2004,)) after they called into question the conceptual basis of the SERVQUAL, having found it, led to confusion with service satisfaction (Jain et al., 2004,). These researchers discarded the 'E' for 'expectation' claiming instead that 'P' for

'performance' alone should be used. They meant that higher perceived performance entails higher quality service. Unfortunately, during this past century, customers have changed their behaviors in ways that do not suit organizational Behavior. Till date, it is unclear as to which of SERVQUAL and SERVPERF is superior in measuring service quality (Jain et al., 2004,). Laroche et al., (2004) made an assessment of the dimensionality of should and will service expectations. They used a survey measuring customers' post encounter expectations and vis-à-vis a well-known airline with a sample of 363 and examined the existence of hypothesized functional and technical dimensions of should and will expectations and determined the casual relationships between two types of expectations and hypothesized dimensions.

They tested their dimensions in the context of the turbulent airline industry. This study measured service quality with other service quality dimensions such as technical and functional dimensions proposed by Grönroos (1983).

Hence it was proven that the SERVQUAL model must not be used in evaluating service quality in all organizations. This could mean that; different industries might require different measurements for service quality.

### 2.2.3. Customer Satisfaction

Customer satisfaction is conceptualized transaction-specific meaning. It is based on the customer's experience on a particular service encounter, (Cronin & Taylor, 1992) and also customer satisfaction is cumulative based on the overall evaluation of service experience (Jones and Suh, 2000). These highlight the fact that customer satisfaction is based on experience with service provider and also the outcome of service.

Giese and Cote, (2000,) clearly state that there is no generic definition of customer satisfaction and after carrying a study on various definitions on satisfaction they came up with the following definition, "customer satisfaction is identified by a response (cognitive or affective) that pertains to a particular focus (i.e. a purchase experience and/or the associated product) and occurs at a certain time (i.e. post-purchase, post consumption)" p. 1 From this definition, it is clear that the consumer's/customer satisfaction is determined by his/her contact experience with the service provider and this is supported by Cicerone et al., (2009,) and Sureshchander et al., (2002), who believe customers' level of satisfaction is determined by their cumulative experiences at all of their points of contact with a supplier organization.

Fornell, (1992), clearly defines customer satisfaction as an overall post-purchase evaluation by the consumer and this is similar to that of Tse and Wilton, (1988, ) who defined customer satisfaction as the consumer's response to the evaluation of the perceived discrepancy between prior expectations and the actual performance of the product or service as perceived after its consumption. These definitions consider satisfaction as a post purchase response and in the case of call center experience is important in evaluating customer satisfaction.

It is important to note that customer loyalty is affected by customer satisfaction (Heskett,

1997). A loyal customer will retain to use the service or sustain to repurchase and with least change to search for substitution. There is empirical support for positive association between customer satisfaction and intention to spread word of mouth (Dabholkar and Thorpe, 1994; Richins, 1983). According to Anton (1997), perception of service quality (performance) can be classified into three zones. Rejection, acceptance and preference by the customer Satisfaction index (CSI). According to him, the score above 85 is under preference zone, the score between 50-84 is under tolerance zone and the score below 50 is under rejection zone.

## **2.3. Empirical Review**

### **2.3.1. Relationship between Service quality and customer satisfaction**

Since customer satisfaction has been considered to be based on the customer's experience on a particular service encounter, (Cronin & Taylor, 1992) it is in line with the fact that service quality is a determinant of customer satisfaction, because service quality comes from outcome of the services from service providers in organizations.

Regarding the relationship between customer satisfaction and service quality, Oliver (1993) first suggested that service quality would be antecedent to customer satisfaction regardless of whether these constructs were cumulative or transaction-specific.

Satisfaction and service quality have certain things in common, but satisfaction generally is a broader concept, whereas service quality focuses specifically on dimensions of service.

Although it is stated that other factors such as price and product quality can affect customer satisfaction, perceived service quality is a component of customer satisfaction (Zeithaml et al. 2006,)

According to Sureshchandar et al., (2002), customer satisfaction should be seen as a multi- dimensional construct just as service quality meaning it can occur at multi levels in an organization and that it should be operationalized along the same factors on which service quality is operationalized.

In relating customer satisfaction and service quality, researchers have been more precise about the meaning and measurements of satisfaction and service quality. Satisfaction and service quality have certain things in common, but satisfaction generally is a broader concept, whereas service quality focuses specifically on dimensions of service.

Parasuraman et al., (1985) suggested that when perceived service quality is high, then it will lead to increase in customer satisfaction. He supports that fact that service quality leads to customer satisfaction and this is in line with Saravana and Rao, (2007,) and Lee et al., (2000), who acknowledge that customer satisfaction is based upon the level of service quality provided by the



service provider.

According to Negi (2009), the idea of linking service quality and customer satisfaction has existed for a long time. He carried a study to investigate the relevance of customer-perceived service quality in determining customer overall satisfaction in the context of mobile services (telecommunication) and he found out that reliability and network quality (an additional factor) are the key factors in evaluating overall service quality but also highlighted that tangibles, empathy and assurance should not be neglected when evaluating perceived service quality and customer satisfaction. This study was based on a specific service industry (mobile service) and it is very important to identify and evaluate those factors which contribute significantly to determination of customer-perceived service quality and overall satisfaction.

Fen & Lian, (2005,) found that both service quality and customer satisfaction have a positive effect on customer's re-patronage intentions showing that both service quality and customer satisfaction have a crucial role to play in the success and survival of any business in the competitive market. This study proved a close link between service quality and customer satisfaction.

Su et al., (2002,) carried a study to find out the link between service quality and customer satisfaction, from their study, they came up with the conclusion that, there exist a great dependency between both constructs and that an increase in one is likely to lead to an increase in another. Also, they pointed out that service quality is more abstract than customer satisfaction because, customer satisfaction reflects the customer's 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.

### 2.3.2 Call center representative behavior

Burgers et al. (2000) establish 4 dimensions to measure customer expectation with regard to call center representative behavior.

**Adaptiveness:** Listen to customers, interpret problems and provide solid solutions by assessing customers' constitution (mood, social behavior, and relationship with the firm) and adjusting behavior accordingly.

**Assurance:** Reducing customer uncertainty by providing clear explanations to customer like steps in the problem solving and the purposes.

**Empathy:** Empathizing with customer situations giving customers the feeling that their problems are important to the organization.

**Authority:** Representatives are empowered and authorized to perform tasks required for solving problems.

### 2.3.3 Service Quality Dimensions

In Parasuraman et al. (1985, 1918) service quality gap model five dimensions and 22 service attributes are identified these dimensions are:

- **Reliability** – Ability to deliver the promised service.
- **Responsiveness** – willingness to provide prompt service.
- **Assurance** – Ability to inspire trust and confidence
- **Empathy** - Individualized attention to customers, caring about the customers.
- **Tangibles** – Appearance of physical facilities, personnel and materials.

However, Rust et al, (1994) state that “SERVQUAL is intended to describe the dimension of quality common to all service and is therefore unlikely to encompass the special properties of any particular service. In call center, unlike face to face service encounters occurring in other service organizations like banks, hospitals, hotels, service encounters are phone encounters that happen every time a customer interacts with a company through call centers over telephone. In telephonic service encounters tangible factors such as attire of employees' physical evidence do not contribute to service quality perceptions of customers.

## Quality

Anton (1997) suggests combining types of metrics. The first are internal metrics which focus mainly on technical quality like waiting time, hold time etc. the second type is external metrics which measure caller perceptions of the call regarding the interaction with and the answer being given by service agent. His model examines each attribute's contribution to the three primary drivers of customer retention –overall satisfaction, willingness to recommend and repurchase intention. The metrics are grouped in to three dimensions.

- **Accessibility** (of the call center (number of rings, queue time, hold time and number of transfer call to other agent).
- **Interaction with agent** (handled the call quickly, showed concern for caller's situation, understood caller's question and speak clearly).
- **Answer or solution** (completeness of the answer, accuracy of the answer, fairness of the answer sufficient knowledge about the product or service).

### 2.3.4 Service quality and customer satisfaction studies related to ethio telecom

A number of studies related to service quality and customer satisfaction with ethio telecom and the previous Ethiopian Telecommunications Corporation (ETC) services were conducted by different researchers. Potluri and Mangnale (2010) conducted an empirical study to find out the satisfaction level of ETC customers using the following parameters: service interaction, service delivery process, customer complaint handling procedure and its outcome and the overall customer satisfaction level.

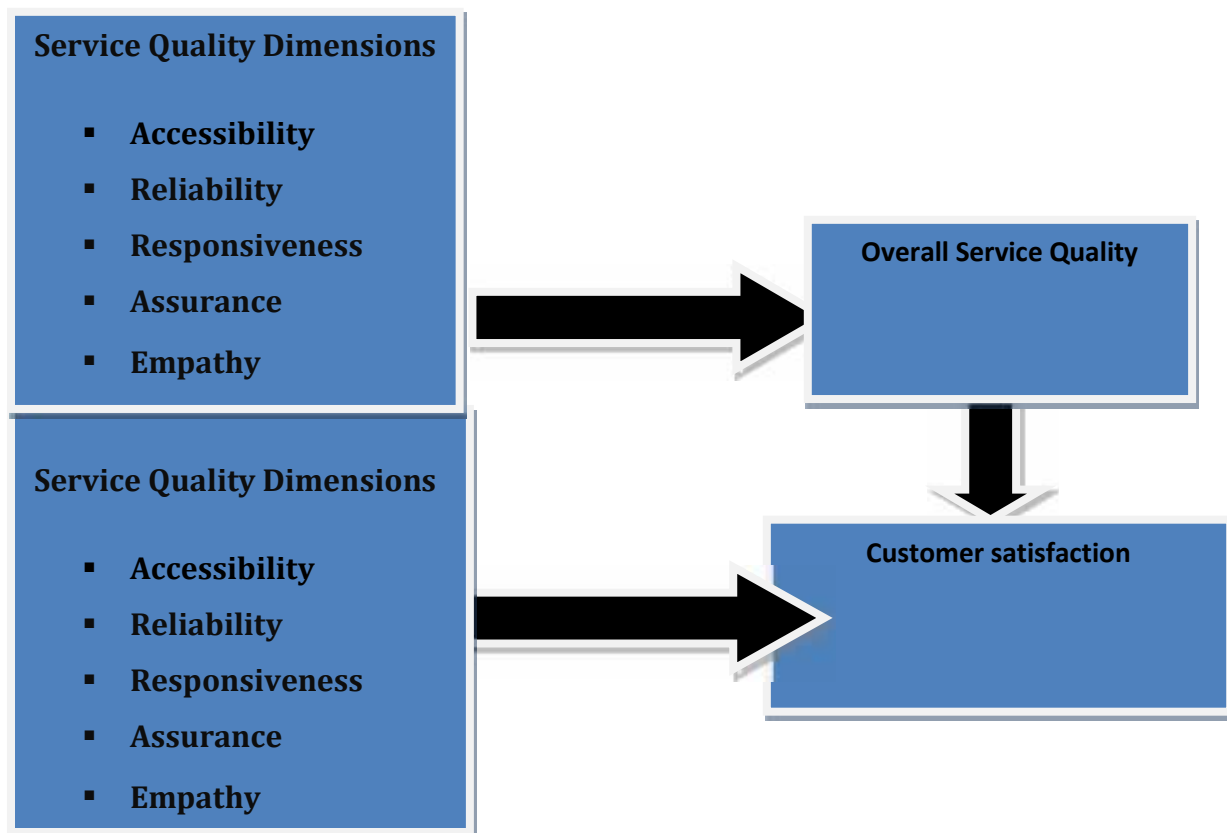
Another study was conducted by RakshitNegi (2009) with the objective of exploring the causal relationship between service quality dimensions and overall service quality, and identifying service quality gaps as experienced by the subscribers of the mobile services of the ETC. The result of the study indicated over all services quality of mobile communications was perceived to be as below average by over half (52.7%) of the respondents, followed by less than one-third (28%) who mentioned it as average, and about one-fifth (19.3%) as above average.

dimensions have their own impact on customer satisfaction but their level of impact is different in between service quality dimensions and among service types.

SERVPERF model is derived from Parasurman's SERVQUAL model which is mainly focus on perceived service quality. The SERVQUAL approach integrates the two constructs (service quality and satisfaction) and suggests that perceived service quality is an antecedent to satisfaction as already stated in theoretical part

After critical review of both theories and empirical studies on service quality and customer satisfaction related to different service sectors, the following conceptual frame work is drawn. The conceptual framework (Figure 2.3.) is drawn by combining service quality dimensions of SERPERF scale derived from the original SERVQUAL model with (Anton, 1997) revised service quality model of call center service. As discussed above, the SERVQUAL model is suitable for measuring service quality and customer satisfaction in different service sectors including retailing services using the service quality dimensions.

#### 2.4. Conceptual framework model



Source: adopted from Cronin, J.J and Taylor, S.A 1992

## 2.5. Hypothesis

Based on the above conceptual framework the following research hypotheses are formulated to be tested.

- H01: Service Quality Dimensions (**Tangibles, reliability, responsiveness, Assurance & empathy**) will not have a positive & significant effect on customer satisfaction.  
(Regression)
- H02: Service Quality Dimensions (**Tangibles, reliability, responsiveness, Assurance & empathy**) will not have a positive relationship with service quality.(correlation)
- H03: Service Quality Dimensions (**Tangibles, reliability, responsiveness, Assurance & empathy**) will not have a positive relationship among themselves.( correlation)

Therefore, the regression equation model will be:

$$Y = \beta_0 + \beta_1 x_i + \beta_2 x_i + \beta_3 x_i + \epsilon_i$$

$$Y = \beta_0 + \beta_1 a_i + \beta_2 r_i + \beta_3 r_i + \beta_4 a_i + \beta_5 e_i + \epsilon_i$$

Where: Y: is the dependent variable service quality and customer satisfaction

- Acc: Tangibles
- Rel: Reliability
- Res: Responsiveness
- Ass: Assurance
- Emp: Empathy
- $\epsilon$ : Error term

## **CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY**

### **3.1 Chapter Overview /Introduction**

This chapter discusses methods used in undertaking this study from the collection of data to methods applied to analyze the collected data. Research design, sample and sampling technique, instrument of data collection, data collection procedure and finally data analysis technique is discussed in this chapter.

### **3.2 Research approach**

The research approach is deductive because it is not developing theories rather theory testing. The study is conducted as a quantitative research; a research that focuses primarily on the construction of the quantitative data.

### **3.3 Research design**

A research design provides a framework for the collection and analysis of data. a combination of descriptive and causal research designs is used in this study. The study was a descriptive in that it seeks to describe the level of customer satisfaction and service quality in ethio telecom call center thus, giving an in-depth understanding of the reality of customer satisfaction with service quality in ethio telecom call center. To understand the relationship between service quality dimensions and customer satisfaction as well as the impact of service quality dimensions on over all service quality and customer satisfaction, causal research design will be used.

### **3.4. Sampling design and procedure**

#### **3.4.1. Target Population**

The researcher used the target respondents, customer of ethio telecom major customers in Addis Ababa who have access to use both 980 and 994 access numbers.

#### **3.4.2. Sampling technique**

Probabilistic sampling technique with stratified random sampling methods is employed to get respond from respondents. Because it ensures each subgroup within the population receives proper representation within the sample The researcher grouped the major customer in to three

parts based on the level of revenue generate to the company, that is very critical medium and less critical customers then applied the stratified random sampling formula which is as follows

**Sample size of the strata=Sample size/population size x layer size**

### 3.4.3. Sample size

In principle, accurate information about given population could be obtained only from census study. However, due to time and cost constraint, in many cases, a complete coverage of population is not possible; thus sampling is one of the methods, which allow the researcher to study relatively small number of units representing the whole population (Sartnakos, 1998). Out of 3,157 major customers 400 of them will be selected. In determining the sample the researcher used sample size determination formula.as shows below

$$n = \frac{N}{1 + Ne^2}$$

Where

**n= sample size**

**N= population size**

**e= margin of error (0.05%) or maximum tolerable error.**

### 3.5. Sources of Data

For the sack of achieving the purpose of this study the relevant data is collected or obtained from primary and secondary source of data.

### **3.5.1. Primary source**

It is clear that data obtained from primary source very important for the reliability of research output. Because it help a researcher to generate a clear and more detailed understanding of problem at hand. Primary data is obtained through the administering of questionnaires.

### **3.5.2. Secondary source**

It is suggested that most business research should be started by using secondary source of data. Because it provide good background information about the issues that related business activities. But for more reliability of secondary data must be combined with primary data. Secondary data was Bullets, brochers and company data base were gathered from the company. As well as the data will be gathered from articles to review related theories and empirical findings in order to have better understanding of customer satisfaction, service quality and SERVQUAL model

## **3.6 Data Collection methodology**

The study used both primary and secondary data. Primary data collected from the sampled customers by using questionnaire. Because questionnaire are easy to administered. The questionnaires are arranged in close ended questions and prepared by English languages. And secondary data is collected from written documents such as journals, books, and magazine and so on.

## **3.7 Data collection instrument**

The major tools used for data collection is, questioners for ethio telecom major customers in Addis Ababa who have access to use both 980 and 994 access numbers , in order to obtain the required information from primary source while secondary data is obtained by referring internal documents.

## **3.8 Data analysis methods**

After the relevant data is collected, it analyzed using statistical package for social sciences (SPSS). Each research questions is answered accordingly and output of the analysis is presented in tables and finally their implications are explained. Descriptive statistics like frequency, mean and correlation analysis techniques were applied to analyze background information of



respondents, to analyze respondents' perception on service quality and satisfaction as well as relationship between service quality dimensions, overall service quality and customer satisfaction. In addition, inferential like regression analysis techniques were used.

### **3.9 Validity and reliability**

#### **3.9.1 Validity**

The validity is assured by evaluating its construct validity. Validity defined as the extent to which data collection method or methods accurately measure what they were intended to measure (Sounders et. al, 2003). To assure the validity of the dimensions whether they can measure the predefined dependent variables or not different theories and empirical studies are assessed to assure its validity. External validity is related to generalization (Bryman and Bell, 2003,). In this study the target population was major customers in Addis Ababa and the sample is enough to generalize for the whole population of ethio telecom major customers. So external validity is strong and can be generalized.

#### **3.9.2 Reliability**

Reliability is the consistency of a set of measurements or measuring instrument, often used to describe a test. Reliability is inversely related to a random error (Coakes & Steed, 2007). There are several different reliability coefficients. One of the most commonly used is called Cronbach's Alpha. Cronbach's Alpha is based on the average correlation of items within a test if the items are standardized. Cronbach's alpha reliability analysis is conducted on the independent variables in order to determine the reliability of the instrument is used. Lack of reliability is a serious drawback of an outcome measure as it indicates errors in measurements (Powell, 1999).

### **3.10 Research Ethics**

There is a growing emphasis on overcoming the ethical issues in business research because of the increased involvement of social responsibility and consumer's wellbeing (Ghauri and Gronhaug, 2005,). All the information treated and kept secretly with high confidentiality without disclosure of the respondents' identity. No information is changed or modified, hence the information is presented as collected and the same with the literatures collected for the purpose of this study. There is no any intention to use unfair means to influence the participants to obtain information. The questionnaire anonymous and high level of confidentiality is considered. The information gathered through questionnaire is used only for its purpose i.e. for the fulfillment of the requirement of my MA degree.

## **Chapter Four: DATA ANALYSIS AND INTERPRETATION**

The aim of this chapter is to analyze and discuss the survey finding using different statistical tools. consists of reliability test, analysis and interpretations of background of the the respondents and analysis and interpretations of the different findings from the survey.

### **4.1. General Information about Respondents**

To discuss the general information of the respondents, descriptive statistics (frequency statistics) was used. The general information include: company category, types of ethio telecom services that the companies are currently using, their experience of ethio telecom call center usage, their call center service usage habit including the access numbers and finally their reasons of call. The next table (table 4.1) summarizes all general information of the respondents.

**Table 4.1.** Frequency (General information about the respondents)

<b>Background</b>		<b>Frequency</b>	<b>Percent</b>
Company category	Financial institutions	49	12.3
	Service enterprises	151	37.8
	Manufacturers	48	12.0
	NGOs/international organization	121	30.3
	Governmental organization	31	7.8
	SQHO/SME Total	400	100.0
Types of ethio telecom services	Fixed line services	212	90.21
	Mobile Services	235	100
	Internet Services	212	90.21
	VPN services	11	4.68
	Total	400	100.0
Experience of Ethio telecom call	Less than one year	16	4.0
	One up to three years	46	11.5
	Three up to five years	115	28.8
	Above five years	223	55.8
	Total	400	100.0
Frequency of call to ethio telecom call	Three times	44	11.0
	Four times	52	13.0
	More than four times	304	76.0
	Total	400	100.0
Usage habit of ethio telecom call	994	224	56.0
	980	9	2.3
	Both	167	41.8
	Total	400	100.0
Reasons for call to ethio telecom call center	For bill request	177	75.3
	For technical support	151	64.3
	For information request	93	39.6
	For complaint	211	89.8
	For complaint status request	188	80
	For feedback	85	36.2
	Total	400	100.0

Source: Survey result (2017)

Table 4.1 shows the general information of the respondents. Majority of the respondents (companies) are service enterprises which account 37% followed by NGO/international organizations which shares 30% and 12.3% and 12% for financial institution and manufacturing companies respectively. The lowest share is governmental organization with 7.8% .

From the types of services ethio telecom is providing, more than 91% respondents have been using all fixed line, mobile and internet services. This shows that the coverage of the services is good except VPN service which is the least.

Concerning the experiences of respondents to ethio telecom call center, majority of the respondents have more than five years experience which counts 55.8% of respondents and only 4% of the respondents have less than one year experience. Moreover, around 76% of respondents were called to Ethio telecom call center for more than four times and 24% of respondents are called to the call center for four and less than four times. This show that the frequency of call to ethio telecom call center is high. From the respondents who have accessed call center, 56%, 2.3% and 41.8% are used 994, 980 and both call center access number respectively.

With respect to purposes of calls (call reasons), the survey result shows 89.8% and 80 of the respondents were called for complaint and for complaint status request respectively. Bill request and call for technical support request ranks third and fourth. The lowest reasons for call were for feedback which shares 36.2%. This implies that majority of calls are related to complaint, complaint status request, bill request and technical support request.

To assess for which services of ethio telecom call center the respondents have frequently called, their frequency of calls and reason for calls were asked.

The main services ethio telecom call center is providing are:

- ✓ Monthly bill request- Customers request their monthly bill amount before the actual settlement whatever the mode of transaction it is.
- ✓ Technical support- It is providing of online technical support service for all ethio telecom product and services.
- ✓ Information request- It is one of the ethio telecom call center services which is handling customers' any information request even though it should be related to telecommunication service. Among this services are directory request (other companies service number), country code, service status, PUK code, information related to new services/products.
- ✓ Complaint handling- It is one of the call center service for which customers can call for complaint related to any ethio telecom services or products. Complaints which cannot be handled at call center level should be escalated to concerned sections and customers should be informed of the probable resolution time.
- ✓ Complaint status request- Is a service for which customers call to request for status of the complaint.
- ✓ Feedback- It is one of the call center service in which customers provide feedback related to services of the company.

## 4.2. Reliability Test

Reliability is the quality of a measurement procedure to provide repeatability and accuracy. A construct is said to be reliable if it brings the same result when we use it multiple times (Bhattacharjee 2012).

**Table 4.2.** Cronbach's Alpha (Reliability analysis)

Dimensions	Cronbach's Alpha value	Number of items
Accessibility	0.703	4
Reliability	0.738	4
Responsiveness	0.88	4
Assurance	0.742	4
Empathy	0.817	4
Overall scale reliability	0.73	20

Source: survey result (2017)

Cronbach's alpha is a coefficient of reliability used to measure the internal consistency of a test or scale. For internal reliability (consistency of the research instrument), reliability test for all service quality dimensions was done. Therefore, the overall reliability of the scale was found to be 0.73 (table 4.2) which indicates the acceptability of the items.

Moreover, the scale consistency of each dimensions adapted from the combination of service quality dimensions of Parasuraman(1985) and Anton(1997) namely accessibility, reliability, responsiveness, assurance and empathy were also computed with the value of 0.703, 0.738, 0.817, 0.742 and 0.817 respectively as table 4.2 shows.

### 4.3. Service Quality Dimensions, Overall Service Quality and Customer Satisfaction

Respondent's perception towards ethio telecom call center service quality is measured through five service quality dimensions. Respondents' perception towards over all service quality and their satisfaction level also measured using their mean score. Table 4.3 shows respondent's perception towards service quality dimensions, over all service quality and customer satisfaction.

**Table 4.3** Descriptive statistics (Perception of SQ dimensions, over all service quality and customer satisfaction)

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Accessibility	400	1	5	3.1756	0.758
Reliability	400	1	5	3.0957	0.727
Responsiveness	400	1	13	3.3431	1.687
Assurance	400	1	5	3.3325	0.745
Empathy	400	1	4	3.2450	0.757
Over all service quality	400	1	5	3.3200	0.888
Customer satisfaction	400	1	5	3.2800	0.899

Source: Survey result (2017)

As table 4.3 shows perception of respondents on responsiveness and Assurance is good compared to other service quality dimensions which have mean score of 3.34 and 3.33 respectively. Empathy has moderate perception with mean score of 3.24 as well as Accessibility and reliability have least perception with mean value of 3.17 and 3.09 respectively.

From this finding, ethio telecom call center service is good in responsiveness that means informing the exact time of service delivery, having good willingness to support customers and their quick respond of customer request are good compared to other dimensions.

Respondents' perception towards quality of assurance items like employee knowledge and courtesy of call center is good.



However service quality of reliability items like providing service at schedule time, performing service right the first time and service quality of accessibility like number of calls attempted before getting agents, length of time holding on and probability of being transferred to other agent is not good.

From table 4.3 above the mean of perception of respondents with over all service quality and customer satisfaction is low which are 3.32 and 3.28 respectively. In general this table shows over all service quality and customer satisfaction is low.

According to Anton (1997) there are three zones of perception of service performance which are preference zone, acceptance zone and rejection zone, by customer satisfaction index (CSI). According to him CSI with  $> 85$  is considered to be in preference zone, CSI in between 50-84 is considered as acceptance zone and CSI with  $< 50$  is in rejection zone which is below average.

#### **4.4. Relationship between Service Quality Dimensions, Service Quality and Customer Satisfaction**

Correlation analysis is used to assess the relationship among service quality dimensions, over all service quality and customer satisfaction. Correlation analysis deal with relationships among variable and helps to gain insight in to the direction and significance of relation between the variables. Correlation coefficient take values between -1 and 1 ranging from being negatively correlated (-1) to uncorrelated (0) to positively correlated (1).

According to Dancey and Reidy(2004), a correlation result which is 0 indicates zero correlation , a result between 0.1 to 0.3 indicates weak correlation, a result which is between 0.4 to 0.6 indicates moderate correlation and a correlation coefficient between 0.7 to 0.9 indicates a strong correlation and a result which is equal to 1 indicates perfect correlation.

Table 4.4 shows the relationship among service quality dimensions, over all service quality and customer satisfaction. As the table shows, all service quality dimensions have positive and significant relationship with over all service quality even though their correlation is different among service quality dimensions. Empathy and assurance have better relationship with over all service quality with moderate coefficient value of .668 and .573 respectively followed by reliability and accessibility which has coefficient value of .524 and .505 respectively. Responsiveness has comparatively low relationship with over all service quality with correlation coefficient value of .385. According to Dancey and Reidy(2004), there is a positive correlation between all service quality dimensions and over all service quality in ethio telecom call center.

**Table 4.4:** Correlation (Relationship among Service quality dimension, over all service quality and customer satisfaction)

Correlations	Access ibility	Reliab ility	Respos iveness	Assuran ce	Empat hy	Over all service quality	Customer satisfacti on
Accessibility	1						
Reliability	.547**	1					
Responsiveness	.223**	.282**	1				
Assurance	.325**	.424**	.312**	1			
Empathy	.464**	.415**	.372**	.653**	1		
Over all service	.422**	.460**	.414**	.605**	.684**	1	
Customer	.505**	.524**	.385**	.573**	.668**	.829**	1

Source: Survey result (2007)

Correlation analysis was undertaken to discuss the relationship between service quality dimensions and customer satisfaction. According to table 4.4 all service quality dimensions and customer satisfactions have positive and significant relationship.

Like the relationship between service quality dimensions and over all service quality, the strength of correlation is different between service quality dimensions and customer satisfaction. Empathy, assurance and reliability have better correlation with correlation coefficient value of .668, .573 and .524 respectively. Responsiveness has the lowest correlation coefficient value of .385. This implies that the better the quality of service with service quality dimensions items of Empathy, assurance and reliability items the higher the level of customer satisfaction.

The relationship between overall service quality and customer satisfaction is also discussed using correlation analysis. As the table shows over all service quality and customer satisfaction has positive and significant relationship with correlation coefficient value of .829. Parasuraman, Zeithmal and Berry (1985, 1988) point out that service quality and customer satisfaction is closely related. The existence of this relationship between service quality and customer satisfaction is more explained by Cronin and Taylor (1992), service quality is an antecedent of satisfaction.

#### 4.5. Assumptions for Regression Analysis

**Table 4.5. Multicollinearity for overall service quality**

Dimensions	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.056	.170		-.328	.743		
AccM	.072	.050	.061	1.437	.151	.633	1.581
RelM	.151	.052	.124	2.891	.004	.623	1.605
ResM	.076	.019	.145	3.934	.000	.839	1.192
AssM	.266	.055	.224	4.865	.000	.540	1.853
EmpM	.473	.057	.403	8.299	.000	.484	2.064

Source: Survey result (2017).

Tolerance is an indicator of how much of the variability of the specified independent is not explained by the other independent variables in the model and is calculated using the formula  $1-R^2$  for each variable. If this value is very small (less than .10) it indicates that the multiple correlation with other variables is high, suggesting the possibility of multicollinearity. The other value given is the VIF (Variance inflation factor), which is just the inverse of the Tolerance value (1 divided by Tolerance).

VIF values above 10 would be a concern here, indicating multicollinearity. Multicollinearity can be detected with the tolerance values and variance inflation factor (VIF). As table 4.5 shows the tolerance values of all independent variables are above 0.1 and the VIF values are below 10 which indicate there is no Multicollinearity problem.

**Table 4.6. Multicollinearity for customer satisfaction**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant )	.299	.171		1.753	.080		
AccM	.180	.050	.152	3.591	.000	.633	1.581
RelM	.230	.053	.186	4.364	.000	.623	1.605
ResM	.058	.020	.109	2.970	.003	.839	1.192
AssM	.206	.055	.171	3.735	.000	.540	1.853
EmpM	.436	.057	.367	7.588	.000	.484	2.064

Source: Survey result (2017)

The values of tolerance for all independent variables (accessibility, reliability, responsiveness, assurance and empathy) are above 0.1 and the values of VIF for these variables are below 10 which indicate that there is no multicollinearity problem.

#### 4.7. Impact of Service quality Dimensions on over all Service Quality

The main assessment in this part is impact of each independent variable on dependent variable.

**Table 4.7.** Linear regression Analyses (impact of each service quality dimensions on service quality).

Dimensions	Unstandardized		Standardize	T	Sig.
	B	Std. Error	Beta		
(Constant)	0.056	0.17		0.328	0.743
Accessibility	0.072	0.05	0.061	1.437	0.151
Reliability	0.151	0.05	0.124	2.891	0.004
Responsiveness	0.076	0.01	0.145	3.934	0.000
Assurance	0.266	0.05	0.224	4.865	0.000
Empathy	0.473	0.05	0.403	8.299	0.000

Source: Survey result (2007)

The value of R square is used to evaluate the model. It tells us how much of the variance in the dependent variable (over all service quality) is explained by the model (which includes the independent variables of accessibility, reliability, responsiveness, assurance and empathy). In this case, the value is 0.55 which can be expressed by percentage ( $0.55 \times 100$ ) this means that this model explains by 55 percent of the variance to overall service quality. (Appendix 2.4)

As depicted in the ANOVA table. The significance value of F statistics is 0.000 which is less than 0.05. It means that the variation explained by the model is not due to chance. This also shows that there is a significant relationship between the dependent and independent variables.

The independent variables estimated to predict over all service quality are accessibility, reliability, responsiveness, assurance and empathy. All these independent variable are significant predictors of service quality with a p value < 0.05 except accessibility but Responsiveness, assurance and empathy have great significance in predicting over all service quality of ethio telecom call center with p value of 0.00, 0.00 and 0.00. Moreover, the standardized coefficient in the table shows the impact of independent variables have on over all service quality. All service quality dimensions have positive impact on service quality of call center even though their impact is different. Empathy, assurance and Responsiveness have comparatively high impact on overall service quality of call center with value of 0.403, 0.224 and .0.145 respectively and accessibility has the least positive impact with value=0.061.

$$Y \text{ (Overall service quality)} = 0.056(\text{con}) + 0.072(\text{accessibility}) + 0.151 \text{ (Reliability)} + 0.076(\text{Responsiveness}) + 0.266(\text{Assurance}) + 0.473(\text{Empathy}) + \epsilon$$

#### 4.8. Impact of Service quality Dimensions on Customer Satisfaction

Linear regressions analysis was applied again to assess the impact of service quality dimensions on customer satisfaction. Table 4.8 shows the SPSS result of the analysis

**Table 4.8** Linear regression analyses (Impact of service quality dimension on Customer satisfaction)

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	0.299	0.171		1.753	0.080
Accessibility	0.180	0.050	0.152	3.591	0.000
Reliability	0.230	0.053	0.186	4.364	0.000
Responsiveness	0.058	0.020	0.109	2.970	0.003
Assurance	0.206	0.055	0.171	3.735	0.000
Empathy	0.436	0.057	0.367	7.588	0.000

Source: Survey result (2007)

As the value of R squared shows(appendix 2.5), in aggregate the dependent variable (customer satisfaction) is explained (impacted) by all independent variables (accessibility, reliability, responsiveness, assurance and empathy) by 55.8 percent which shows the evaluation of the model. This R square is not over estimated while evaluating the model's fitness as its variation from adjusted R square is very near which is 55.2%.

In evaluating each independent variables impact on dependent variable (customer satisfaction), the table shows assurance, reliability, responsiveness and accessibility have significant impact on customer satisfaction of ethio telecom call center. The magnitudes of the impact coefficient values are also positive for all independent variables. Empathy has the biggest impact with value of  $\beta = 0.367$  on customer satisfaction followed by reliability and Assurance compared to other variables. Responsiveness has the lowest positive and significant impact with value of  $\beta = 0.109$ .

$$Y \text{ (Customer satisfaction)} = 0.299(\text{con}) + 0.180(\text{accessibility}) + 0.230 \text{ (Reliability)} + 0.058(\text{Responsiveness}) + 0.206(\text{Assurance}) + 0.436(\text{Empathy}) + \epsilon_i$$

#### 4.9. Impact of Overall Service quality on Customer Satisfaction

Linear regression analysis is used to investigate the impact of overall service quality on customer satisfaction. Table 4.9 shows the survey result of the two variables.

**Table 4.9.** Linear regression analysis (Impact of overall service quality on customer satisfaction)

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	0.496	0.098		5.08	0.00
Over all service quality	0.838	0.028	0.829	29.52	0.00

Source: Survey result (2017)

Over all service quality has significant positive impact with p value = 0.00 on customer satisfaction of ethio telecom call center. The directions of the impact also positive with coefficient value of 0.829 which indicate that based on this model overall service quality has significant impact on customer satisfaction with value=0.829. In general the regression analysis shows that all independent variables listed in the model have significant and positive impact on dependent variables except responsiveness and accessibility.



#### 4.10. Summary of Hypotheses Testing

After the analysis of all survey result, the hypothesis tests are summarized

**Table 4.10.** Summary of hypothesis testing

Hypothesis	test	Result
<b>H1</b> Service Quality Dimensions ( <b>Tangibles, reliability, responsiveness, Assurance &amp; empathy</b> ) will not have a positive & significant effect on customer satisfaction.	Regression	Not supported
<b>H2</b> Service Quality Dimensions ( <b>Tangibles, reliability, responsiveness, Assurance &amp; empathy</b> ) will not have a positive relationship with service quality.	correlation	Not supported
<b>H3</b> Service Quality Dimensions ( <b>Tangibles, reliability, responsiveness, Assurance &amp; empathy</b> ) will not have a positive relationship among themselves.	correlation	Not supported

## CHAPTER FIVE

### 5. SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter is the final chapter which contains summary of the findings, conclusion, recommendations, limitations and future implication of the study.

#### 5.1. Summary of Findings

- The main objective of the study was to assess the overall service quality and customer satisfaction with ethio telecom call center and to investigate the impact of service quality dimensions on customer satisfaction. In this study hypothesis were also developed to investigate how service quality dimensions can affect customer satisfaction.
- To meet this objective quantitative research strategy was adopted and Probabilistic sampling technique with stratified random sampling methods was used to collect quantitative data from ethio telecom customers.
- Descriptive statistics like frequency, mean and correlation analysis techniques were applied to analyze background information of respondents, to analyze respondents' perception on service quality and satisfaction as well as relationship between service quality dimensions, overall service quality and customer satisfaction. In addition, inferential like regression analysis techniques were used.
- The study revealed different findings. From the background information of the respondents more than 90% of the respondents are using all services of ethio telecom except VPN service.

- Mean score comparison was also conducted to evaluate customers perception on service quality dimensions, overall service quality and customer satisfaction.
- Correlation coefficient statistics shows that Empathy and assurance service quality dimensions have strong and significant relationship with over all service quality; significant relationships were also detected between service quality dimensions and customer satisfaction.
- The finding also indicated that there is significant relationship among independent variables (service quality dimensions). Relatively stronger correlation is scored between assurance and empathy.
- In general, all independent variables have significant relationship with dependent variables at  $p= 0.01$  even though their strength is different.
- Regression analysis was undertaken to investigate impacts of each independent variables on dependent variable.
- Finally, the hypotheses developed in this study were tested and the result shows that all service quality dimensions have significant and positive impact on service quality except accessibility it has positive but insignificant impact. Moreover, all service quality dimensions have significant and positive impact on customer satisfaction, Overall service quality has also significant and positive impact on customer satisfaction

## 5.2. Conclusion

The main aim of the study was to assess service quality and customer satisfaction as well as to examine the impact of various service quality dimensions on service quality and customer satisfaction in ethio telecom call centers and to find out important dimensions of services having greater influence on service quality and customer satisfaction. Accordingly, five service quality dimensions (accessibility, reliability, responsiveness, assurance and empathy) were hypothesized to evaluate service quality and customer satisfaction.

Since the mean value of overall service quality and customer satisfaction is low (below average), it is concluded that overall service quality of call center is not good and customers are not satisfied with the services of ethio telecom call center.

Ethio telecom can improve its service by focusing on all service quality dimensions and at the same time it can increase customer satisfaction by focusing on overall service quality and important dimensions.

Ethio telecom can improve its call center service quality and customer satisfaction by improving service quality of all dimensions and by giving special attention to some dimensions like empathy, reliability and assurance.

### 5.3. Recommendations

As presented in the findings of the study all five dimensions of service quality have significant and positive impact on service quality and customer satisfaction except Responsiveness. So working to improve these service quality dimensions will contribute to the overall service quality and customer satisfaction. Based on the survey results, the following recommendations are given.

- ✓ Ethio telecom should implement multiple channels of communication like internet, video chat, integrated voice record (IVR) which leads to contact center services other than using only voice call.
- ✓ The company needs to assess its call center man power versus daily incoming calls and should take corrective action to improve its accessibility.
- ✓ The company should implement different kinds of motivational schemes to call center agents which will encourage employees to provide appropriate service to customers which could increase customer satisfaction.
- ✓ The company should show good progress in Implementing modern systems automation like IPCC (Internet Protocol call center and CRM (Customer relationship management), full implementation of these systems is recommended. This will help to provide prompt and error free service to customers.
- ✓ The company should Implement standardized work process and procedures related to call center service is important. These include setting achievable KPI (Key performance indicators) and standardized call quality monitoring parameters. Implementations of these procedures help to minimize the variation between agents in handling customers.
- ✓ Ethio telecom should Provide continuous on job and off job training to call center agents specifically on communication skill, complaint as well as customer handling skills which will improve the service interaction between the company and customers at call center level. Moreover, this will help to provide quick response to customers instead of escalating each and every complaint to other body of the company.

- ✓ In general, all Service quality dimensions listed in the model of the study have impact on overall service quality and customer satisfaction of ethio telecom call center. Based on these dimensions, customers perceived over all service quality and satisfaction is low. So that ethio telecom should work hard on all these service quality dimensions to improve its service quality and customer satisfaction of call center.

## **5.4. Limitations and Direction for Future Research**

### **5.4.1. Limitation of the study**

There are some limitations associated with this study that need to be explained. Firstly, the results obtained from this study cannot be generalized to a wide range of residential customers as the perceived satisfaction level might be different based on access number they are using. Second it is geographically limited to ethio telecom major customers in Addis Ababa.

Carrying out this study on customers with different level was another limitation because customers' expectation could be different based on their level. Moreover, there were no adequate prior studies in Ethiopia related to call center service. However, the above limitations are less significant compared to the importance of carrying out this type of study.

### **5.4.2. Direction for Future Research**

The purpose of this study was to find how customers of ethio telecom call center perceive service quality and to measure their satisfaction. Knowing how customers perceive service quality and being able to measure service quality can benefit management of ethio telecom by providing reliable data that can be used to monitor and maintain improved service quality.

Findings also show that customers' perceived service quality and satisfaction is low and this therefore means ethio telecom should work hard on all dimensions of service quality in order to bring higher perceived service quality and customer satisfaction.

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# APPENDIX

## Appendix 1: Questionnaire: Service quality survey



St. Mary's University

### MARKETING MANAGEMENT GRADUATE PROGRAM

#### Questionnaire

**Dear respondent,** I am a graduate student at St. Mary's university. The purpose of this study is to measure service quality and the level of customer satisfaction in Ethio telecom call center. Your kind cooperation will help in getting reliable data and I want to assure that it will be used only for this study. Please try to answer all stated questions.

If you have any questions, please contact me through my:-

Email: [etseseyoum@gmail.com](mailto:etseseyoum@gmail.com)

Phone number: 0910638282

Thank you very much for your cooperation!

Lidya Seyoum

**Part one:** General information about the respondents

**Direction:** Please circle your response

1. Company category:
  1. Financial institution
  2. Service provider
  3. Manufacturer
  4. NGOs/international organization
  5. Governmental organization
  6. SOHO/SME
  
2. From services provided by ethio telecom, which services do you currently using? (Please tick on as many services as applicable)
  1. Fixed line telephone services
  2. Mobile Services
  3. internet services
  4. VPN services
  
3. How long you have been using Ethio telecom call center service?
  1. Less than one year
  2. One up to three years
  3. Three up to five years
  4. Above five years
  
4. How many times you have been called to ethio telecom call center since last three months?
  1. Three times
  2. Four times
  3. More than four times
  
5. Which Ethio telecom call center access numbers you have been used to contact Ethio telecom call center agents?
  1. 994
  2. 980
  3. Both
  
6. What were the reasons of your calls to ethio telecom call center? (Please circle as many reasons as applicable)
  1. For bill request
  2. For technical support
  3. For information request
  4. For Complaint
  5. For complaint status request
  6. For Feedback

## PART TWO: SERVICE QUALITY DIMENSIONS

The statements deal with the perceptions of service experienced in ethio telecom call center. Please show the extent to which these statements reflect your perception of service in ethio telecom call center. Please circle a number that shows your level of agreement with the following statements where (1-Stronglydisagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Stronglyagree)

s/n	Service quality dimensions	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I	<b>Accessibility</b>					
1	The number of calls you attempted before getting Ethio telecom call center agent is few	1	2	3	4	5
2	The length of time you spent on hold waiting forThe first Ethio telecom call center agent to answer your call is short	1	2	3	4	5
3	The length of time placed on hold by Ethio telecom Call center agent is short	1	2	3	4	5
4	The probability of transferring your call to another Ethio telecom call center agent is low	1	2	3	4	5
II	<b>Reliability</b>					
4	Ethio telecom call center provides services at scheduled times as promised	1	2	3	4	5
5	When you have problem Ethio telecom call center shows a Sincere Interest in solving it	1	2	3	4	5
6	Ethio telecom call center performs the service right the first time	1	2	3	4	5
7	Ethio telecom call center provides its service at the time it promises to do so	1	2	3	4	5
III	<b>Responsiveness</b>					
8	Employees in ethio telecom call center inform customers exactly when service will be performed	1	2	3	4	5
9	Employees in ethio telecom call center gives you prompt service	1	2	3	4	5

10	Employees in ethio telecom call center are always willing to help you	1	2	3	4	5
11	Employees in ethio telecom call center are never too busy to respond to your request	1	2	3	4	5
IV	<b>Assurance</b>					
12	The behavior of employees in the ethio telecom call center instills confidence in you	1	2	3	4	5
13	You feel safe in your transactions with the ethio telecom call center	1	2	3	4	5
14	Employees in ethio telecom call center are Consistently courteous with you	1	2	3	4	5
15	Employees in ethio telecom call center have the knowledge to answer your questions	1	2	3	4	5
V	<b>Empathy</b>					
16	Ethio telecom call center gives you individual attention	1	2	3	4	5
17	Ethio telecom call center has operating hours Convenient to you	1	2	3	4	5
18	Ethio telecom call center has employees who deal with you in a caring fashion	1	2	3	4	5
19	Employees in ethio telecom call center understand your specific needs	1	2	3	4	5

### PART THREE: LEVEL OF SERVICE QUALITY AND CUSTOMER SATISFACTION

This part indicates overall level of service quality and your overall level of satisfaction on Ethio telecom call center services. Please circle a number that shows over all service quality perception and your level of satisfaction with the following statements.



(1-Highly Dissatisfied, 2-Dissatisfied, 3-Neutral, 4-Satisfied,5-highlysatisfied)

VI	<b>Overall level service quality and satisfaction</b>	Strongly dissatisfied	Dissatisfied	Neutral	Satisfied	Strongly satisfied
1	Over all, the service quality of ethio Telecom call center service is good	1	2	3	4	5
2	In general, I am satisfied with the services of ethio telecom call center	1	2	3	4	5

## Appendix 2: Statistical output

### 2.1. Reliability test (Cronbach,s Alpha)

Dimensions	Cronbach's Alpha	N ofItems
Accessibility	.703	4
Reliability	.738	4
Responsiveness	.880	4
Assurance	.742	4
Empathy	.817	4

### 2.2. Descriptive statistics

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
AccM	400	1.50	5.00	3.1756	.75837
RelM	400	1.50	5.00	3.0957	.72798
ResM	400	1.00	13.50	3.3431	1.68760
AssM	400	1.00	5.00	3.3325	.74596
EmpM	400	1.00	4.75	3.2450	.75798
Over all, the service quality of ethio Telecom call center service is good	400	1.00	5.00	3.3200	.88858
Valid N (listwise)	400				

### 2.3. Correlation Analyses

Correlations

		AccM	RelM	ResM	AssM	EmpM	svq	satsf
AccM	Pearson Correlation	1	.547**	.223**	.325**	.464**	.422**	.505**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	400	397	400	400	400	400	400
RelM	Pearson Correlation	.547**	1	.282**	.424**	.415**	.460**	.524**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
	N	397	397	397	397	397	397	397
ResM	Pearson Correlation	.223**	.282**	1	.312**	.372**	.414**	.385**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000
	N	400	397	400	400	400	400	400
AssM	Pearson Correlation	.325**	.424**	.312**	1	.653**	.605**	.573**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000
	N	400	397	400	400	400	400	400
EmpM	Pearson Correlation	.464**	.415**	.372**	.653**	1	.684**	.668**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
	N	400	397	400	400	400	400	400
svq	Pearson Correlation	.422**	.460**	.414**	.605**	.684**	1	.829**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
	N	400	397	400	400	400	400	400
satsf	Pearson Correlation	.505**	.524**	.385**	.573**	.668**	.829**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	400	397	400	400	400	400	400

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

## Appendix 2.4 Linear regressions (Impact of service quality dimensions on service quality)

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.744 <sup>a</sup>	.553	.547	.59877

a. Predictors: (Constant), EmpM, ResM, ReIM, AccM, AssM

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	173.459	5	34.692	96.763	.000 <sup>b</sup>
	Residual	140.183	391	.359		
	Total	313.642	396			

a. Dependent Variable: svcq

b. Predictors: (Constant), EmpM, ResM, ReIM, AccM, AssM

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.056	.170		-.328	.743
	AccM	.072	.050	.061	1.437	.151
	ReIM	.151	.052	.124	2.891	.004
	ResM	.076	.019	.145	3.934	.000
	AssM	.266	.055	.224	4.865	.000
	EmpM	.473	.057	.403	8.299	.000

a. Dependent Variable: svcq

## Appendix 2.5 Linear regressions (Impact of service quality dimensions on customer satisfaction)

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.747 <sup>a</sup>	.558	.552	.60273

a. Predictors: (Constant), EmpM, ResM, RelM, AccM, AssM

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	179.028	5	35.806	98.560	.000 <sup>b</sup>
	Residual	142.045	391	.363		
	Total	321.073	396			

a. Dependent Variable: satsf

b. Predictors: (Constant), EmpM, ResM, RelM, AccM, AssM

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.299	.171		-1.753	.080
	AccM	.180	.050	.152	3.591	.000
	RelM	.230	.053	.186	4.364	.000
	ResM	.058	.020	.109	2.970	.003
	AssM	.206	.055	.171	3.735	.000
	EmpM	.436	.057	.367	7.588	.000

a. Dependent Variable: satsf

## Appendix 2.6 Linear regressions (Impact of overall service quality on customer satisfaction)

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.829 <sup>a</sup>	.687	.686	.50411

a. Predictors: (Constant), svq

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	221.497	1	221.497	871.599	.000 <sup>b</sup>
	Residual	101.143	398	.254		
	Total	322.640	399			

a. Dependent Variable: satsf

b. Predictors: (Constant), svq

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.496	.098		5.084	.000
	svq	.838	.028	.829	29.523	.000

a. Dependent Variable: satsf