

**THE EFFECT OF SERVICE QUALITY ON CUSTOMER
SATISFACTION: A STUDY ON HUAWEI TECHNOLOGIES
ETHIOPIA PLC**

**A Thesis Submitted to the School of Graduate Studies of Addis Ababa
University in Partial Fulfillment of the Requirements for the Master of
Arts Degree in Total Quality Management and Organizational Excellence**

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June 2020

DECLARATION

I declare that this thesis (The Effect of Service Quality on Customer Satisfaction: A Study on Huawei Technologies Ethiopia PLC) is my original work. It has not been submitted for a degree in any other universities and all the materials used in this study have been duly acknowledged.

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**For the Degree of Master of Arts in Total Quality Management and
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STATEMENT OF CERTIFICATION

This is to certify that Rahel Belay Negash has carried out her research work entitled “The Effect of Service Quality on Customer Satisfaction: A Study on Huawei Technologies Ethiopia PLC” for the partial fulfillment of Masters of Arts in Total Quality Management and Organizational Excellence at Addis Ababa University, School of Graduate Department of Management. This study is original and is not submitted for any degree in this university or any other universities and is suitable for submission of Masters of Arts Degree in Total Quality Management and Organizational Excellence.

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Table of Contents

DECLARATION	ii
STATEMENT OF CERTIFICATION	iv
ACKNOWLEDGEMENT	v
List of Tables	ix
List of Figures	x
List of Acronyms	xi
Abstract	xii
CHAPTER ONE: INTRODUCTION.....	1
1.1 Background of the Study.....	1
1.2 Background of Huawei	3
1.2.1 Huawei in Global View.....	3
1.2.2 Huawei Technologies Ethiopia PLC.....	4
1.3 Statement of the Problem.....	6
1.4 Research Question	8
1.5 Objectives of the Study	8
1.5.1 General Objective	8
1.5.2 Specific Objectives	8
1.6 Definition of Terms.....	9
1.7 Scope of the Study	9
1.8 Significance of the Study	10
1.9 Limitations of the Study.....	10
1.10 Organization of the Paper	11
CHAPTER TWO: LITERATURE REVIEW.....	12
2.1 Theoretical Literature Review	12
2.1.1 Concepts of Service and Service Quality.....	12
2.1.1.1 General Concept of Service	12
2.1.1.2 General Concept of Service Quality	13
2.1.1.3 Measurement and Dimensions of Service Quality.....	15
2.1.2 Understanding of Customer Satisfaction	19
2.2 Empirical Literature Review	21
2.3 Conceptual Framework of the Study	23
2.3.1 Research Hypotheses	25

CHAPTER THREE: RESEARCH METHODOLOGY	26
3.1 Research Approach	26
3.2 Research Design.....	26
3.3 Data Source & Collection Techniques.....	27
3.3.1 Data Type and Source	27
3.3.2 Data Collection Methods	28
3.3.3 Data Collecting Instruments.....	28
3.3.4 Data Collection Procedures.....	29
3.4 Sampling Design	29
3.4.1 Target Population	29
3.4.2 Sampling Techniques	30
3.4.3 Sample Size.....	30
3.5 Methods of Data Analysis.....	31
3.6 Regression Model Specification	32
3.7 Variable Description	32
3.8 Validity of Questionnaire.....	32
3.9 Reliability.....	33
3.10 Ethical Consideration.....	34
CHAPTER FOUR: DATA PRESENTATION, ANALYSIS & DISCUSSION	35
4.1 Response Rate.....	35
4.2 Descriptive Statistics.....	36
4.2.1 Demographic Information of the Respondents	36
4.2.2 Description of Service Quality Dimensions.....	38
4.2.2.1 Description of Tangibility	38
4.2.2.2 Description of Reliability.....	39
4.2.2.3 Description of Responsiveness	40
4.2.2.4 Description of Assurance.....	41
4.2.2.5 Description of Empathy	42
4.2.2.6 Description of Service Quality Dimensions Summary	42
4.2.3 Description of Overall Customer Satisfaction	43
4.3 Correlation Analysis	44
4.4 Regression Analysis.....	45
4.4.1 Diagnostic Test of Assumptions	46
4.4.2 Regression Results	50
4.5 Hypothesis Testing.....	53

CHAPTER FIVE: SUMMARY OF MAJOR FINDINGS, CONCLUSION & RECOMMENDATIONS.....	54
5.1 Summary of Major Findings	54
5.2 Conclusion	56
5.3 Recommendations.....	57
5.4 Future Area of Research	57
References.....	58
Appendices.....	62
Appendix 1: Questionnaire in English.....	62

List of Tables

Table 1.1: Definition of Terms

Table 2.1: Comparison of the Original Model and Restructured Model of the Quality Dimensions

Table 2.2: Summary of Satisfaction Determinants

Table 3.1: Questionnaire Structure of the Study

Table 3.2: Targeted Number of Respondents

Table 3.3: Reliability Analysis

Table 4.1: Response Rate of the Respondents

Table 4.2: Response Rate across the target Population

Table 4.3: Demographic Information of Respondents

Table 4.4: Descriptive Analysis Tangibility

Table 4.5: Descriptive Analysis for Reliability

Table 4.6: Descriptive Analysis for Responsiveness

Table 4.7: Descriptive Analysis for Assurance

Table 4.8: Descriptive Analysis for Empathy

Table 4.9: Descriptive Summary of Service Quality Dimensions

Table 4.10: Frequency Distribution of Overall Customer Satisfaction

Table 4.11: Overall Customer Satisfaction Statistics

Table 4.12: Correlation between Service Quality Dimensions and Customer Satisfaction

Table 4.13: Linearity Test (ANOVA Table)

Table 4.14: Multicollinearity Test

Table 4.15: Durbin-Watson Test

Table 4.16: Model Summary of Multiple Linear Regression

Table 4.17: ANOVA result of Multiple Linear Regression Model

Table 4.18: Multiple Linear Regression-Beta Coefficients of Major Independent Variables

Table 4.19: Hypothesis Test Results

List of Figures

Figure 2.1: Conceptual Framework

Figure 4.1: Normal P-P Plot

Figure 4.2: Regression Standardized Residual

List of Acronyms

AI	Artificial Intelligence
GCI	Global Connectivity Index
ICT	Information Communication Technology
INSA	Information Network Security Agency
IoT	Internet of Things
MinT	Ministry of Innovation Technology
MoA	Ministry of Agriculture
MoH	Ministry of Health
MoSHE	Ministry of Science and Higher Education
TVET	Technical and Vocational Education and Training

Abstract

The main objective of the study is to examine the effect of service quality on customer satisfaction in the case of Huawei Technologies Ethiopia PLC. To achieve the objective, the quantitative research approach was employed and sample data was collected from five organizations in Addis Ababa by cross-sectional survey method. In the survey method, a structured questionnaire were used to collect the data. The targeted sample size was 96 and out of this 69 respondents were involved in the study. The research used purposive sampling from the staffs of IT department and managements of the aforementioned organizations. The study has followed both descriptive and explanatory research design. The collected data was analyzed by correlation and multiple regression analysis with the help of SPSS V25. The result of the study revealed that all dimensions of service quality i.e. tangibility, reliability, responsiveness, empathy, and assurance have a significant and positive relationship with Huawei Technologies Ethiopia PLC customers' satisfaction. However, among the dimensions of service quality, assurance has relatively the strongest relationship with customer satisfaction; followed by tangibility and reliability. Finally yet importantly, the study concludes that, assurance in Huawei Technologies Ethiopia PLC highly predicts the variation in customer satisfaction followed by tangibility, responsiveness, reliability, and empathy respectively. The study recommended that due attention should be given to assurance, tangibility and responsiveness among the service quality in order to increase Huawei Technologies Ethiopia PLC customers' satisfaction level. The importance of this study is to provide useful information for the decision to the company in order to increase the satisfaction of its customers. The findings of the study can be used for developing service quality strategies to address efficient and effective service to the customers so that they can increase customers' satisfaction. Furthermore, the study will be used as a reference for further studies.

Keywords: *Service quality, customer satisfaction, SERVQUAL, Tangibility, Reliability, Responsiveness, Assurance, Empathy.*

CHAPTER ONE: INTRODUCTION

This chapter presents an overview of the entire study. It includes the background of the study, background of the study area, statement of the problem, objective of the study, research questions, significance of the study, operational definition, delimitations of the study and limitation of the study and organization of the study.

1.1 Background of the Study

The growth in the service economy is widely recognized and increasingly contributes to the economic development of many regions. Although the service sector accounts for most of the new job growth in developed countries, the dominance of the service sector is not limited to highly developed nations (Audrey, 2003).

Service organizations range in size from huge international corporations like airlines, banking, insurance, telecommunications, hotel chains, and freight transportation to a vast array of locally owned and operated small businesses, including restaurants, laundries, taxis, optometrists, and numerous business-to-business (B2B) services (Lovelock & Wright, 1999).

Improving Service quality and customer satisfaction has been the major concern of organizations in any industry for many years. In the period of globalization and continues technological advancements, maintaining customer satisfaction is not an option, it is a must to survive the strong competition. An organization that consistently satisfies its customers, enjoy higher retention levels and greater profitability due to increase in customer loyalty (Wicks & Roethlein 2009). The payoff resulted from satisfying customers with improving service quality and other marketing activities is also extensively studied and proven to be true through different marketing researches.

In the current business world, the quality of customer service is becoming the concern of both customers and organizations. And in most industries, providing quality service is very important for their longer survival. In service industries, globally, the subject of service quality remains critical as businesses strive to maintain a comparative advantage in the marketplace Zeithaml and Bitner, (2003). Service quality is considered an important tool for a firm's struggle to differentiate itself from its competitors (Ladhari, 2008).

Gefan (2002) defined Service quality as the subjective comparison that customers make between the quality of the service that they want to receive and what they actually get. Bolton

and Drew (1991) described service quality as a form of attitude that results from the comparison of expectations with performance. Berry *et al.*, (1990) pointed out that since customers are the “sole judge of service quality”, an organization can build strong reputation for quality service when it can constantly meet customer service expectations.

Service quality is the delivery of excellent or superior service relative to customer expectations (Zeithaml and Bitner 1996). Service quality is recognized as a multidimensional construct. Many researchers try to identify different dimensions that construct quality of service. Among those the SERVQUAL model constructed by Parasuraman (1988) is most popular. It features five dimensions: tangibles, reliability, responsiveness, empathy and assurance.

Customer satisfaction is the concept that occupies a central position in marketing thought and practice (Potluri & Mangnale, 2010). Customer satisfaction is actually how customer evaluates the ongoing performance (Gustafsson, Johnson & Roos, 2005). According to Atalik and Arslan (2009) the ability of a service provider to create high degree of satisfaction is crucial for product differentiation and developing strong relationship with customers. However one key challenges of this market is how they satisfy and retain their customers and also manage service quality, which holds a significant importance to customer satisfaction and their perceived performance.

The economic success and productivity gains made possible by digital transformation depend on investment in ICT infrastructure, a fact that is not lost on policymakers or industry leaders. ICT is already having a strong economic impact across countries and regions in every stage of development. However, it is not just a case of flexing financial muscle and throwing investment at tech projects – guided investment is necessary to forge a strong digital economy that reflects current economic and technological realities. Investing effectively requires an understanding of how ICT maturity influences productivity, a knowledge of where the tipping points for growth sit, and an insight into national ICT development in the context of an evolving global ecosystem that is based on collaboration (GCI, 2019).

Huawei Technologies Ethiopia PLC is engaged in the entire network construction of Ethio-telecom including GSM, CDMA and fixed network in order to provide better service to Ethiopia telecom and contribute more to the success of GTP. The GCI report revealed that Ethiopia ranks 79 out of 79 countries by scoring 23 out of 120. Ethiopia has low scores for broadband development, which has hindered the development of more advanced enabling technologies (Huawei report, 2020).

Due to intangible nature of services it is difficult for the firms to analyze how the customers perceive and evaluate the desired outcome of the service quality (Zeithaml, 1981). As customer evaluate their level of satisfaction by experimenting the service quality, satisfaction with services is related to confirmation or disconfirmation of expectation (Smith and Houston 1982). The issue of highest priority today involves understanding the impact of service quality on profit and other financial outcomes of the organization (Zeithaml *et al.*, 1996).

Accordingly, Newman and Cowling (1996) stated that excellent service quality is vital to business profitability and survival. Thus, from the finding of Newman and Cowling, the researcher understands that if service quality is going down in the organization, it will have negative effects on the organization's profitability and an organization with good service quality can satisfy its customers easily. Besides this, as of the knowledge of the research there is no specific research conducted on Huawei Technologies Ethiopia PLC with respect to service quality and customer satisfaction. This study, therefore, investigated the effect of service quality on customer satisfaction with special reference to Huawei Technologies Ethiopia PLC using SERVQUAL measures to determine service quality and customer satisfaction. SERVQUAL scale is the measures of service quality based on the gap between expectation and performance. Within SERVQUAL model there are five specific dimensions of service quality: tangibles, reliability, responsiveness, assurance and empathy (Parasuraman, Zeithaml & Berry, 1988).

1.2 Background of Huawei

1.2.1 Huawei in Global View

Founded in 1987, Huawei is a leading global provider of information and communications technology (ICT) infrastructure and smart devices. Huawei is committed to bringing digital to every person, home and organization for a fully connected, intelligent world. As indicated in the company's 2019 annual report (as of December 2019), the company have more than 194,000 employees, 96,000 R & D staff, 14 R & D centers, 36 joint innovation centers and operate in more than 170 countries and regions, serving more than three billion people around the world.

The company was founded in 1987 by Ren Zhengfei, a former Deputy Regimental Chief in the People's Liberation Army. Initially focused on manufacturing phone switches, Huawei has expanded its business to include building telecommunications networks, providing operational

and consulting services and equipment to enterprises inside and outside of China, and manufacturing communications devices for the consumer market. Huawei now is a collective company rather than privately owned. It provides a variety of product and services; for consumers it provides Mobile phones, tablets, mobile broadband, smart home, accessories etc. In addition, for business it provides different type of telecom wireless network, telecom fixed network, core network, network energy, IT, enterprise wireless and network etc. (corporate presentation, unpublished internal document).

According to the company founder Ren Zhengfei, the name *Huawei* comes from a slogan he saw on a wall, *Zhonghua youwei* meaning "China has promise", when he was starting up the company and needed a name. *Zhonghua* or *Hua* means China, while *youwei* means "promising/to show promise".

As of the end of 2018, Huawei sold 200 million smartphones (Anand Tech, 2018). They reported that strong consumer demand for premium range smart phones helped the company reach consumer sales in excess of \$52 billion in 2018 (Reuters, 2018). Huawei announced worldwide revenues of \$105.1 billion for 2018, with a net profit of \$8.7 billion (Huawei Annual Report, 2018). In 2019, Huawei reported revenue of US\$122 billion (Huawei Annual Report, 2019).

1.2.2 Huawei Technologies Ethiopia PLC

Huawei Technologies Ethiopia PLC is established in 1999 & engaged in the entire network construction of Ethio-telecom including GSM, CDMA and fixed network in order to provide better service to Ethiopia telecom and contribute more to the success of GTP. Huawei Ethiopia core values which are; customer first, Dedication, Continuous Improvement, openness and initiative, integrity and teamwork are the internal driving force for the company that enables it to provide effective service to Ethio-telecom and to achieve the companies Vision of “Enriching people’s lives through communication”. Its mission is to focus on Ethio- Telecom’s market challenges and needs by providing excellent ICT solution and service in order to consistently create maximum value for Ethio-telecom. Huawei believes that customer-centricity, dedicated Huaweiers and continuous improvement is the main foundation of its success (Huawei core values, unpublished internal document).

Huawei’s commitment to helping Ethiopia its education with advanced technologies, and making efforts to bridge the digital divide in Ethiopia. Huawei has launched and has reportedly

been implementing various initiatives aimed at improving the ICT capacity of the youth in Ethiopia, and in Africa in general.

Huawei started its ‘Seeds for the Future’ project in Ethiopia in 2016. In the project, with the cooperation of the Ethiopian Ministry of Science and Higher Education (MoSHE), 10 highly talented students from Ethiopian universities are selected from Ethiopia and sent to China every year for short-term training. The project keeps sending 10 students every year. The company has been conducting ICT Competition in Ethiopia since 2018. In the recent competition in 2019, 2,357 students from 22 universities in Ethiopia took part in the competition, out of which a teacher and three students have been selected to participate in the final competition in China.

On the ICT Talent Ecosystem of Ethiopia, Huawei signed an agreement with MoSHE in January 2017 for the joint construction of ICT Academies in 37 public higher education institutions. The two sides also signed an agreement in January 2019 to jointly construct ICT Academies in technical and vocational education and training (TVET), the first time in Ethiopia to extend Huawei Academy to TVET (Xinhua Report, 2020).

By now, Huawei’s Education Cloud Solution has covered 365 secondary schools, 10 universities, with more than 30,000 cloud desktops, which have benefited more than 27,000 teachers and students. Huawei has also worked together with more than 10 top universities in Ethiopia, where it has constructed the most advanced data centers, fixed & wireless school networks and Education Cloud for them.

So far, more than 300,000 college students have become beneficiaries of digital research and development, digital education and distant education empowered by Huawei (Xinhua Report, 2020).

1.3 Statement of the Problem

The service industry plays an increasingly important role in the economy of many countries. In today's global competitive environment, delivering quality service is considered as an essential strategy for success and survival (Parasuraman *et al.*, 1985).

The concept of quality, efficiency, productivity, growth and survival pose a great challenge for the survival and growth of all corporate bodies. These growth and survival demands are further deepened by the need to attract and retain customers, as customers are the main focus of any successful business. Business success depends on a firm's understanding and meeting customers' needs and demands. In most of the developing countries, utility provision has always suffered a setback as utility firms have always been criticized for poor quality of services (Agyapong, 2011).

One important utility in an economy is ICT/telecommunication. The ICT & telecommunication industry's role in an economy cannot be overemphasized. This is because it is the means through which all daily transactions and activities are undertaken. It aids decision making, organizing, influencing, activating, instructing, providing feedback, promoting interpersonal and business relationships as well as exchange of information (Agyapong, 2011). All social, economic, political, cultural, trade and commercial activities are undertaken using ICT/telecommunication. The nature of a country's ICT industry affects its pace of commercial and domestic activities (Frempong and Henten, 2004).

Ethiopia is the fifth largest economy in Africa and is expected to be the third largest within 10 years. The country's economy is mainly based on labor-intensive industries, and Ethiopia offers a highly accessible market for foreign businesses seeking expansion into Africa. As a fast-growing sector, the ICT market is promising in Ethiopia. It has the second largest population in Africa and the challenges of limited Internet access and the lack of incentives for young developers are quickly being addressed. The GCI report (2020) revealed that Ethiopia ranks 79 out of 79 countries by scoring 23 out of 120. Ethiopia has low scores for broadband development, which has hindered the development of more advanced enabling technologies (Huawei report, 2020).

Huawei is a leading global ICT solutions provider. Through their dedication to customer-centric innovation and strong partnerships, they have established end-to-end capabilities and strengths across the carrier networks, enterprise and customers by providing competitive ICT

solutions and services. Huawei provides end-to-end data center integration services for operators, enterprises and governments, ensuring data center highly efficient, easy to expand, secure and reliable.

Huawei Technologies Ethiopia has been providing ICT solutions to different organizations in Ethiopia. These are Ministry of Science and Higher Education (MoSHE), Ministry of Health (MoH), Ministry of Agriculture (MoA), Ministry of Innovation Technology (MInT), and Information Network Security Agency (INSA).

Service quality has been found in the literature to be a competitive tool for many companies. This is even much more pronounced in today's highly globalized, industrialized and competitive markets. As has already been mentioned, the growth and survival of companies depend on their customers which ICT is no exception. Several studies have been carried out in the developed countries regarding customer satisfaction and prescriptions have been put forward. Also, studies have been carried out regarding the relationship between service quality and customer satisfaction in the developed countries and also in Ethiopia using the SERVQUAL model. However, only few studies have been carried out in ICT area in the developing counties (mainly on telecommunication) and as of the knowledge of the researcher there is no research so far conducted on Huawei Technologies Ethiopia PLC.

Newman and Cowling (1996) stated that excellent service quality is vital to business profitability and survival. Thus, from the finding of Newman and Cowling, the researcher understands that if service quality is going down in the organization, it will have negative effects on the organization's profitability and an organization with good service quality can satisfy its customers easily. Agyapong (2011) conducted a study on telecommunication sector in Ghana with respect to the service quality and customer satisfaction. He found that all the service quality variables were significant in explaining customer satisfaction. This finding implies that telecom and ICT management should always improve upon their service to continuously satisfy their clients.

As of the knowledge of the researcher there is no research so far conducted on Huawei Technologies Ethiopia PLC to measure the customer satisfaction with respect to the service quality that the company provided. Hence, this study aims to explain the effect of perceived service quality of Huawei Technologies Ethiopia PLC on customer satisfaction in the case of selected clients of the company.

1.4 Research Question

In examining the effect of service quality on the customer satisfaction with respect to Huawei Technologies Ethiopia PLC, the study has attempted to answer the following research questions:

- Are the customers satisfied with the service quality they get from Huawei Technologies Ethiopia PLC?
- Is there any relationship among service quality dimensions and customer satisfaction?
- Which dimensions of service quality contribute significantly to determine the customer satisfaction in Huawei Technologies Ethiopia PLC service?

1.5 Objectives of the Study

1.5.1 General Objective

The main objective of this study is to examine the effect of service quality on customer satisfaction in the context of Huawei Technologies Ethiopia PLC.

1.5.2 Specific Objectives

Specifically this study has attempted: -

- To examine the overall satisfaction level of customers with the service quality they get from Huawei Technologies Ethiopia PLC.
- To examine the relationship between service quality dimensions and customer satisfaction with Huawei Technologies Ethiopia PLC services.
- To identify the service quality dimensions that has significant effect on customer satisfaction.

1.6 Definition of Terms

Table 1.1: Definition of Terms

Key Terminologies	Contextual Meanings	Author
Customer Satisfaction	A person's feeling of pleasure or disappointment resulting from comparing one's perception of a performance received (an outcome) and one's initial expectations.	Reddy and Abay (2018).
Quality	A dynamic condition associated with service products, people, processes and environments that meet or exceed expectations.	Ishak and Sulvariany (2017)
Quality Service	The ease of making good communication relationships, understanding the needs of the taxpayer, the availability of physical facilities including adequate means of communication, and skilled employees in their duties.	Ishak and Sulvariany (2017)
Service Quality Dimensions	Service quality dimensions which is adopted from a model used by Suresuchandar <i>et al.</i> (2002) are Tangibility, Reliability, Responsiveness, Assurance and Empathy.	Suresuchandar <i>et al.</i> (2002)
Reliability	The ability to perform the promised service dependably and accurately.	Parasuraman <i>et al.</i> , (1985)
Responsiveness	The willingness to help customers and provide prompt service.	Parasuraman <i>et al.</i> , (1985)
Assurance	Its employee's knowledge and courtesy and their ability to inspire trust and confidence.	Parasuraman <i>et al.</i> , (1985)
Empathy	It's being caring, individualized attention given to customers	Parasuraman <i>et al.</i> , (1985)
Tangibility	Appearance of physical facilities, equipment's, personnel and written materials.	Parasuraman <i>et al.</i> , (1985)

1.7 Scope of the Study

There are different organizations that Huawei Technologies Ethiopia PLC currently working with. As explained in the previous section, Huawei's Education Cloud Solution has covered 365 secondary schools, 10 universities, with more than 30,000 cloud desktops, which have benefited more than 27,000 teachers and students. Huawei has also worked together with more than 10 top universities in Ethiopia, where it has constructed the most advanced data centers, fixed & wireless school networks and Education Cloud for them. Besides these, different ministry offices are also working with Huawei.

Conducting the study to all of these customers is difficult because the population is infinite and it is hard to manage all of these customers so the study was focused only on companies that have a long-term business contacts and high reputations with Huawei. These organizations are Ministry of Science and Higher Education (MoSHE), Ministry of Health (MoH), Ministry of Agriculture (MoA), Ministry of Innovation Technology (MInT), and Information Network Security Agency (INSA).

As the method of primary data collection, only questionnaire used to conduct the study. Since compared to other departments, IT department has good understanding of the services that Huawei is rendering to the identified companies. Besides this, they are assumed to be the right person to evaluate the quality of the service that Huawei is providing. In This research the effect of service quality on customer satisfaction in the contest of Huawei Technologies Ethiopia PLC in service quality customer satisfaction relationship is examined. Also it tries to look at the effect of service quality dimensions on customer's satisfaction.

Conceptually, the study is limited to the five dimensions of service quality as stated by Parasuraman *et al.*, (1985).

1.8 Significance of the Study

This research will have a great deal of importance/ significance for the mangers of Huawei Technologies in general and Huawei Technologies Ethiopian branch in particular. Because it provide information about the level quality of service the company is providing to its customers from the point of view of the customers. It will help them to know whether the company is delivering its promise to the customers and also it will provide them insight about the ways to improve their service to their customers. The research will also give some insight about service quality and customer satisfaction in the ICT industry. It will serve as a spring board for other researchers to undertake further investigation.

For the researcher, conducting this study has helped a lot to broaden the knowledge on the topic area. Finally, anybody who might be interested to conduct a research in this subject area may use the study as a reference and will initiate further researches to be done in the subject area. Besides, the study is believed to trigger the importance for undertaking further research on ICT industry in a broader scope.

1.9 Limitations of the Study

The scope of the study was limited to the five organizations and the effect of service quality on the satisfaction of these organizations. All the customer of the Huawei Technologies Ethiopia PLC is not taken as the subject of the study. This limits the generalizability of the research findings. Lastly, in general the most important factor that limited the study output was shortage of time and COVID-19 pandemic.

1.10 Organization of the Paper

The study is structured in 5 chapters. The first chapter presents a brief overview of the research gap and introduce the research question and objectives, as well as, the scope and limitations of the research study. The next chapter i.e. Literature review, provides the reader both empirical and theoretical background for the research subject. Theoretical Background provides insight in to the concepts related to the study area. Empirical Background provides the findings of different studies conducted in related study areas. The third chapter i.e. Research Methodology, indicates the entire research process including research design, approach, as well as, its data collection methods that was utilized while conducting the study. The sampling procedure in addition to the ethical considerations is also discussed within this chapter as well. The fourth chapter i.e. Analysis and Discussion, presents the analysis and discussion of findings generated from data collection techniques being applied. The last chapter i.e. Summary of Findings, Conclusions & Recommendations presents a summary of achieved results, reminds the reader about limitations, and provide recommendations and proposes areas for further study.

CHAPTER TWO: LITERATURE REVIEW

This chapter presents the review of past literatures to clarify the various terms used in this study that constitute the variables tested. The review has three major sections. The first section presents a review of the theoretical aspects related to the study. The second section presents the empirical reviews related with the study. The third section presents the conceptual framework that this study has followed to answer the research questions.

2.1 Theoretical Literature Review

2.1.1 Concepts of Service and Service Quality

2.1.1.1 General Concept of Service

Many experts have defined the meaning of service in various ways. “Service” was an act, or performance, of people offered by one party to another. In addition, a service is an economic activity that creates value and provides benefits for clients at specific times and places, with the result of bringing about a desired change, in or on behalf of, the recipient of the service (Lovelock & Wirtz, 2004).

A service is any act or performance that one party can offer to another that is essentially intangible and does not result in the ownership of anything. Its production may or may not be tied to a physical product (Keller and Kotler, 2006). Similarly Zeithaml and Bitner (2004) also defined service as deeds, processes and performances. Both definitions and also other scholars’ definitions agree on the intangibility, inseparability, perishable, and variability nature of a service. Moreover, many literatures explain the existence and importance of service in all kinds of organizations. In general Service organizations range in size from huge international corporations like airlines, banking, insurance, communications, hotel chains, and freight transportation to a vast array of locally owned and operated small businesses, including restaurants, laundries, taxis, optometrists, and numerous business-to-business (“B2B”) (Lovelock and Wright, 1999).

According to Robert W.L. (2005) “customer service is defined as the ability of knowledgeable, capable and enthusiastic employees to deliver products and services to their internal and external customers in a manner that satisfies identified and unidentified needs and ultimately result in positive word-of-mouth publicity and return business.”

“Customer service is concerned establishing, maintaining and enhancing relationships between and/or among relevant business parties in order to achieve the objective of the relevant parties” Osuagwu (2002). According to Davidow and Uttal (1989) “customer service means all features, acts and information that augment the customer’s ability to realize the potential value of a core product or service.”

2.1.1.2 General Concept of Service Quality

Yamit (2002) as cited in Ishak and Sulvariany (2017) states that quality is a dynamic condition associated with service products, people, processes and environments that meet or exceed expectations i.e. it is the difference between customer expectations of service and perceived service. While Parasuraman, *et al*, (1990) as cited in Ishak and Sulvariany (2017) states that quality is a measure of overall assessment of the level of a good service and defines quality as fitness fit (fitness for use). Quality services should be able to provide security, comfort, smoothness and legal certainty (Ishak and Sulvariany, 2017).

Service quality is an outgrowth of the total quality management (TQM) movement of the 1980s and suffers from that movement’s focus on the provider rather than the value derived by customers (Klaus *et al.*, 2012). When compared to product quality, service quality is difficult to measure, define, control and communicate (Stanton, 1991). He also added that assuming similar times and locations, quality of service is the only factor that differentiates the different offerings. In view of meeting customer requirements, Oakland (2009) states that it has wide implications and may include availability, delivery, reliability, maintainability, and cost effectiveness, are among many other features.

Customer service and delivering quality service is the major issue determining the competitive edge of organizations. Lack of or failure to meet quality will lead an organization to lose all or some of its customers. A great emphasis is needed for a service to retain all its qualities that customers need. Quality in a service business has become a measure of the extent to which the service provided meets the customer’s expectations. In the modern highly competitive business world, the key to sustainable competitive advantage lies in delivering high quality service that will intern, lead to satisfied customers. Customer satisfaction is considered a pre requisite of customer retention and loyalty, and can help to boost profitability, market share and return on investment.

According to Gronroos (1994) cited in Al-Hawary *et al.*, (2011) there are three dimensions of service quality stated as:

1. **Technical Quality**, which involves what the customer is receiving from the service delivery. This can be measured by the consumer in a rather objective manner.
2. **Functional Quality**, which involves the manner in which the service is delivered. This concerns the psychological interaction between the buyer and the seller perceived in a very subjective way, and would include elements such as: Attitudes and behavior of employees; Approachability of service personnel; Accessibility of service; Appearance and personality of personnel; Relationship between employees, and Interrelationships between employees and customers.
3. **Corporate Image dimension of quality** is the result how consumers perceive the firm, and it is expected to be built up mainly by the technical and functional quality of its services, and will eventually affect service perceptions.

Also Parasuraman *et al.*, (1985) defined service quality as “the degree and direction of discrepancy between consumer’s perceptions and expectations in terms of different but relatively important dimensions of the service quality, which can affect their future purchasing behavior.” This definition clearly shows that service quality is what customers assess through their expectations and perceptions of a service experience. Customers’ perceptions of service quality result from a comparison of their before-service expectations with their actual service experience. Juran, (1982) defined quality as “Fitness for use”. As indicated on Lewis *et al.*, (1983), quality also defined from different point of views: - From customer point, from process point of view, from product point of view and from the cost point of view.

- From customer point of view: “quality means fitness for use and meeting Customer satisfaction.”
- From process point of view: “quality means conformance with the process design, standards and specifications.”
- From product point of view: “quality means the degree of excellence at an acceptable price.”
- From the cost point of view: “quality means best combination between costs and features.”

2.1.1.3 Measurement and Dimensions of Service Quality

Service quality is more difficult for consumer to evaluate than good quality. Service quality perceptions result from a comparison of consumer expectations with actual service performance. Quality evaluations are not made solely on the outcome of service, they also involve evaluations of the process of service delivery.

Parasuraman *et al.*, (1988) identified five dimensions of service quality (SERVQUAL) that must be present in any service delivery. SERVQUAL helps to identify clearly the impact of quality dimensions on the development of customer perceptions and the resulting customer satisfaction. SERVQUAL include: reliability, responsiveness, assurance, empathy, and tangibility.

Cronin and Taylor (1992) argued for “Performance only” measurement of service quality and proposed a service quality measurement tool called SERVPERF. Parasuraman’s SERVQUAL model is widely used to measure perceived service quality. Since the SERVPERF was curved out of the SERVQUAL, the literature on both models are reviewed.

A. The SERVQUAL Model

SERVQUAL is one of the tools used in measuring the quality of services. According to Buttle (1996), SERVQUAL is for the measuring and managing the quality of service. Asubonteng *et al.*, (1996) also intimate that the model is used to measure the quality of services from the customer’s point of view. The originators of the model are Parasuraman, Zeithaml and Berry. It was developed in 1985 but was polished or refined in their subsequent articles, Parasuraman *et al.*, (1988). The main aim of SERVQUAL is to have a standard and a reliable tool that can be used to measure the quality of services in different service sectors, Curry and Sinclair, (2002). Originally, those who developed SERVQUAL introduced ten service quality dimensions or attributes. These are: tangibles, reliability, responsiveness, competency, courtesy, communication, credibility, security, access and understanding the customer. However in the 1988 article, these were reduced to five Parasuraman *et al.*, (1988). These are; tangibles, reliability, responsiveness, assurance and empathy. The aim of this study is to examine the effect of service quality on customer satisfaction in special reference to Huawei Technologies Ethiopia PLC with the help of SERVQUAL in order to measure service quality. Hence, each dimensions of SERVQUAL model has to be elaborated more. Basically Zeithmal *et al.*, 1993 examines five dimensions of service quality.

I. Tangibles as a SERVQUAL Dimension

The tangibles are considered as the firms' representatives, physical facilities, materials, and equipment as well as communication materials. Fitzsimmons (2001) denoted Physical environmental conditions that work as a clear evidence of the care and attention paid for the details offered by the service provider. Davis *et al.*, (2003) summarized tangibles like the physical confirmation of the service. More specifically, Parasuraman *et al.*, (1985) defined the tangibility appearance of physical facilities, equipment, personnel, and written materials. However, physical facilities and equipment, physical appearance, understandability of the staff all are the components of tangibles. In context of service quality, tangibles can be referred to as Information and Communications Technology (ICT) equipment, physical facilities and their appearance (ambience, lighting, air conditioning, seating arrangement); and lastly but not least, the services providing personnel of the organization (Blery *et al.*, 2009). In this research, tangibles are the facilities and the Huawei services offered by the employees of the company perceived by the identified customers.

II. Reliability as a SERVQUAL Dimension

Reliability is to provide promised, dependable, accurate and consistent services to the customers. However, reliability depends on handling customer service issues, performs the services right the first time; offers services on time, and maintain a record of error-free (Khan and Fasih, 2014). (Parasuraman *et al.*, 1988) defined reliability as the most significant factor in conventional service. Khan *et al.* (2018) stated reliability as to provide precise and constant benefit or service to the customers.

III. Responsiveness as a SERVQUAL Dimension

Responsiveness is defined as "the willingness to help customers and provide prompt service" (Parasuraman *et al.*, 1988). More specifically, responsiveness is defined as the willingness or readiness of employees to provide services. It contains the timeliness of service (Parasuraman *et al.*, 1985). (Khan *et al.*, 2018) defined it as the eagerness to encourage clients and to give provoked benefits. However, Johnston (1997) defines responsiveness such as speed and timeliness of service delivery. Responsiveness is the speed, prompt customer service, less waiting time and short queuing time. Moreover, responsiveness is defined as the willingness or readiness of employees to provide services. It contains the timeliness of service (Parasuraman *et al.*, 1985).

IV. Empathy as a SERVQUAL Dimension

Khan *et al.*, (2018) stated in their research that the arrangement of bank considering the individualized service to the respective clients. However, (Parasuraman *et al.*, 1985) defined empathy as a care and individual attention to its clients. The employees of Huawei Technologies Ethiopia PLC need to recognize their customers by name and providing specific service to the individual customers that shows empathy.

V. Assurance as a SERVQUAL Dimension

Khan *et al.*, (2018) concludes that the information that the passes with their trust and certainty. (Blery *et al.*, 2009) in their research stated that it is the level of knowledge and courtesy of employees for providing services and to build confidence in customer. Moreover, Skilled employees who treat customers with respect and make consumers feel that they can trust the firm exemplifies assurance. Parasuraman *et al* (1985) as cited in Chulle (2016) proposed that ten dimensions determine service quality: reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding the customers, and tangibles. Thus, they proposed that the difference between perceived performance and expected performance of these ten dimensions determines overall perceived quality. These dimensions are restructured in to five principal dimensions that customers use to judge service quality based on a comparison between expected service and perceived service.

Table 2.1: Comparison of the Original Model and Restructured Model of the Quality Dimensions

Original Model	Restructured Model	Description
Tangibility	Tangibility	Physical aspect of what is provided that can be perceived by the five human senses.
Reliability	Reliability	Ability to fulfill what was promised both dependably and accurately. Reliable service performance is a customer expectation and means that service accomplished on time, in the same manner, without error every time.
Responsiveness	Responsiveness	Ability to attend to the users and provide the service promptly, capturing the notion of flexibility and ability to adapt to the needs of the service user.
Competency	Assurance	Defined as the courtesy, knowledge of employees and their ability to convey trust and confidence. The assurance dimensions are competence of perform services, politeness and respect to customer, effective communication with the customer, and the general attitude that the server has the customer's best interest at heart.
Courtesy		
Credibility		
Safety		
Access	Empathy	Individualized attention to the users. Empathy includes accessibility, sensitivity and effort in understanding the needs of users.
Communication		
Comprehension of the user		

Source: Parasuraman *et al.*, (1985) as cited on Chulle (2016)

Based on the five service quality dimensions, two sets of twenty two statements or questionnaire are developed (Donnelly *et al.*, 1995; and Iwaarden *et al.*, 2003).

B. The SERVPERF Model

The five domains tangibles, reliability, responsiveness, assurance and empathy identified in the SERVQUAL model are equally applicable to the SERVPERF model. According to Cronin and Taylor (1994), SERVPERF can provide managers with a summary of overall service quality score, which can then be plotted in relation to time and specific customer segmentations related to consumer characteristics, for example, demographic subcategories and individual constituencies. The SERVPERF scale thus provides a useful tool for measuring the overall service quality attitudes of service managers. However, they suggest that great care should be exercised by managers of service organizations in attempting to derive more specific information from data captured by the SERVPERF scale for strategic decision making (Cronin & Taylor 1994).

SERVPERF is less complicated, more concise, more precise and easier to administer than SERVQUAL. However the SERVQUAL model is the more attractive model because it is more comprehensive and provides better diagnostic information. Nevertheless, SERVPERF explains more of the variation in customer perceptions of service quality than SERVQUAL, as measured by R² statistics. R² can be obtained by regression analysis, wherein the single item overall service quality measure is the dependent attribute, and the deduced five domains are the independent attributes.

C. Gronroos Model

Gronroos (1984), relates definition of service quality with the result of the comparison that customers make between their expectations about a service and their experience of the way the service has been performed. According to Gronroos (1984), services are produced, distributed, and consumed in the interaction between the service provider and the service receiver. Accordingly, services must be viewed from an interactive perspective. The model proposed by Gronroos (1984, 1990) focuses on the role of technical quality (or output) and functional quality (or process) as occurring prior to and resulting in outcome quality. In the model, technical quality refers to what is delivered to the customer while functional quality is regarding with how the result of the process was transferred to the customer. The model states that the consumer is not interested only on what he/she receives as an outcome of the production

process, but also on the process itself. The perception of the functionality of the technical outcome (technical quality) is a major determinant of the way he/she appreciates the effort of the service provider.

2.1.2 Understanding of Customer Satisfaction

Satisfaction can be defined as a person's feeling of pleasure or disappointment resulting from comparing one's perception of a performance received (an outcome) and one's initial expectations (Reddy and Abay, 2018). If performance falls short of expectations, the client is dissatisfied. On the contrary, if performance matches expectations, the client is satisfied. If performance exceeds expectations, the client is highly satisfied or delighted (Kotler, 2012).

Satisfaction is a customer's post purchase evaluation of the overall service experience. It is an affective state of feeling reaction in which the consumer's needs desires and expectations during the course of the service experiences have been met or exceeded (Hunt, 1977). Satisfaction is a post choice evaluation judgment concerning a specific purchase decision, on the other way it can be approximated by the equation: satisfaction = perception of performance – expectations (Oliver, 1980 as cited on Chulle, 2016).

There is lack of consensus among researchers on the subject matter of customer satisfaction. This is because several researchers have looked the concept from different perspectives. Rust and Oliver (1994) suggest that customer satisfaction or dissatisfaction - a "cognitive or affective reaction" - emerges as a response to a single or prolonged set of service encounters. In the words of Giese and Cote (2000), consumer satisfaction comprises three basic components including the type of response (cognitive, affective or conative); the center of interest or the subject on which the response is focused; and the moment in time at which the evaluation is made. But Anderson and Fornell (1994) are of the view that the literature is not very clear about the distinction between quality and satisfaction. Satisfaction is a "post consumption" experience which compares perceived quality with expected quality, whereas service quality refers to a global evaluation of a firm's service delivery system (Anderson & Fornell, 1994; Parasuraman *et al.*, 1985).

According to Besterfield (1994), Barsky (1995) and Kanji and Moura (2002), customer satisfaction is a complex construct as it has been approached differently. As expressed by Levesque and McDougall (1996), satisfaction is conceptualized as an overall, customer attitude towards a service provider. Also customer satisfaction has been described as an effective

response, focused on product performance compared to some pre-purchase standard during or after consumption (Halstead *et al.*, 1994). So Mano and Oliver (1993) establish that satisfaction is an attitude or evaluative judgement varying along the hedonic continuum focused on the product, which is evaluated after consumption. This was reechoed by Fornell (1992), when he identified satisfaction as an overall evaluation based on the total purchase and consumption experience focused on the perceived service performance compared with pre-purchase expectations over time.

Customer satisfaction can be influenced by a variety of factors. Some factors that affect customer satisfaction in the service industry are speed of service, quality of service, and the cleanliness of the place of business. Kenneth *et al.*, (2003) classify factors that affect customer satisfaction in to three factor structures:-

- **Basic Factors:** - these are the minimum requirements that are required in a product to prevent the customer from being dissatisfied. They do not necessarily cause satisfaction but lead to dissatisfaction if absent. These are those factors that lead to the fulfillment of the basic requirement for which the product is produced. These constitute the basic attribute of the product or service. They thus have a low impact on satisfaction even though they are a prerequisite for satisfaction. In a nutshell competence and accessibility
- **Performance Factors:** - these are the factors that lead to satisfaction if fulfilled and can lead to dissatisfaction if not fulfilled. These include reliability and friendliness.
- **Excitement Factors:** - these are factors that increase customers' satisfaction if fulfilled but does not cause dissatisfaction if not fulfilled which include project management.

2.2 Empirical Literature Review

There is also a lot of argument regarding whether customer satisfaction is the antecedent of service quality or the outcome of service quality. “Initially, scholars take the position that satisfaction is an antecedent of service quality since to reach an overall attitude (service quality) implies an accumulation of satisfactory encounters” (Bolton & Drew, 1991). However, other scholars take the opposite view that service quality is the antecedent of customer satisfaction (Cronin & Taylor, 1992); (Ekinici, 2004); (Rust & Oliver, 1994); as cited on (Harr, 2008).

Empirical research by Cronin & Taylor (1992), showed that service quality has a significant effect on customer satisfaction. Similarly, recent studies by González & Brea (2005); & Ekinici (2004) as cited on (Harr, 2008) using recursive structural models provided empirical support that service quality results in customer satisfaction. Customer satisfaction “is a broader concept than service quality which focuses specifically on dimensions of service (Zeithaml *et al.*, 2006).

Most studies confirm that there is a relationship between service quality and customer satisfaction. For instance, Parasuraman *et al.* (1988) and Caruana (2002) found a positive relationship between service quality and customer satisfaction. Likewise, Linier (2013) also found that perceived service quality influences customer satisfaction. Similarly, (Nathan, and Elsayghier, 2012) assured that service quality has a positive effect on customer satisfaction which means that the higher quality of service attracts more customers who have bought back the desire and intention to recommend.

In order to achieve a high level of customer satisfaction, majority of researchers suggest that a high level of service quality should be delivered by the service provider as service quality is normally considered an antecedent of customer satisfaction (Cronin & Taylor, 2002). Parasuraman *et al* (1994) as cited by Chulle (2016) concluded that the confusion surrounding the distinction between the two constructs was partly attributed to practitioners and the popular press using the terms interchangeable, which make theoretical distinctions difficult.

Wilson *et al.* (2008) as cited in Amanfi (2012) stated that other than service quality such as price or compliance cost, product quality, complaint handling and employee satisfaction can determine customer satisfaction. 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 (Wilson *et al.*, 2008, as cited in Reddy and Abay, 2018).

Maroundas *et al* (2009) measured customer satisfaction and service quality in the Greek tax administration system by using SERVPERF as the main measuring instrument. The finding showed that service quality and satisfaction were seen as one-dimensional variables that center on the human factor. More specifically, as regards service quality, the general factor that emerged according to the study includes elements of responsiveness, emotional understanding (empathy) and assurance. As regards to satisfaction, the factor that emerged incorporates elements of responsiveness, empathy, assurance and reliability.

Krishna, *et al.* (2010) in their study assessed the effect of Service Quality (SERVQUAL) on Customer Satisfaction in Retailing. They utilized SERVQUAL dimension such as tangibility, reliability, responsiveness, empathy, and assurance; to analyze the gap between perceptions and expectations of the customer, concerning with the service at retail units in the South Indian state of Andhra Pradesh in the city of Hyderabad. The result of their study showed that services offered by retail units have positive impact and are significant in building customer satisfaction.

Wilson *et al.* (2008) as cited in Amanfi (2012) stated that other than service quality such as price or compliance cost, product quality, complaint handling and employee satisfaction can determine customer satisfaction. Millett (1954) as cited in Reddy and Abay (2018) pointed out that in a democratic government, public organizations focus on very specific service dimensions in order to deliver a satisfactory service to taxpayers. He focused on five dimensions of service that create taxpayer satisfaction such as: Equitable service, Timely service, ample service, Continuous service, and Progressive service.

Elnan and Andersen (1999) proved a positive relationship between service quality and customer satisfaction in the bus industry in Norway. A recent study by Ojo (2010) in the telecommunication industry showed that a positive relationship exists between service quality and customer satisfaction. The same relationship is demonstrated by Cook (2008) and Oyeniyi and Abiodun (2008). Fornell *et al.*, (1996) argued that perceived quality, which had been explained as the served market's evaluation of recent consumption experienced, would have a direct and positive impact on overall customer satisfaction. In their development of the American Customer Satisfaction Index (ACSI), they concluded that overall customer satisfaction, especially for ACSI, has three antecedents, which are: perceived service quality, perceived value and customer expectation.

The summary of different determinants of customer satisfaction with respect to service quality as per different researchers is presented as below: -

Table 2.2: Summary of Customer Satisfaction Determinants

Authors	Determinants of Customer Satisfaction
Maroundas <i>et al.</i> (2009)	Responsiveness, Emotional understanding (empathy), Reliability and Assurance
C.N. Krishna Naik, <i>et al.</i> (2010)	Five dimensions of service quality(SERVQUAL) such as; Tangibility, Reliability, Responsiveness, Empathy, and Assurance
Wilson <i>et al.</i> (2008) as cited in Amanfi (2012)	In addition to Five dimensions of service quality(SERVQUAL) i.e. Tangibility, Reliability, Responsiveness, Empathy, and Assurance; Compliance Cost, Product Quality, Compliant Handling & Employee Satisfaction
Suresuchandar <i>et al.</i> (2002) as cited in Reddy and Abay (2018)	Service Quality Dimensions (SERVQUAL) such as; Tangibility, Reliability, Responsiveness, Empathy, and Assurance
Millett (1954) as cited in Reddy and Abay (2018)	Service Delivery Dimensions such as; Equitable Service, Timely Service, Ample Service, Continuous Service, and Progressive Service
Commonwealth Ombudsman (2009)	Complaints Handling System such as; Fairness, Accessibility, Responsiveness, Efficiency and Integration.
Reddy and Abay (2018)	Service Quality Dimensions such as; Tangibility, Reliability, Responsiveness, Assurance and Empathy Service Delivery Dimensions such as; Equitable Service, Timely Service, Ample Service, Continuous Service, and Progressive Service Complaints Handling System such as; Accessibility, Efficiency and Integration

Source: Author computation

2.3 Conceptual Framework of the Study

The conceptual framework shows the crucial process, which is useful to show the direction of the study. Based on the overall review of the related literatures, the following conceptual framework for this study was developed. The purpose of this study is to examine the effect service quality on customer satisfaction with special reference to Huawei Technologies Ethiopia PLC. To this end, the aim of this section is to summarize the idea gained from previous literature and to bring out the contributions for this study area. Thus this part starts with the idea generated and the contribution follows.

The general idea from the past literature is that there is a relationship between customer satisfaction and service quality; also that service quality could be evaluated with the use of five service quality dimensions and the most useable is the SERVQUAL scale. Thus, customers in this paper are those who consume the services of Huawei Technologies Ethiopia PLC, satisfaction denotes customer's desire to maintain a business relationship with the organization and it is also the feelings of the customers towards the services provided to them by the

organizations; while customer satisfaction in this study is the pleasures obtained by customers for the services provided to them by the employees of the organizations.

After a thorough review of different literatures, the conceptual framework of the study is adapted from Parasuraman *et al.*, (1994) and Caruana (2002). Also, this study investigates five variables of service quality namely: tangibles, reliability, responsiveness, empathy, security and customer satisfaction. Based on the previous study the following framework is developed.

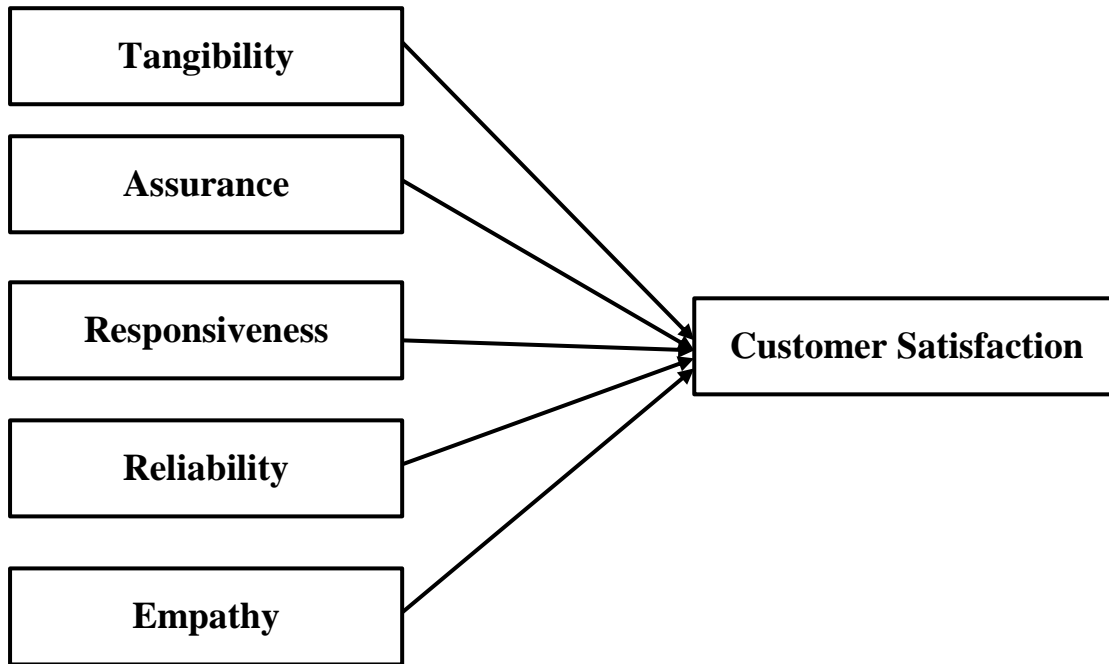


Figure 2.1: Conceptual Framework of the Study
Source: adapted from Parasuraman *et al.*, (1994) and Caruana (2002)

The conceptual framework in this study shows the link between the variables of study; service quality dimension (tangibility, reliability, responsiveness, assurance and empathy) and customer satisfaction.

2.3.1 Research Hypotheses

The researcher develops the following hypotheses for the study based on the above literature review and conceptual framework of the study.

H1: There is positive relationship between overall service quality and customers satisfaction

H2: The tangibles have significant positive influence on customer satisfaction.

H3: Reliability has significant positive impact on customer satisfaction.

H4: Responsiveness has significant positive effect on customer satisfaction

H5: Assurance has significant positive impact on customer satisfaction

H6: Empathy has significant positive link with customer satisfaction

CHAPTER THREE: RESEARCH METHODOLOGY

The aim of this section was to highlight the overall methodological consideration of the thesis. In this chapter the practical methods which was used in order to answer the research questions and fulfill the purpose of the research were presented. It presents brief explanation of the research methodology that was used in the research and it includes research design, population, sample size and sampling techniques, sources/tools of data collection and method of data analysis, validity and reliability and finally ethics issues.

3.1 Research Approach

The main purpose of this study was to examine the effect of service quality on customer satisfaction in the case of Huawei Technologies Ethiopia PLC. According to John, (2014) Research approaches are plans and the procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation.

The selection of a research approach is also based on the nature of the research problem or issue being addressed, the researchers' personal experiences, and the audiences for the study. There are three basic approaches to research (a) qualitative (b) quantitative (c) mixed methods. Creswell (2003) noted that quantitative survey is the most appropriate one to use if the purpose of an investigation is to describe the degree of relationship which exists between the variables. Accordingly this research was conducted using quantitative research approach hence, it examined and measured the relationship between service quality and customer satisfaction in relation to Huawei Technologies Ethiopia PLC. Therefore; the quantitative method is used by considering sample customers of the organization and questionnaires was distribute.

3.2 Research Design

Research design is a framework or blueprint for conducting a research. It contains all the necessary information needed to structure and solve the research problems. According to Singh (2006), research design is essentially a statement of the object of the inquiry and the strategies for collecting the evidence, analyzing the evidences and reporting the findings.

There are different types of scientific research. Namely exploratory research, Descriptive research and Explanatory research (Bhattacharjee, 2012).

Accordingly, this research is conducted using both descriptive and explanatory research and also different inferential statistics tools such as regression analysis and correlation analysis is used to understand the relationship between the five dimensions of SERVQUAL and customer satisfaction and the impact this SERVQUAL dimensions have on customer satisfaction in Huawei Technologies Ethiopia PLC. Explanatory design is applicable in a research to show cause and effect relationships among dependent and independent variables (Fasil, 2018).

Descriptive research attempts to define or describe a subject often by creating a profile of a group of problems, people or events through the collection of data the tabulation of the frequencies on research variables or their interaction: the study reveals who, what, where, when and how much (Cooper and Schindler, 2006). The researcher used the Cross-sectional field survey method to assess the relationship between service quality and customer satisfaction. Cross sectional research design involves carrying out of a study just once and the information is therefore used to represent a specific time, since the research is limited in time, as the research is being undertaken for an academic course limited to 3 months (Saunders Lewis and Thornhill,2003).

3.3 Data Source & Collection Techniques

3.3.1 Data Type and Source

In order to achieve the general & specific objectives, both primary and secondary source of data were utilized. According to Biggam (2008), primary data is the information that the researcher finds out by him/herself regarding a specific topic. The main advantage with this type of data is that it is collected with the research's purpose in mind. It implies that the information resulting from it is more consistent with the research questions and objectives.

Primary data were obtain from a structured self-administered questionnaire. The primary data were collected through structured questionnaire adopted from Parasuraman *et al.*, (1994) and Caruana (2002). Secondary information were collected from previous studies, journals and articles conducted on customer satisfaction and other related titles, and unpublished materials of Huawei and web addresses and /or internet reports generated. The customers' judgments were used as the source of data for analysis.

3.3.2 Data Collection Methods

For collecting the primary data, the researcher utilized survey data collection method in order to collect data from Ministry of Science and Higher Education (MoSHE), Ministry of Health (MoH), Ministry of Agriculture (MoA), Ministry of Innovation Technology (MInT), and Information Network Security Agency (INSA).

Cooper and Schindler (2006) defined a survey as an instrument process used to collect information during a highly structured interview through use of structured questionnaires. In survey method questionnaire were used in order to collect the data. Secondary data was collected through reviewing the selected written materials from the aforementioned sources.

3.3.3 Data Collecting Instruments

For collecting the primary data, structured self-administered questionnaire were used as the main instruments for data gathering from Ministry of Science and Higher Education (MoSHE), Ministry of Health (MoH), Ministry of Agriculture (MoA), Ministry of Innovation Technology (MInT), and Information Network Security Agency (INSA).

The structured questionnaire adopted from Parasuraman *et al.*, (1994) and Caruana (2002) were modified by the researcher in order to relate it with the general & specific objectives of the research. The questionnaire designed for assessing service quality of Huawei Technologies Ethiopia PLC were structured in a five-point Likert-type scale questionnaire; with responses options ranging from “Strongly Disagree” (coded as 1) to “Strongly Agree” (coded as 5). Besides this for measuring the customer satisfaction, questionnaires were structured in a five-point Likert-type scale questionnaire; with responses options ranging from “Highly Dissatisfied” (coded as 1) to “Highly Satisfied” (coded as 5).

The questionnaire has three sections and has a total of 28 questions. The first part of the questionnaire is about the demographic characteristics of the respondents and has 5 questions. The second section was designed to measure the service quality of Huawei Technologies Ethiopia PLC with respect to the identified customers. This section has a total of 22 questions under 5 sub-sections i.e. quality dimensions. The last section is to measure the satisfaction of the identified customers and has one question. The name of sections, sub-sections & number of questions is presented as below;

Table 3.1: Questionnaire Structure of the Study

S.No.	Sections & Sub-sections	Number of Questions	Total No. of Questions
1	General Information	Question No. 1 - 5	5
2	Service Quality Dimensions	Question No. 6 - 27	22
2.1	Tangibility	Question No. 6 - 9	4
2.2	Reliability	Question No. 10 - 14	5
2.3	Responsiveness	Question No. 15 - 19	5
2.4	Assurance	Question No. 20 - 23	4
2.5	Empathy	Question No. 24 - 27	4
3	Customer Satisfaction	Question No. 28	1
	Total Questions		28

The questionnaires were prepared by English language. The questionnaire is attached as appendix 1 in this document. Regarding the collection of secondary data, the researcher referred several literatures, reports, journals, academic magazines, published papers, books, essays, researches, dissertations, websites, reports and documents related to the research topics.

3.3.4 Data Collection Procedures

The researcher distributed the questioner to each sample customers by personally giving them the questioner and through email. After the questioners are returned back, the researcher sees what is properly filled and not then entered the data into a computer for electronic processing using the SPSS v.25.

3.4 Sampling Design

A sample design is a defined plan for obtaining a sample from a given population (Kothari, 2004). So in this section the sampling frame, sampling size & the sampling techniques were described as follow.

3.4.1 Target Population

According to Hair *et al.* (2010), target population is said to be a specified group of people or object for which questions can be asked or observed made to develop required data structures and information.

As explained in the previous section, currently 365 secondary schools, 10 universities, and different government organizations are the customers of Huawei Technologies Ethiopia PLC. Conducting the study to all of these customers is difficult because the population is infinite and it is hard to manage all of these customers so the study was focused only on companies that have a long-term business contacts and high reputations with Huawei. These organizations are

Ministry of Science and Higher Education (MoSHE), Ministry of Health (MoH), Ministry of Agriculture (MoA), Ministry of Innovation Technology (MInT), and Information Network Security Agency (INSA). IT department and management staffs of these organizations are targeted to the study since they are assumed to be well aware of the topic and they are the right persons to evaluate the service of Huawei Technologies Ethiopia PLC. Hence, these are the target population or universe of the study.

3.4.2 Sampling Techniques

There are two types of sampling techniques Probability and Non-probability sampling Techniques. Non-probability sampling is that sampling procedure which does not afford any basis for estimating the probability that each item in the population has of being included in the sample. Non-probability sampling is also known by different names such as deliberate sampling, purposive sampling and judgment sampling. In this type of sampling, items for the sample are selected deliberately by the researcher; his choice concerning the items remains supreme. In other words, under non-probability sampling the organizers of the inquiry purposively choose the particular units of the universe for constituting a sample on the basis that the small mass that they so select out of a huge one will be typical or representative of the whole (Creswell, 2003). In probability sampling, all people within the research population have a specifiable chance of being selected. These types of sample are used if the researcher wishes to explain, predict or generalize to the whole research population (Dawson, 2002).

The researcher followed two stages to identify and select respondents. The first stage involved purposive identification of respondents from the aforementioned five organizations. The researcher purposely identified the staff of IT department and the management from each organizations. This was decided based on the reason that these departments are assumed to be the most concerned bodies to evaluate the services of Huawei. Secondly, the researcher adopted census survey method over staffs of IT & Management in these organizations. This is because the target populations of the study are of manageable size.

3.4.3 Sample Size

According to Alreck & Settle (2005) the choice of sample size is normally made after considering statistical precision, practical issues and availability of resources. A different sampling paradigm by Lowler (1984) as cited in (Fasil, 2018) noted that there is no a single precise way for the determinations of sample size hence there are a number of inadequacy for

deciding on sample size. Malhotra & Peterson (2006) stated that, the larger the sampling size of a research, the more accurate the data generated. Roscoe (2001) also proposes that the appropriate sample sizes for most research to be greater than 30 and less than 500.

In this study, the target population is the staff of IT department and the management staffs of the aforementioned five government organizations. Therefore, number of respondents to whom the questionnaire was distributed were the staff of IT department and the management of these organizations. The total targeted number of respondents across these organizations is 96 as indicated in the following table;

Table 3.2: Targeted Number of Respondents

No.	List of Organizations	Targeted No. of Respondents
1	Ministry of Science and Higher Education (MoSHE)	24
2	Ministry of Innovation Technology (MInT)	22
3	Ministry of Health (MoH)	18
4	Ministry of Agriculture (MoA)	20
5	Information Network Security Agency (INSA)	12
	Total	96

3.5 Methods of Data Analysis

After collecting the data; the collected data were reviewed for detection of errors and omissions through careful scrutiny of the completed questionnaires and were examined for completeness and accuracy upon completion of the data collection process. Thereafter, the data was sorted & coded, then organized systematically and analyzed using Statistical Package for Social Sciences (SPSS v25). After the data are sorted & encoded both descriptive and inferential statistical techniques were employed to analyze the data. The data was analyzed using SPSS computer software.

The Data analysis includes: descriptive statistics to count the frequency of response, Reliability analysis-to test the internal consistency of the instrument, correlation analysis-to assess the relationship between variables of the study and multiple regression analysis-to assess the extent of influence of independent variables (service quality dimensions) or dependent variables (customer satisfaction).

Thus, both the strength of the relationship between variables and the influence of independent on dependent variable and statistical significance were assessed.

3.6 Regression Model Specification

Coakes and Steed (2007) stated that the result of regression is an equation that represents the best prediction of a dependent variable from several independent variables. This study used multiple linear regression model after testing relevance of structural equation model. The relevant test for conducting linear regression model according to Almaquist *et al.*, (2016) are the absence of outliers, linearity, normality, the absence of multicollinearity.

Specifically, the regression model for this study can be expressed as follows;

$$CS = \beta_0 + \beta_1TAN + \beta_2REL + \beta_3RES + \beta_4AS + \beta_5EM + \varepsilon$$

Where; CS = Customer Satisfaction, TAN = Tangibility, REL = Reliability, RES = Responsiveness, AS = Assurance, and EM = Empathy.

And, β_0 is constant; and β_1 is the coefficient of tangibility, β_2 is the coefficient of reliability, β_3 is the coefficient of responsiveness, β_4 is the coefficient of assurance, and β_5 is the coefficient of empathy as well as ε is the error or noise term.

3.7 Variable Description

Based on the theoretical and empirical analysis of the literature review, for examining the effect of service quality on customer satisfaction in the case of Huawei Technologies Ethiopia PLC the researcher has adopted a model previously used by Parasuraman *et al.*, (1994) and Caruana (2002). So as it was mentioned in Parasuraman *et al.*, (1994) and Caruana (2002), the dependent variable is the customer satisfaction of the identified organizations and the independent variables are Service Quality Dimensions such as tangibility, reliability, responsiveness, assurance and empathy.

3.8 Validity of Questionnaire

Validity is a general term denoting “correctness of measure” (Yaremko, 1982 as cited in Reddy & Abay, 2018). Validity refers to the degree to which an instrument measures what it is supposed to be measuring. Validity has a number of different aspects and assessment approaches. Statistical validity is used to evaluate instrument validity, which includes internal validity and structure validity (Shehadah, 2017). Bryman & Bell (2007) as cited in Muhe (2018) also defined validity as how much any measuring instrument measures what it is intended to

measure. They also suggest that the important issue of measurement validity relates to whether measures of concepts really measure the concept or not. There are several ways of establishing validity such as content validity; convergent validity, concurrent validity; predictive validity; construct validity; and convergent validity.

As stated by Bhattacharjee (2012), Content validity is an assessment of how well a set of scale items matches with the relevant content domain of the construct that it is trying to measure. Convergent validity refers to the closeness with which a measure relates to (or converges on) the construct that it is purported to measure, Predictive validity is the degree to which a measure successfully predicts a future outcome that it is theoretically expected to predict. Concurrent validity examines how well one measure relates to other concrete criterion that is presumed to occur simultaneously.

The validity of this research paper, as it was stated in the literature review part, all the variables along with the questionnaire are adopted from previous research work of Parasuraman *et al.*, (1994) and Caruana (2002). Therefore, the study used content validity because it assess how well a set of scale items matches with the relevant content domain of the construct that it is trying to assess through the review of literature and adapting instruments used in previous studies.

3.9 Reliability

Reliability is the extent to which a study's operations can be repeated, with the same results and it also involves the accuracy of the chosen research (Wiedersheim-Paul and Eriksson, 2008; as cited on Hailegebriel, 2016). Reliability is the degree to which the measure of a construct is consistent or dependable. In other words, if we use this scale to measure the same construct multiple times, we will get pretty much the same result every time, assuming the underlying phenomenon is not changing. Nunnally (1978) as cited in Muhe (2018) stated that reliability is the consistency of a test, survey, observation, or another measuring device. The level of reliability of the instrument indicates the consistency of the variables. Cronbach's alpha is an index of reliability associated with the variation accounted for the true score of the underlying construct and it can only be measured for variables which have more than one measurement question. 0.5 is a sufficient value, while 0.7 and above is a more reasonable value.

Based on this premises, the reliability of the questionnaire was analyzed by using Cronbach's alpha statistics & presented in table 3.3 below.

Table 3.3: Reliability Analysis

Variables	Cronbach's Alpha	Number of Items
Tangibility	.863	4
Reliability	.866	5
Responsiveness	.789	5
Assurance	.853	4
Empathy	.710	4
Overall Reliability	.956	22

Generally speaking, scales with a coefficient between 0.80 and 0.95 are considered to have very good reliability. Scales with a coefficient between 0.70 and 0.80 are considered to have good reliability, and value with a coefficient between 0.60 and 0.70 indicates fair reliability. When the coefficient is below 0.6, the scale has poor reliability (Almaquist *et al.*, 2016).

The above table 3.3 shows that the values of Cronbach's Alpha ranges from 0.710 to 0.866. The Cronbach's Alpha value of responsiveness and empathy is consider as good reliability, where are the rest dimensions of service quality (i.e. tangibility, reliability, and assurance) have Cronbach's Alpha value above 8.0 but less than 9.0. Hence it is consider as very good reliability. The Cronbach's Alpha value of the entire questions were equals 0.956 (95.6%) and this indicates very good reliability of the entire questionnaire. This means that the variables are consistent to measure the effect of service quality on customer satisfaction in Huawei Technologies Ethiopia PLC. Therefore, the level of alpha was considered to be reliable enough to proceed with the data analysis. Thereby, it can be said that the researcher proved that the questionnaire was valid, reliable, and ready for distribution to the population sample.

3.10 Ethical Consideration

This study identified four key ethical issues which as stated by Creswell (2003) that could affect this research study, and put in place strategies to address them: informed consent; confidentiality; negative impact on employability; and security of data. Informed consent was provided by respondents in this study through the return of their completed questionnaire to the researcher as explained in the beginning of the questionnaire. Confidentiality was maintained and upheld by the researcher. Negative impact of employability is protected through upholding confidentiality of responses. Finally, securing of data was upheld by storing all responses in the hands of the researcher.

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS & DISCUSSION

This chapter deals with the analysis, interpretation of responses from questionnaires and the findings of the study and discussion on the findings. Relevant information pertaining to the study was retrieved from purposively identified respondents from the staffs of IT & Management staffs found in the identified customers of Huawei Technologies Ethiopia PLC through questionnaires having 28 questions. The chapter consists of the response rate, descriptive analyses (i.e. the biographic information; mean and standard deviation of the respondents' responses) and inferential analysis which sought to answer the study objectives.

4.1 Response Rate

The study conducted a survey and purposively selected staffs of IT & managements found in the identified organizations. The researcher distributed the questionnaires to the targeted respondents in census basis both in person and email. Self-administered questionnaires, which are simple and easy to understand, were designed to collect data from the target groups. The researcher issued a total of 96 questionnaires in person & through email to the identified respondents and only 69 were filled and returned giving a response rate of 72% as indicated in table 4.1 below. The data was collected in April - May 2020.

Table 4.1: Response Rate of the Respondents

No.	Description	Respondents
1	Questionnaire distributed/Targeted sample	96
2	Questionnaire returned	69
3	Response Rate	72%
4	Usable response	69

Source: - Computed by the researcher, 2020

As it was indicated in the previous sections, the questionnaire was distributed to the five large organizations. The response rate across these organizations is presented as follow;

Table 4.2: Response Rate across the Target Population

No.	List of Organizations	Targeted No.	No. Returned Questionnaire	Response Rate (%)
1	Ministry of Science and Higher Education (MoSHE)	24	17	70%
2	Ministry of Innovation Technology (MInT)	22	14	65%
3	Ministry of Health (MoH)	18	15	85%
4	Ministry of Agriculture (MoA)	20	18	88%
5	Information Network Security Agency (INSA)	12	5	39%
	Total	96	69	72%

As indicated in the above table, the response rate from INSA is the lowest since it was difficult to deliver the questionnaire in person and it was difficult to get the email of management staffs. Even those email that the researcher sent was not fully responded. On the other, the response rate from MoA is found to be the highest. A letter of introduction was attached to the questionnaires explaining the purpose of the study. This was preceded by seeking permission from each organization’s top management and from each respondents. The whole exercise was conducted within four weeks (i.e. from mid of April till mid of May 2020).

4.2 Descriptive Statistics

This subsection in general describes the general characteristics of the respondents and study variables.

4.2.1 Demographic Information of the Respondents

The researcher distributed 96 questionnaires to the targeted respondents from the aforementioned five organizations or customers of Huawei Technologies Ethiopia PLC. But 69 questionnaires were fully filled and returned with response rate of 72%. Table 4.3 below presents demographic information of respondents.

Table 4.3: Demographic Information of Respondents

Variable	Category	Frequency	Percent
Name of Organizations	MoSHE	17	24.6
	MInT	14	20.3
	MoH	15	21.7
	MoA	18	26.1
	INSA	5	7.2
Sex	Male	49	71.0
	Female	20	29.0
Education Background	< grade 12/10	3	4.3
	Diploma	5	7.2
	Degree	34	49.3
	Master	21	30.4
	Above Master	6	8.7
Length of year being a customer in the branch.	Less than 1 year	7	10.1
	1 – 5 years	21	30.4
	6 – 10 years	37	53.6
	More than 11 years	4	5.8
Working Department	IT Staff	43	62.3
	Management Staff	26	37.7

Source: Survey, 2020

A. Respondents across the Organizations

From table 4.3, majority of the respondents (26.1%) in the study were from MoA followed by MoSHE (24.6%) and MoH (21.7%) respectively. In contrary, least percentages of respondents were from INSA (7.2%) followed by MInT (20.3%).

B. Gender of Respondents

As indicated in table 4.3 above, majority of the respondents i.e. 71% who participated in the study were male whereas 29% of the respondents were female.

C. Respondents Level of Education

In reference to level of education, 95.7% of the respondent attended college/university therefore the most frequent respondents had an education level at least diploma. Out of 69 respondents, 49.3% of the respondents were the most frequent respondents having first degree; followed by master degree holder respondents having 30.4% share. On the other hand, least percentage of the respondents have an education level of less/equal to grade 12/10 and an education level of above second degree (masters) having 4.3% & 8.7% share respectively. This implies that more than 88% of the respondents have first degree and above first degree. This will have good implication for the quality of the findings of the study.

D. Work Experience

The descriptive statistics of the demography of respondents also indicates that majority of the respondents i.e. 53.6% have a work experience of 6 – 10 years, followed by respondents having a work experience of 1 – 5 years and less than or equal to 1 year by having 30.4% and 10.1% share respectively. In contrary, the least number of respondents i.e. 5.8% have a work experience of above 11 years.

E. Department of Respondents in their respective organization

As it was indicated in the previous section, staff of IT & Management in the identified organizations were the target populations. As it is indicated in table 4.3 above, 62.3% of the respondents were from IT department whereas 37.7% of the respondents were from management staffs.

4.2.2 Description of Service Quality Dimensions

The main objective of this study is to examine the effect of service quality on customer satisfaction in the context of Huawei Technologies Ethiopia PLC. Service quality dimension which was adopted from a model used by Parasuraman *et al.*, (1994) and Caruana (2002) are Tangibility, Reliability, Responsiveness, Assurance and Empathy. In order to achieve the general & specific objectives, each service quality dimensions are examined as follow;

4.2.2.1 Description of Tangibility

As it was explained in conceptual framework, to examine the effect of service quality on the customer satisfaction with respect to Huawei Technologies Ethiopia PLC, the researcher adopted a model used by Parasuraman *et al.*, (1994) and Caruana (2002).

The mean value represents the average of all customer response on certain dimensions while, standard deviation shows how diverse the responses of the respondents are. This means that if the standard deviation shows smaller number, it indicates that the response of the respondents shows close opinions and when the standard deviation is high, it indicates the response of the respondents shows high variation. According to Zaidatol & Bagheri (2009) as cited by Tsegaye (2017), means score less than 3.39 is defined as low, mean score of 3.40 – 3.79 is defined as moderate, and mean score above 3.80 is defined as high. Based on this premises, the mean score and standard deviation of tangibility is presented as follow;

Table 4.4: Descriptive Analysis Tangibility

Attributes	N	Minimum	Maximum	Mean	Std. Deviation
Huawei Technologies Ethiopia PLC has an up-to-date and enough equipment to support its customers.	69	2.00	5.00	3.9710	.90702
The physical setting and the atmosphere of Huawei Technologies Ethiopia PLC office is virtually appealing.	69	1.00	5.00	4.3768	.84194
The service provider employees of Huawei Technologies Ethiopia PLC are neat and well groomed.	69	2.00	5.00	4.3913	.80836
The location of Huawei Technologies Ethiopia PLC office is convenient for the customers.	69	1.00	5.00	3.9420	.93752
Valid N (listwise)	69				

Source: Compiled from Survey Questionnaires using SPSS V 25,

From the above table 4.4 it can be seen that the study respondents i.e. the identified customers of Huawei tend to have a higher agreement on the service provider employees of Huawei are neat and well groomed (Mean = 4.39, SD= .81)); followed by statement stating that the physical setting and atmosphere of Huawei office is virtually appealing (Mean = 4.37, SD = .84). Besides this, among the attributes of tangibility, relatively the lowest agreements were

observed for a statement stating that Huawei Technologies has an up-to-date and enough equipment to support its customers (Mean = 3.97, SD= 0.91)) and for a sentence described as “the location of Huawei Technologies Ethiopia PLC office is convenient for the customers” (Mean = 3.94, SD= 0.94) respectively. The study indicates that, all the attributes of tangibility are 3.80 which means there is high agreement of each attributes of tangibility according to Zaidatol & Bagheri (2009) as cited by Tsegaye (2017). The above table revealed that the average mean score of tangibility is 4.17 and SD is 0.74.

4.2.2.2 Description of Reliability

As indicated in table 4.5 below, 5 questions were prepared for the customers in order to know their opinion about the attributes of reliability. The result of the survey is presented as below;

Table 4.5: Descriptive Analysis for Reliability

Attributes	N	Minimum	Maximum	Mean	Std. Deviation
Huawei Technologies Ethiopia PLC always keeps its promise and delivers what they have promised.	69	2.00	5.00	4.2319	.82507
Huawei Technologies Ethiopia PLC show sincere interest in solving the problems you have as a customer.	69	2.00	5.00	3.4058	.92861
The service given at Huawei Technologies Ethiopia PLC is always right at the first time/dependable.	69	2.00	5.00	4.2899	.82429
Huawei Technologies Ethiopia PLC provides its service at the times promised.	69	2.00	5.00	3.1449	1.04706
Huawei Technologies Ethiopia PLC keep accurate records of customer data.	69	3.00	5.00	3.9420	.72526
Valid N (listwise)	69				

Source: Compiled from Survey Questionnaires using SPSS V 25, 2020

From the above table 4.5 it can be seen that among the attributes of reliability, respondents showed the highest agreement for “The service given at Huawei Technologies Ethiopia PLC is always right at the first time/dependable” (Mean = 4.29, SD= 0.82) followed by “Huawei Technologies Ethiopia PLC always keeps its promise and delivers what they have promised” (Mean = 4.23, SD= 0.83). Relatively respondents showed the least agreement or highest disagreement for “Huawei Technologies Ethiopia PLC provides its service at the times promised” (Mean = 3.14, SD= 1.04). On the other hand, respondents showed moderate agreement for “Huawei Technologies Ethiopia PLC show sincere interest in solving the problems you have as a customer” (Mean = 3.41, SD= 0.93).

The study indicates that, the average mean score of reliability is Mean = 3.80 & SD = 0.71. According to Zaidatol & Bagheri (2009) as cited by Tsegaye (2017), this is the lowest of high mean score range.

4.2.2.3 Description of Responsiveness

As indicated in table 4.6 below, 5 questions were prepared for the customers in order to know their opinion about the attributes of responsiveness. The result of the survey is presented as below;

Table 4.6: Descriptive Analysis for Responsiveness

Attributes	N	Minimum	Maximum	Mean	Std. Deviation
Information is kept in a way to be easily obtained by a customer at any time.	69	1.00	5.00	3.6522	.85451
Huawei Technologies Ethiopia PLC gives a promise service to a customer.	69	2.00	5.00	3.2029	.85025
The employees of Huawei Technologies Ethiopia PLC are always willing to help a customer.	69	2.00	5.00	3.2029	.88417
The employees of Huawei Technologies Ethiopia PLC are never too busy to attend to customer inquiries and requests.	69	2.00	5.00	3.2754	.96838
Huawei Technologies Ethiopia PLC is willing to accept feedback and comments on irregularities.	69	3.00	5.00	4.5507	.52960
Valid N (listwise)	69				

Source: Compiled from Survey Questionnaires using SPSS V 25, 2020

From the above table 4.6 it can be seen that among the attributes of responsiveness, respondents showed relatively the highest agreement for “Huawei Technologies Ethiopia PLC is willing to accept feedback and comments on irregularities” (Mean = 4.55, SD= 0.53). On the other hand, based on the categories as Zaidatol & Bagheri (2009) as cited by Tsegaye (2017) stated, respondents showed moderate agreement for a statement “information is kept in a way to be easily obtained by a customer at any time” (Mean = 3.65, SD= 0.83). In contrary, respondents showed the least agreement for the remaining attributes of responsiveness. Respondents showed the least agreement/the highest disagreement for a statement “Huawei Technologies Ethiopia PLC gives a promise service to a customer” & “The employees of Huawei Technologies Ethiopia PLC are always willing to help a customer” with a mean score of 3.20 & SD= 0.88 for each.

The study indicates that, the average mean score of responsiveness is Mean = 3.53 & SD = 0.64. According to Zaidatol & Bagheri (2009) as cited by Tsegaye (2017), this is defined as moderate mean score range.

4.2.2.4 Description of Assurance

As indicated in table 4.7 below, 5 questions were prepared for the customers in order to know their opinion about the attributes of assurance. The result of the survey is presented as below;

Table 4.7: Descriptive Analysis for Assurance

Attributes	N	Minimum	Maximum	Mean	Std. Deviation
The behavior of employees of Huawei Technologies Ethiopia PLC helps build the confidence of the customers.	69	2.00	5.00	3.9710	.90702
Customers of Huawei Technologies Ethiopia PLC feels safe for their business link with the company.	69	1.00	5.00	3.6522	.85451
The employees of Huawei Technologies Ethiopia PLC are polite for their customers.	69	2.00	5.00	4.3768	.82429
Employees of Huawei Technologies Ethiopia PLC have appropriate skill and knowledge to support customer's inquiries.	69	1.00	5.00	3.9710	.92309
Valid N (listwise)	69				

Source: Compiled from Survey Questionnaires using SPSS V 25, 2020

From the above table 4.7 it can be seen that among the attributes of assurance, based on the categories as Zaidatol & Bagheri (2009) as cited by Tsegaye (2017), respondents showed relatively the highest agreement for “The employees of Huawei Technologies Ethiopia PLC are polite for their customers” (Mean = 4.38, SD= 0.82). On the other hand, based on the categories as Zaidatol & Bagheri (2009) as cited by Tsegaye (2017), respondents showed moderate agreement for a statement “Customers of Huawei Technologies Ethiopia PLC feels safe for their business link with the company” (Mean = 3.65, SD= 0.85). The above table also indicates that respondents showed high agreement for all attributes of assurance except the one identified as moderate.

The study indicates that, the average mean score of assurance is Mean = 3.99 & SD = 0.73. According to Zaidatol & Bagheri (2009) as cited by Tsegaye (2017), this is defined as high mean score range.

4.2.2.5 Description of Empathy

As indicated in table 4.8 below, 5 questions were prepared for the customers in order to know their opinion about the attributes of empathy. The result of the survey is presented as below;

Table 4.8: Descriptive Analysis for Empathy

Attributes	N	Minimum	Maximum	Mean	Std. Deviation
The employees of Huawei Technologies Ethiopia PLC give customers individual attention.	69	2.00	5.00	3.4058	1.03354
The employees of Huawei Technologies Ethiopia PLC give customers personal services when the need arises.	69	2.00	5.00	3.6667	1.14618
The employees of Huawei Technologies Ethiopia PLC have their customers' "best interest at heart"	69	1.00	5.00	3.5652	1.02151
The employees of Huawei Technologies Ethiopia PLC understand the specific needs of their customers.	69	2.00	5.00	3.4348	1.15654
Valid N (listwise)	69				

Source: Compiled from Survey Questionnaires using SPSS V 25, 2020

From the above table 4.8 it can be seen that among the attributes of empathy, based on the categories as Zaidatol & Bagheri (2009) as cited by Tsegaye (2017), respondents showed moderate agreement for all attributes of empathy. However, relatively they showed the highest agreement for "The employees of Huawei Technologies Ethiopia PLC give customers personal services when the need arises" (Mean = 3.67, SD= 1.14). The study indicates that, the average mean score of empathy is Mean = 3.52 & SD = 0.79. According to Zaidatol & Bagheri (2009) as cited by Tsegaye (2017), this is defined as moderate mean score range.

4.2.2.6 Description of Service Quality Dimensions Summary

As indicated in the literature review as well as conceptual framework of the study, the researcher has adopted a model used by Parasuraman *et al.*, (1994) and Caruana (2002) in order to examine the effect of service quality on customer satisfaction in the context of Huawei Technologies Ethiopia PLC. Service quality dimension which was adopted from a model used by Parasuraman *et al.*, (1994) and Caruana (2002) are Tangibility, Reliability, Responsiveness, Assurance and Empathy. The summary of these dimensions of service quality is presented as follow;

Table 4.9: Descriptive Summary of Service Quality Dimensions

Dimensions of Service Quality	N	Minimum	Maximum	Mean	Std. Dev.
Tangibility	69	2.50	5.00	4.1703	.73701
Reliability	69	2.20	4.80	3.8029	.70752
Responsiveness	69	2.20	4.80	3.5333	.64413
Empathy	69	2.00	5.00	3.5181	.79788
Assurance	69	2.50	5.00	3.9928	.73135

Source: Compiled from Survey Questionnaires using SPSS V 25, 2020

From the above table 4.9 it can be seen that among the attributes of service quality dimensions, respondents relatively showed the highest agreement for tangibility (Mean = 4.17, SD= 0.74) followed by assurance (Mean = 3.99, SD= 0.73) and reliability (Mean = 3.80, SD= 0.71). On the other hand, respondents showed the least agreement/highest disagreement for empathy (Mean = 3.52, SD= 0.80).

However, in general based on the categories of Zaidatol & Bagheri (2009) as cited by Tsegaye (2017), among the dimensions of service quality, respondents showed high agreement for tangibility, assurance and reliability in their descending orders. On the other hand, based on the categories of Zaidatol & Bagheri (2009) as cited by Tsegaye (2017), respondents showed moderate agreement for responsiveness and empathy.

This descriptive result implies that tangibility is perceived as the most influencing service quality dimension on customer satisfaction on Huawei Technologies Ethiopia PLC, followed by assurance and reliability respectively. On the other hand, empathy is perceived as the least influencing service quality dimension on customer satisfaction of Huawei Technologies Ethiopia PLC, followed by responsiveness.

4.2.3 Description of Overall Customer Satisfaction

As we can see on table 4.10, there is no respondents stating strongly dissatisfied. However, 2.9 % of the respondents are dissatisfied with the service quality they get from Huawei Technologies Ethiopia PLC and 34.8% of the respondents are neutral that means they are neither satisfied nor dissatisfied with the service quality given by Huawei Technologies Ethiopia PLC. On the other hand, 50.7% of the respondents are satisfied and the remaining 11.6% are very satisfied. That means Huawei Technologies Ethiopia PLC can satisfy only 62.3% of the customers which can rate their satisfaction as satisfied and strongly satisfied.

Table 4.10: Frequency Distribution of Overall Customer Satisfaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dissatisfied	2	2.9	2.9	2.9
	Neutral	24	34.8	34.8	37.7
	Satisfied	35	50.7	50.7	88.4
	Strongly Satisfied	8	11.6	11.6	100.0
	Total	69	100.0	100.0	

Source: Computed from Survey Questionnaires using SPSS V 25, 2020

Generally the mean value for customer satisfaction is 3.71 with a standard deviation of 0.709 respectively (Table 4.10). The mean value for overall customer satisfaction based on the

categories of Zaidatol & Bagheri (2009) as cited by Tsegaye (2017), is moderate that shows there Huawei Technologies Ethiopia PLC needs to improve its service deliver in order to satisfy its customer by filling a gap between what it should be and what it actually is.

Table 4.11: Overall Customer Satisfaction Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Overall, how satisfied are you with the services provided by Huawei Technologies Ethiopia PLC?	69	2.00	5.00	3.7101	.70921

Source: Computed from Survey Questionnaires using SPSS V 25, 2020

4.3 Correlation Analysis

This study used both descriptive and explanatory designs to reach at aforementioned objectives. Correlation analysis is one of explanatory design that is intended to identify the relationship between independent variables i.e. dimensions of service quality and dependent variable i.e. customer satisfaction of Huawei Technologies Ethiopia PLC. In this section we will see the relationship between each dimensions of service quality with customer satisfaction.

Correlation analysis helps to gain insight in to the direction and strength of correlation between variables (Almaquist *et al.*, 2016). As stated in Almaquist *et al.* (2016), the correlation coefficient 1 or -1 is termed as perfect, -0.9 to -0.7 (or 0.7 to 0.9) termed as very strong, -0.69 to -0.5 (or 0.5 to 0.69) termed as substantial association, -0.49 to -0.30 (or 0.30 to 0.49) termed as moderate, -0.29 to -0.1 (or 0.10 to 0.29) termed as low, and from -0.09 to -0.01 (or 0.01 to 0.09) termed as negligible association. Based on this premises, the correlation between each dimensions of service quality and customer satisfaction is presented as below.

Table 4.12: Correlation between Service Quality Dimensions and Customer Satisfaction

SERVQUAL items		Tangibility	Reliability	Responsiveness	Empathy	Assurance
Tangibility	Pearson Correlation	1				
	Sig. (2-tailed)					
Reliability	Pearson Correlation	.869**	1			
	Sig. (2-tailed)	.000				
Responsiveness	Pearson Correlation	.854**	.874**	1		
	Sig. (2-tailed)	.000	.000			
Empathy	Pearson Correlation	.704**	.652**	.736**	1	
	Sig. (2-tailed)	.000	.000	.000		
Assurance	Pearson Correlation	.971**	.904**	.890**	.709**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
Overall Satisfaction	Pearson Correlation	.581**	.559**	.556**	.451**	.591**
	Sig. (2-tailed)	.000	.000	.000	.000	.000

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

Source: Computed from Survey Questionnaires using SPSS V 25, 2020

H1: There is positive relationship between overall service quality and customers satisfaction

The results in the table 4.12 show that there is a positive & statistically significant relationship between all dimensions of service quality and customer satisfaction of Huawei Technologies Ethiopia PLC customers i.e. tangibility ($r = 0.581, 0.000; P < 0.01$), reliability ($r = 0.559, 0.000; P < 0.01$), responsiveness ($r = 0.556, 0.000; P < 0.01$), empathy ($r = 0.451, 0.000; P < 0.01$), and assurance ($r = 0.591, 0.00; P < 0.01$). Generally, the p-value of all service quality dimensions is 0.000 which is less than 1%, decision is reject the null hypothesis (H_0) and accept alternative hypothesis i.e. conclude that there is a significant and positive correlation between service quality dimensions and customer satisfaction of Huawei Technologies Ethiopia PLC customers.

Besides this, as per the classification of relationship strength stated by Almaquist *et al.* (2016), there is a significant, positive and substantial relationship between all service quality dimensions (except empathy) and customer satisfaction of Huawei Technologies Ethiopia PLC customers. However, there is a significant, positive and moderate relationship between empathy and customer satisfaction of Huawei Technologies Ethiopia PLC customers.

In general from this correlation analysis we can conclude that all dimensions of service quality i.e. tangibility, reliability, responsiveness, empathy and assurance have significant and positive correlation with customer satisfaction of Huawei Technologies Ethiopia PLC customers. Besides this, as it was indicated above from the correlation coefficient of all the five dimensions of service quality dimensions, assurance has relatively the strongest relationship with customer satisfaction; followed by tangibility and reliability.

4.4 Regression Analysis

This analysis is used to examine the effect of service quality dimension on customer satisfaction of Huawei Technologies Ethiopia PLC customers. Multivariate linear regression method was used to run the regression analysis. In multiple regressions, each independent variable effect on dependent variable is estimated while taking into account all independent variables effects on dependent variable (Almquist *et al.*, 2015). Before running the regression analysis, classical model assumptions were tested.

4.4.1 Diagnostic Test of Assumptions

To test multiple linear regression first necessary to test the classical assumption includes linearity, normality test and multicollinearity test. The result of each assumptions are presented as follow;

I. Linearity Test

Linearity test aims to determine the relationship between independent variables and the dependent variable is linear or not. The linearity test is a requirement in the correlation and linear regression analysis (Almquist *et al.*, 2015). If the value of sig. deviation from linearity in the ANOVA test is greater than 0.05, then the relationship between the independent variables are linearly dependent; and if the value is less than 0.05, then the relationship between independent variables with the dependent is not linear. Keeping this in mind, linearity test between the independent variables i.e. service quality dimensions with customer satisfaction of Huawei Technologies Ethiopia PLC customers were computed by SPSS version 25 and the result of the test is presented as follow;

Table 4.13: Linearity Test (ANOVA Table)

			Sum of Squares	df	Mean Square	F	Sig.
Customer Satisfaction * Tangibility	Between Groups	(Combined)	15.081	10	1.508	4.575	.000
		Linearity	11.551	1	11.551	35.037	.000
		Deviation from Linearity	3.530	9	.392	1.190	.319
	Within Groups		19.122	58	.330		
	Total		34.203	68			
Customer Satisfaction * Reliability	Between Groups	(Combined)	15.774	12	1.315	3.995	.000
		Linearity	10.670	1	10.670	32.424	.000
		Deviation from Linearity	5.104	11	.464	1.410	.194
	Within Groups		18.429	56	.329		
	Total		34.203	68			
Customer Satisfaction * Responsiveness	Between Groups	(Combined)	12.965	13	.997	2.583	.007
		Linearity	10.567	1	10.567	27.366	.000
		Deviation from Linearity	2.398	12	.200	.517	.894
	Within Groups		21.238	55	.386		
	Total		34.203	68			
Customer Satisfaction * Empathy	Between Groups	(Combined)	11.117	12	.926	2.247	.021
		Linearity	6.964	1	6.964	16.892	.000
		Deviation from Linearity	4.154	11	.378	.916	.532
	Within Groups		23.086	56	.412		
	Total		34.203	68			
Customer Satisfaction * Assurance	Between Groups	(Combined)	17.475	9	1.942	6.848	.000
		Linearity	11.958	1	11.958	42.176	.000
		Deviation from Linearity	5.517	8	.690	2.432	.062
	Within Groups		16.728	59	.284		
	Total		34.203	68			

Source: Computed from Survey Questionnaires using SPSS V 25, 2020

Based on the ANOVA Output Table as indicated above, value sig. Deviation from Linearity of all independent variables is found greater than 0.05. The value of Sig. Deviation from Linearity of customer satisfaction & tangibility is $0.319 > 0.05$, reliability $0.194 > 0.05$, responsiveness $0.894 > 0.05$, empathy $0.532 > 0.05$, and assurance $0.062 > 0.05$. Therefore, it can be concluded that there is a linear relationship between each dimensions of service quality and customer satisfaction of Huawei Technologies Ethiopia PLC.

II. Multicollinearity Test

Gujarati (2004) states that multicollinearity problem arises when there is a linear relationship among explanatory variables that the result could not obtain estimates of all parameters. This causes large variance and standard error with a very low t- ratio and wide confidence interval. Different methods are often suggested to detect the existence of multicollinearity problem. Variance inflation factors (VIF) technique used for continuous explanatory variable and contingency coefficient (CC) method is used for dummy variables. For continuous variables, if the value of VIF is 10 and above, the variables are said to be collinear. Similarly, if the value of CC greater than 0.75, the variables said to be collinear.

As stated by Almquist *et al.* (2015), the decision making criteria is if the VIF value lies between 1 -10, then there is no multicollinearity and if the VIF value < 1 or > 10 , then there is multicollinearity. Based on this criteria, the test were conducted on the independent variables and the result is shown as below;

Table 4.14: Multicollinearity Test

	Tolerance	VIF
Tangibility	.056	7.900
Reliability	.158	6.322
Responsiveness	.159	6.296
Empathy	.433	2.308
Assurance	.390	5.877

Source: Compiled from Survey Questionnaires using SPSS V 25, 2020

Based on the coefficients output – collinearity statistics, obtained VIF value of all service quality dimensions obtained is 1 to 10. Hence, it can be concluded that there is no multicollinearity symptoms.

III. Autocorrelation Test

The other assumption is that the regression model errors are independent; that is, the error terms are uncorrelated for any two observations (there has to be no autocorrelation). This issue is called autocorrelation and means that regression errors are correlated positively, or negatively, over time. Fortunately, we can identify this issue using the Durbin–Watson test. The Durbin–Watson test assesses whether there is autocorrelation by testing a null hypothesis of no autocorrelation, which is tested against a lower and upper bound for negative autocorrelation and against a lower and upper bound for positive autocorrelation. Thus, as stated by Almquist et al. (2015), if Durbin–Watson values lie between 0 and 4, we can say that there is no autocorrelation. Keeping this in mind, the result of Durbin-Watson test is presented as follow;

Table 4.15: Durbin-Watson Test

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.598 ^a	.357	.306	.59080	2.161
a. Predictors: (Constant), Assurance, Empathy, Responsiveness, Reliability, Tangibility					
b. Dependent Variable: Overall Customer Satisfaction					

Source: Computed from Survey Questionnaires 2020, using SPSS V 25

From the above table, we can see that the value of Durbin-Watson of a model with 5 independent variables and 69 observation is 2.161. From this we can conclude that there is no autocorrelation and we can proceed with the regression model.

IV. Normality Test

In order to test the normality, the researcher used a normal probability plot test by using SPSS. As it is indicated in Almquist *et al.* (2015), the decision making criteria is if the points follow the diagonal line, it can be concluded that the value is normally distributed. Conversely, if the points do not follow the diagonal line, it can be concluded that the residual value is abnormally distributed. The normal probability plot of the SPSS output is presented as below;

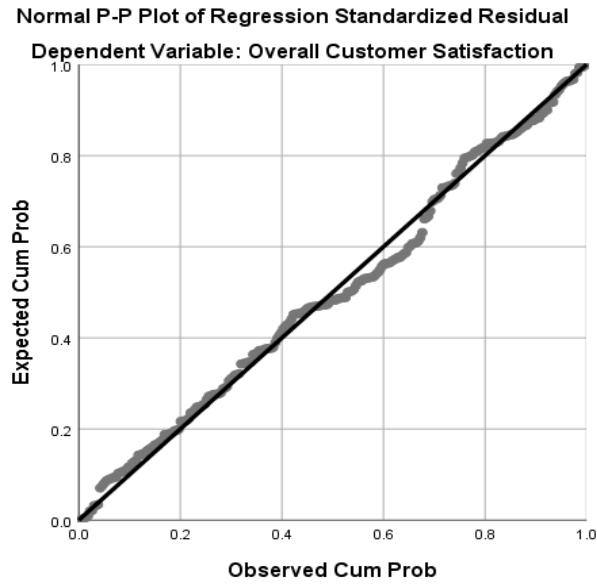


Figure 4.1: Normal P-P Plot
 Source: Own computations, 2020

Based on normal chart probability the above plot, we can see that the existing points always follow and approach the diagonal line. Thus, it can be concluded that the residual value is normally distributed so that the regression analysis procedure has been fulfilled.

V. Residual Normality Test

One of the classical linear regression models assumptions is the error term should be normally distributed or expected value of the error term should be normally distributed or expected value of the errors terms should be zero ($E(UT)=0$). The researcher used histogram to identify normal distribution of residuals and the result is presented as follow;

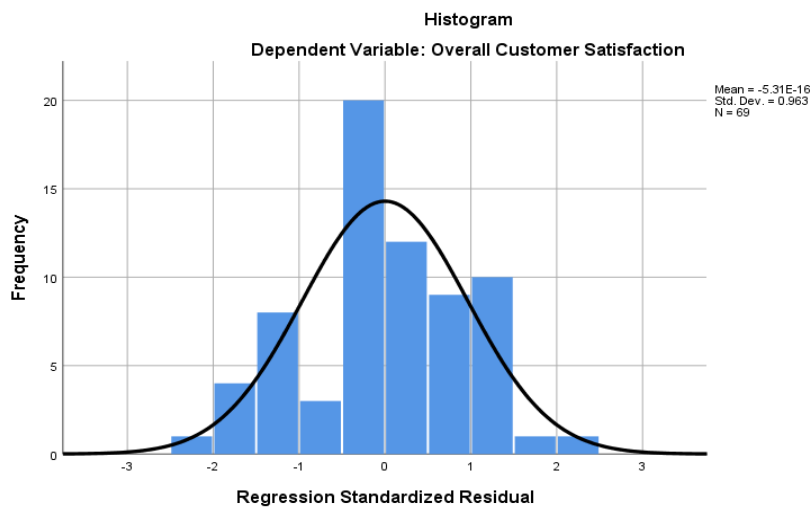


Figure 4.2: Regression Standardized Residual

Source: Own computations, 2020

The result indicates that many of the residuals are fairly close more to the curve and the histogram is bell shaped. This implies that the majority of scores lie around the center of the distribution so the largest bars on the histogram are all around the central value. Therefore, this indicates that the residuals are normally distributed.

4.4.2 Regression Results

The first table of the linear regression model is the Model Summary table. This table provides the R, R², adjusted R², and the standard error of the estimate, which can be used to determine how well a regression model fits the data. The R² value (also called the coefficient of determination) reflects how much of the variation in the dependent variable (customer satisfaction of Huawei Technologies Ethiopia PLC customer) that is explained by the variation in the independent variable (service quality dimensions). In other word, the value of R² shows the influence of dependent variable due to the independent variables.

Table 4.16: Model Summary of Multiple Linear Regression

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.598 ^a	.357	.306	.59080
a. Predictors: (Constant), Assurance, Empathy, Responsiveness, Reliability, Tangibility				
b. Dependent Variable: Overall customer Satisfaction				

Source: Own computations, 2020

The study model summary is presented in table 4.16 above. This summary is used to identify role of service quality dimensions used in this study in explaining customer satisfaction of Huawei Technologies Ethiopia PLC. The R value represents the simple correlation and is (0.598) which indicates there is substantial association between independent variables (i.e. service quality dimensions) and dependent variable (i.e. customer satisfaction). As it is shown in the table, R squared is 0.357 and adjusted R squared is 0.306 suggesting that that 30.6% variation in Huawei Technologies Ethiopia PLC customers' satisfaction is explained by service quality dimensions (i.e. tangibility, responsiveness, reliability, empathy and assurance) used in this model.

The value of adjusted R square is interpreted as the explanatory variable which is the aforementioned five dimensions of service quality (i.e. tangibility, responsiveness, reliability, empathy and assurance) jointly explained 30.6% of Huawei Technologies Ethiopia PLC customers' satisfaction variation in the organization. The remaining percent of the change in

Huawei Technologies Ethiopia PLC customers' satisfaction is caused by other factors which are not included in this study.

The second result of regression i.e. ANOVA table as indicated in table 4.17 below gives a p-value=.000 which shows that the fitted regression model is appropriate. So that the independent variables (i.e. Service Quality Dimensions such as tangibility, responsiveness, reliability, empathy, and assurance) significantly predict the dependent variable (i.e. Huawei Technologies Ethiopia PLC customers' satisfaction, hence the regression model is a good fit of the data. Accordingly hypothesis testing revealed that null hypothesis rejected but alternative hypothesis (H2 up-to H6) accepted.

Table 4.17: ANOVA result of Multiple Linear Regression Model

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.213	5	2.443	6.998	.000 ^b
	Residual	21.990	63	.349		
	Total	34.203	68			

a. Dependent Variable: Huawei Technologies Ethiopia PLC Customers' Satisfaction
b. Predictors: (Constant), Tangibility, Responsiveness, Reliability, Empathy, Assurance

Source: Own computations, 2020

As indicated in table 4.17 above, F-statistic is significant at 0.000 indicating that the model used (multiple linear regression) is appropriate to explain effect of service quality on customer satisfaction of Huawei Technologies Ethiopia PLC. This implies that service quality dimensions of Huawei Technologies Ethiopia PLC significantly affects its customer satisfaction.

The main important result of multiple linear regression models i.e. Beta-coefficient has given much emphasis. Beta-coefficient basically measures the variance of dependent variable caused by independent variable in the model i.e. the effect of each major determinant variable on Huawei Technologies Ethiopia PLC customers' satisfaction (Almquist *et al.*, 2015). The p value shows the significance level of models. The result is presented as below;

Table 4.18: Multiple Linear Regression-Beta Coefficients of Major Independent Variables

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.296	.429		3.024	.004
	Tangibility	.139	.411	.044	3.664	.000
	Reliability	.099	.255	.099	4.880	.000
	Responsiveness	.107	.279	.097	1.974	.042
	Empathy	.033	.136	.037	1.509	.003

Assurance	.242	.498	.024	1.302	.007
a. Dependent Variable: Overall Customer Satisfaction					

Source: Own computations, 2020

As it is shown in the above table, there is a positive association between all independent variables (i.e. service quality dimensions) and customer satisfaction. Besides this, the column called sig. shows the p-values of dimensions of service quality is below 0.05, which means that the association between all dimensions of service quality and Huawei Technologies Ethiopia PLC customers' satisfaction is statistically significant. This implies that, there is a significant association between all dimensions of service quality (i.e. tangibility, responsiveness, reliability, empathy, and assurance) and Huawei Technologies Ethiopia PLC customers' satisfaction.

The researcher used unstandardized coefficients and their sign to analyze the effect of each independent variables (i.e. service quality dimensions) on dependent variable (i.e. Huawei Technologies Ethiopia PLC customers' satisfaction).

The result as indicated in table 4.18 above, assurance have the highest B coefficient value i.e. 0.242; followed by tangibility and responsiveness by having B coefficient value of 0.139 & 0.107 respectively. This implies that, assurance in Huawei Technologies Ethiopia PLC highly predicts (24.2%) the variation in customer satisfaction of Huawei; followed by tangibility (13.9%) and responsiveness (10.7%) respectively. On the other hand, among the dimensions of service quality, empathy have the least B coefficient value i.e. 0.033; followed by reliability by having B coefficient value of 0.099. This implies that, empathy in Huawei Technologies Ethiopia PLC predicts the least (3.3%) the variation in customer satisfaction of Huawei; followed by reliability (9.9%).

The unstandardized coefficients column gives us an indication of what would happen if we were to increase one of the independent variables by exactly one unit. The result of unstandardized coefficients as indicated in the above table implies that if tangibility were to increase by one unit, we would expect customer satisfaction Huawei customers to increase by 0.139 units. In the same manner, if reliability were to increase by one unit, we would expect customer satisfaction of Huawei customers to increase by 0.099 units, if responsiveness were to increase by one unit, we would expect customer satisfaction of Huawei customers to increase by 0.107 units, if empathy were to increase by one unit, we would expect customer satisfaction

of Huawei customers to increase by 0.033 units, and if assurance were to increase by one unit, we would expect customer satisfaction of Huawei customers to increase by 0.242 units.

Multiple regression analysis was conducted to examine the effect of service quality on customer satisfaction of Huawei Technologies Ethiopia PLC customers.

From the above analysis, it can be concluded that the estimated regression equation was:

$$\text{Overall Customer Satisfaction} = 1.296 + 0.139 * \text{Tangibility} + 0.099 * \text{Reliability} + 0.107 * \text{Responsiveness} + 0.033 * \text{Empathy} + 0.242 * \text{Assurance}.$$

From this regression equation it can be concluded that Assurance in Huawei Technologies Ethiopia PLC has the highest effect on Huawei Technologies Ethiopia PLC customers' satisfaction; followed by Tangibility, Responsiveness, Responsiveness, and Empathy respectively.

4.5 Hypothesis Testing

The multiple regression analysis results have answered 5 hypotheses that the study was intended to address. The remaining one hypothesis was addressed in the correlation analysis as indicated in the previous section. The result of the hypothesis testing is summarized as below;

Table 4.19: Hypothesis Test Results

No	Hypothesis	Analysis Used	Decision
Hypothesis 1	There is positive relationship between overall service quality and customers satisfaction	Correlations Analysis	Accept
Hypothesis 2	The tangibles have significant positive influence on customer satisfaction.	Multiple Regression Analysis	Accept
Hypothesis 3	Reliability has significant positive impact on customer satisfaction.	Multiple Regression Analysis	Accept
Hypothesis 4	Responsiveness has significant positive effect on customer satisfaction	Multiple Regression Analysis	Accept
Hypothesis 5	Assurance has significant positive impact on customer satisfaction	Multiple Regression Analysis	Accept
Hypothesis 6	Empathy has significant positive link with customer satisfaction	Multiple Regression Analysis	Accept

The above summary depicts that, the six hypotheses that assumed earlier to accomplishing study were supported by all dimensions.

CHAPTER FIVE: SUMMARY OF MAJOR FINDINGS, CONCLUSION & RECOMMENDATIONS

This chapter provides the summary of major findings, conclusions and recommendations from the study. The conclusions and recommendations are derived from the findings of the study, which are presented in chapter four.

5.1 Summary of Major Findings

The main objective of this study was to examine the effect of service quality on customer satisfaction in the context of Huawei Technologies Ethiopia PLC. Based on the theoretical and empirical review of related literature, a conceptual framework was designed from adopting a model from a previous work of Parasuraman *et al.*, (1994) and Caruana (2002).

In conducting this study, the required data is obtained through self-administered structured questionnaires. To check the validity and reliability of the adopted instruments validity and reliability test were carried out. Though Huawei Technologies Ethiopia PLC is currently working with 365 secondary schools, 10 universities, and different government organizations, since conducting the study to all of these customers is difficult due to time and budget the study was focused on companies that have a long-term business linkage and high reputations with Huawei. These are Ministry of Science and Higher Education (MoSHE), Ministry of Health (MoH), Ministry of Agriculture (MoA), Ministry of Innovation Technology (MInT), and Information Network Security Agency (INSA). With in these organizations, in order to identify the respondents, staffs of IT department and managements were purposively identified. This is because they are assumed to be well aware of the topic and they are the right persons to evaluate the service of Huawei Technologies Ethiopia PLC. Hence, these are the target population or universe of the study. The targeted sample size was 96, but only 69 respondents were responded and considered in this study. Hence, the response rate is 72%.

The service quality was measured using the five service quality dimensions (tangibles, reliability, responsiveness, assurance and empathy) and the satisfaction level of respondents was measured using a five point Likert scale ranging from strongly dissatisfied (1) to strongly satisfied (5). In order to address the objectives of the study, both descriptive and explanatory

design were utilized. The major findings of the study according to the specific objectives of the study is summarized as follow.

The first objective of the study was to examine the overall satisfaction level of customers with the service quality they get from Huawei Technologies Ethiopia PLC. The descriptive analysis revealed that among the attributes of service quality dimensions, respondents relatively showed the highest agreement for tangibility (Mean = 4.17, SD= 0.74) followed by assurance (Mean = 3.99, SD= 0.73) and reliability (Mean = 3.80, SD= 0.71). On the other hand, respondents showed the least agreement/highest disagreement for empathy (Mean = 3.52, SD= 0.80). However, in general based on the categories of Zaidatol & Bagheri (2009) as cited by Tsegaye (2017), among the dimensions of service quality, respondents showed high agreement for tangibility, assurance and reliability in their descending orders. On the other hand, based on the categories of Zaidatol & Bagheri (2009) as cited by Tsegaye (2017), respondents showed moderate agreement for responsiveness and empathy. This descriptive result implies that tangibility is perceived as the most influencing service quality dimension on customer satisfaction on Huawei Technologies Ethiopia PLC, followed by assurance and reliability respectively. On the other hand, empathy is perceived as the least influencing service quality dimension on customer satisfaction of Huawei Technologies Ethiopia PLC, followed by responsiveness.

Regarding to overall customer satisfaction, there is no respondents stating strongly dissatisfied. However, 2.9 % of the respondents are dissatisfied with the service quality they get from Huawei Technologies Ethiopia PLC and 34.8% of the respondents are neutral that means they are neither satisfied nor dissatisfied with the service quality given by Huawei Technologies Ethiopia PLC. On the other hand, 50.7% of the respondents are satisfied and the remaining 11.6% are very satisfied. That means Huawei Technologies Ethiopia PLC satisfied only 62.3% of the customers which can rate their satisfaction as satisfied and strongly satisfied. Generally the mean value for customer satisfaction is 3.71 with a standard deviation of 0.709 respectively. The mean value for overall customer satisfaction based on the categories of Zaidatol & Bagheri (2009) as cited by Tsegaye (2017), is moderate that shows that Huawei Technologies Ethiopia PLC needs to improve its service deliver in order to satisfy its customer by filling a gap between what it should be and what it actually is.

The second objective of the study was to examine the relationship between service quality dimensions and customer satisfaction with Huawei Technologies Ethiopia PLC services.

Correlation analysis was carried out in order to address this objective. The study revealed that all dimensions of service quality i.e. tangibility, reliability, responsiveness, empathy and assurance have significant and positive correlation with customer satisfaction of Huawei Technologies Ethiopia PLC customers. Besides this, from the correlation coefficient of all the five dimensions of service quality dimensions, assurance has relatively the strongest relationship with customer satisfaction; followed by tangibility and reliability.

The last objective of the study was to identify the service quality dimensions that has significant effect on customer satisfaction. Multiple regression analysis was carried out in order to address this objective. The study revealed that 30.6% variation in Huawei Technologies Ethiopia PLC customers' satisfaction is explained by service quality dimensions (i.e. tangibility, responsiveness, reliability, empathy and assurance) used in this model. This means that the five dimensions of service quality (i.e. tangibility, responsiveness, reliability, empathy and assurance) jointly explained 30.6% of Huawei Technologies Ethiopia PLC customers' satisfaction. The remaining percent of the change in Huawei Technologies Ethiopia PLC customers' satisfaction is caused by other factors which are not included in this study. From the multiple regression analysis result, the study depicts that Assurance in Huawei Technologies Ethiopia PLC has the highest effect on Huawei Technologies Ethiopia PLC customers' satisfaction; followed by Tangibility, Responsiveness, Responsiveness, and Empathy respectively. It is in support with the studies such as Karim and Chowdhury (2014), Chan (2008), Appannan, Doraisamy & Hui (2013) and others.

5.2 Conclusion

The study was aimed to examine the effect of service quality on customer satisfaction in the case of Huawei Technologies Ethiopia PLC. The study concluded that tangibility is perceived as the most influencing service quality dimension on customer satisfaction on Huawei Technologies Ethiopia PLC, followed by assurance and reliability respectively. On the other hand, empathy is perceived as the least influencing service quality dimension on customer satisfaction of Huawei Technologies Ethiopia PLC, followed by responsiveness. The study also concludes that the overall satisfaction level of customers with the service provided by Huawei Technologies Ethiopia PLC is moderate that shows that Huawei Technologies Ethiopia PLC needs to improve its service deliver in order to satisfy its customer by filling a gap between what it should be and what it actually is. Besides this, all dimensions of service quality i.e. tangibility, reliability, responsiveness, empathy and assurance in Huawei Technologies

Ethiopia PLC have significant and positive correlation with customer satisfaction. However, among the dimensions of service quality, assurance has relatively the strongest relationship with customer satisfaction; followed by tangibility and reliability. Finally yet importantly, the study concludes that, assurance in Huawei Technologies Ethiopia PLC highly predicts the variation in customer satisfaction followed by tangibility, responsiveness, reliability, and empathy respectively.

5.3 Recommendations

On the basis of the above findings and conclusions, the following recommendations can be forwarded. Assurance is the first dimensions of service quality that have a very significant influence on customer satisfaction. So Huawei Technologies Ethiopia PLC has to enhance the capacity of its employees in order to build the confidence of the customers. This means that the employees of the company needs to have the appropriate skills and knowledge in order to build customers confidence on the organization.

Besides this, since tangibility is predicted to be the second influencing factors for customer satisfaction, the company has to equip with the up-to-date equipment's to effectively support its customers. In addition to this, the company has to collect comments and feed backs from the customers periodically in order to know their needs and hence to enhance their satisfactions.

5.4 Future Area of Research

Future researchers, who want to investigate similar area, may increase the sample size in order to incorporate large number of its customers. Moreover they can further investigate the levels of service quality and customer satisfaction among itself and its main competitors using other service quality measurement tools. Since this study focus only on the relationship between service quality and customer satisfaction, future researchers may include other factors that can have a big impact on customer satisfaction and do a survey

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Appendices

Appendix 1: Questionnaire in English

The Effects of Service Quality on Customer Satisfaction: A Study on Huawei Technologies Ethiopia PLC

Dear Respondents;

I would like to thank you in advance for taking your time to fill out this questionnaire as your input will be a key in developing my research. The purpose of this study is to examine the effect of service quality on customer satisfaction in the case of Huawei Technologies Ethiopia PLC to make a partial fulfillment of the requirements for the Master of Arts Degree in Business Administration – General Management in Addis Ababa University School of Graduate Studies. The study will be used purely for academic purpose and thus it will not affect you in any case. Therefore, I kindly request you to spend your precious time to fill the questionnaire as frank as and reasonable as possible. Information gathered will be treated with utmost confidentiality and will not be used for any other purpose. *Therefore, you are all not expected to write your name.*

Best Regards!!

Part I. General Background of Respondents (Demographic Information)

- In which Organization you belong to:
 - Ministry of Science and Higher Education (MoSHE)
 - Ministry of Health (MoH)
 - Ministry of Agriculture (MoA)
 - Ministry of Innovation Technology (MInT)
 - Information Network Security Agency (INSA)
- Sex
 - Male
 - Female
- Education Background
 - ≤ Grade 12/10
 - Diploma
 - Degree
 - Master
 - Above Master
- Number of years worked in the organization?
 - Less than 1-year
 - 1 – 5 years
 - 6 – 10 years
 - More than 10 years
- In which category is your current position?
 - IT staff
 - Management Staff

Part II: Service Quality Questions

Please rate each statement by a **cross (x)** or **any other mark** on the appropriate number on a five Likert Scale questions. Where 1. Strongly Disagree, 2. Disagree, 3. Neutral, 4. Agree 5. Strongly Agree.

S.No.	Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
A	Tangibility					
6	Huawei Technologies Ethiopia PLC has an up-to-date and enough equipment to support its customers.					
7	The physical setting and the atmosphere of Huawei Technologies Ethiopia PLC office is virtually appealing.					
8	The service provider employees of Huawei Technologies Ethiopia PLC are neat and well groomed.					
9	The location of Huawei Technologies Ethiopia PLC office is convenient for the customers.					
B	Reliability					
10	Huawei Technologies Ethiopia PLC always keeps its promise and delivers what they have promised.					
11	Huawei Technologies Ethiopia PLC show sincere interest in solving the problems you have as a customer.					
12	The service given at Huawei Technologies Ethiopia PLC is always right at the first time/dependable.					
13	Huawei Technologies Ethiopia PLC provides its service at the times promised.					
14	Huawei Technologies Ethiopia PLC keep accurate records of customer data.					
C	Responsiveness					
15	Information is kept in a way to be easily obtained by a customer at any time.					
16	Huawei Technologies Ethiopia PLC gives a promise service to a customer.					
17	The employees of Huawei Technologies Ethiopia PLC are always willing to help a customer.					
18	The employees of Huawei Technologies Ethiopia PLC are never too busy to attend to customer inquiries and requests.					
19	Huawei Technologies Ethiopia PLC is willing to accept feedback and comments on irregularities.					
D	Assurance					
20	The behavior of employees of Huawei Technologies Ethiopia PLC helps build the confidence of the customers.					

S.No.	Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
21	Customers of Huawei Technologies Ethiopia PLC feels safe for their business link with the company.					
22	The employees of Huawei Technologies Ethiopia PLC are polite for their customers.					
23	Employees of Huawei Technologies Ethiopia PLC have appropriate skill and knowledge to support customer's inquiries.					
E	Empathy					
24	The employees of Huawei Technologies Ethiopia PLC give customers individual attention.					
25	The employees of Huawei Technologies Ethiopia PLC give customers personal services when the need arises.					
26	The employees of Huawei Technologies Ethiopia PLC have their customers' "best interest at heart"					
27	The employees of Huawei Technologies Ethiopia PLC understand the specific needs of their customers.					

Part III: Overall Customer Satisfaction Question

S.No.	Statements	Highly Dissatisfied	Dissatisfied	Neutral	Satisfied	Highly Satisfied
28	Overall, how satisfied are you with the services provided by Huawei Technologies Ethiopia PLC?					