ADDIS ABABA UNIVERSITY COLLEGE

OF BUSINESS AND ECONOMICS

M.SC. IN MANAGEMENT (EXTENSION).

The Effect of Total Quality Management on Customer Satisfaction in The Case of Ethio Telecom.

A thesis submitted to Addis Ababa university college of business and economics in partial fulfilment of the requirements for the degree of master of science (M.Sc.) in management specialized in Total quality management and organizational excellence.

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DECLARATION

Endalkachew Masresha, the under signed, declare that this thesis entitled: "The impact of total quality management in customer satisfaction in the case of Ethiotelecom, in Addis Ababa." is my original work. I have undertaken the research work independently with the guidance and support of the research supervisor/advisor. This study has not been submitted for any degree or diploma program in this or any other institutions and that all sources of materials used for the thesis has been duly acknowledged.

Declared by Name: Endalkachew Masresha

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Date: 02/26/2024

This is to certify that the thesis entitled: "The impact of total quality management in customer satisfaction in the case of EthioTelecom, in Addis Ababa." submitted in partial fulfilment of the requirements for the degree of masters of in management specialized in total quality management and organizational excellence, Addis Ababa University College of Business and Economics and is a record of original research carried out by Endalkachew Masresha MSc GSE/4192/14 under my supervision, and no part of the thesis has been submitted for any other degree or diploma. The assistance and help received during the course of this investigation have been duly acknowledged. Therefore, I recommend it to be accepted as fulfilling the thesis requirements.

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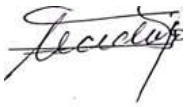
Signature: 

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CERTIFICATE OF APPROVAL

This is to certify that the thesis prepared by Endalkachew Masresha, entitled "The impact of total quality management in customer satisfaction in the case of Ethiotelecom, in Addis Ababa." and submitted in partial fulfilment of the requirements for the degree of masters of in management specialized in total quality management and organizational excellence, Addis Ababa University College of Business and Economics complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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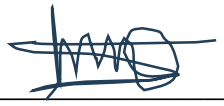
Internal Examiner: **Dr. Habtamu E**. Signature:  Date: 02/26/2024

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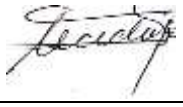
Advisor: **Dr. Tewodros W. (Asst Prof)** Signature:  Date:12/01/2024

ACKNOWLEDGEMENTS

I want to start by giving thanks to the almighty God who has given me the courage, endurance, and direction I need in my life. My utmost gratitude is extended to my adviser, Dr. Tewodros W. (Asst Prof), for his prompt and unwavering assistance in reviewing and providing valuable feedback, Lastly, I want to express my gratitude to my family specially my wife Kidist Nigussie for her encouragement and support while I prepared this thesis.

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ACRONYMS

TQM	Total Quality Management
ETC.	EthioTelecom
CXQMD	Customer Experience and Quality Management Division
Co	chief officer
PM	Process Management
CI	Continuous improvement
CF	Customer Focus
EI	Employee involvement
TMS	Top management support
SQ	System quality
CSM	customer satisfaction Measurements
ANOVA	Analysis of Variance
DW	Durbin-Watson
HQ	Corporate head office
EAAZ	East Addis Ababa zone
WAAZ	West Addis Ababa zone
NAAZ	North Addis Ababa zone
SAAZ	South Addis Ababa zone
CAAZ	Central Addis Ababa zone
SWAAZ	South West Addis Ababa zone

ABSTRACT

The purpose of this study was to investigate the impact of total quality management dimensions on customer satisfaction in the case of EthioTelecom. To achieve the objective, the researcher used explanatory and descriptive research design technique to analyze the impacts of TQM dimensions on customer satisfaction. The research data has been collected using both primary and secondary sources of data. Considering the population as homogenies and simple random sampling technique was used to select the desired sample size from the target population. Based on this assumption the researcher selected 362 samples from the total study population of 4608 EthioTelecom employees who are working in different corporate and zonal offices. This collected quantitative and qualitative data were analyzed using descriptive statistics, correlations, multiple linear regression model to identify the relationship between predictor variables of Process Management, Continuous Improvement, Customer Focus, Employee involvement, Top Management Support, System Quality and the predicted variable of customer satisfaction. The overall findings of the study revealed that Process Management, Continuous Improvement, Customer Focus, and Top Management Support dimensions of TQM had statistically significant and positive impacts on customer satisfaction in EthioTelecom. On the other hand, the effect of System quality was negative and insignificant and Employee involvement was positive and insignificant on customer satisfaction.

Key word

PM =Process Management, CI= Continuous improvement, CF= Customer Focus, EI= Employee involvement, TMS= Top management support, SQ= System quality, CSM= customer satisfaction measurement

CHAPTER ONE

INTRODUCTION

1.Background of The Study

Business setting have experienced marvelous changes and improvement in total quality management and it has developed into one of the crucial tactics that may be used in any organization to achieve organizational competitive advantage. Additionally, firms must improve the quality of their goods and services to compete against other providers due to the ongoing expansion of the global service provider industry (Demirbag Mehmet, Tatoglu Ekrem, Tekinkus Mehmet & Zaim Selim, 2006).

Enhancing corporate presentation and increasing customer satisfaction are two goals; There were several complete quality management methods put into place. The foundation of Total Quality Management (TQM) is the idea that all employees of a business should work together to provide high-quality goods and services in order to satisfy consumers' needs (Prajogo et al. 2004).

Any organization can increase organizational competences, efficiency, and staff productivity by focusing on quality as a major success factor. Customers have many options for service providers, but they would only select those who met or exceeded worldwide standards in terms of quality, dependability, and profitability (Brah and Lim, 2006).

The idea of Total Quality Management (TQM) was developed in the service industry as a result of the importance of service quality in ensuring the survival of the service provider,monitoring manufacturing or other industry operations is one method that might be used to eliminate errors. In addition to several values and concepts that all employees within the same firm share, total quality management also includes a variety of quality instruments and methods (Gharakhani et al., 2013).

According to Lakhal et al. (2006), TQM is a method that strives to create and transfer better, more efficient services by fostering cooperation among organizational members. Total quality management approaches have been the subject of numerous studies, yet they are still regarded as nebulous and unclear (Dean & Bowen, 1994).

This could be explained due to the fact that total quality management has different definitions according to the individual thought about TQM term. Various studies were conducted in order to distinguish the relationship between practices of total quality management and the performance of organizations which is the main aim of our research. The investigation's scope covers a variety of industries, including financial, operational, and quality performance. Such studies demonstrated a

positive relationship between effective TQM implementation and organizational performance, showing that when an organization effectively implements TQM practices, both its organizational and employee performance are significantly improved (Prajogo et al. 2004), its productivity is increased, and its operational costs are reduced (Lam, 1995).

The whole efficiency of the company is carefully considered by total quality management, and the results are higher than the sum of the individual outputs. The management subsystems, such as strategy, quality control tools, a customer-focused approach, and staff interaction, also need to be incorporated (Omachonu and Ross, 1994 cited in Shafiq, 2011).

The goal of total quality management is frequently described as continuous improvement. Both internal and external consumers was experience an infinite journey of service. Additionally, Total Quality Management is a system that actively involves each employee in meeting important client needs by continuously enhancing all parts of job activity using well-organized control, enhancement, and scheduling approaches. All employee functions need to be updated to give them the ability to continuously enhance their work processes (Amaniampong & Salakp, 2014).

Since customer happiness has a beneficial impact on any organization's profitability, every organization strives to be the greatest and best firm by focusing on customer satisfaction. Customers also play an important role in organizational success. Customers play a key role in firms as stakeholders (Koirala and Shrestha, 2018).

As a result, the foundation of all enterprises, especially those in the service sector, is the structure of the customer connection in order to increase organizational performance, which results in increased profitability, service quality, customer perception, and customer loyalty are the major concerns of today's service firms (Ibid) (Angelova & Zekiri, 2011).

In a similar vein, Alomain, Tunea, and Zairi (2013) stated that successful firms in the future was place a strong emphasis on customer happiness made it clear that comprehensive quality management has a significant impact on operational performance, particularly at major businesses that specialize in manufacturing processes.

A number of TQM categories, including leadership, individual management, and customer focus, were thought to be crucial performance predictors,the impact of total quality management on customer satisfaction is discussed in the context of EthioTelecom in this essay (Terziovski 1999).

1.2 Overview of Telecom in Ethiopia

In Ethiopia, the first communications system was established in 1894. The oldest public telecommunications company in Africa is called Ethiopian Telecommunications Corporation. When the vast open wire line system connecting the capital with all of the significant administrative centers of the nation was established during those years, technology played a role in the integration of Ethiopian society. Ethiopia reorganized the telephone, telegraph, and postal systems in 1941 following the conclusion of the war with Italy, which caused the destruction of the country's communications network. 1952 saw the establishment of the Imperial Board of Telecommunications (IBTE) with proclamation No. 131/52. The Board oversaw the development and distribution of telecommunications services in Ethiopia and enjoyed complete financial and administrative autonomy.

Following the market reforms, the operation and regulation of telecommunication services were placed under the control of the Imperial Board of Telecommunications of Ethiopia, which changed its name to the Ethiopian Telecommunications Authority in 1981.By Proclamation 49/1996, the Government established the Ethiopian Telecommunication Agency (ETA) as a distinct regulatory body. The Ethiopian Telecommunications Corporation (ETC) was also established by the Council of Ministers in 1996 through regulation 10/1996.

The major responsibilities of ETC, which operates under the direction of the ETA, are to maintain and grow the nation's telecommunications infrastructure and to offer local and international phone, telex, and other communication services. In this regard, ETC is the sole provider of any services relating to telecommunications at present time.

The Federal Democratic Republic of Ethiopia reorganized the telecommunications industry, and in November 1996, Proclamation No. 49/1996 established the Ethiopian Telecommunications Authority (ETA) and the Ethiopian Telecommunications Corporation (ETC), two distinct, independent entities, in keeping with the 2005/06-2009/10 five-year plan, the Ethiopian government chose to concentrate on improving telecommunication services, viewing them as a crucial tool for the country's development. On Monday, November 29, 2010, ethio telecom was established, driven by the goal of assisting Ethiopia's steady growth within the framework of the Growth Transformation Plan (GTP), with aspirational goals for 2015.

1.3 Statement of the problem

One of the variables that significantly affect the customer satisfaction at in telecom sector is mainly depends on implementing and practicing of TQM dimensions like top management commitment, leadership, employee empowerment and involvement in the decision making activities, continuous measurement, and management of quality, and continuous improvement in quality products and processes. The influence of TQM on customers' satisfaction and business value is an important issue for company, resource managers, other stakeholders and researchers.

According to Ogbari, Mercy, and Borishade (2015), several firms have implemented customer satisfaction mechanisms that prioritize quality service and a well-designed framework. Hill and Alexander (2000) and Jones and Sasser (1995), as referenced in Ogbari et al. (2015), found that improving customer satisfaction has a direct impact on company success. Today, corporations recognize the importance of monitoring service quality to ensure customer happiness (Benjamin, 2012).

TQM and service delivery including productivity enhancement, profitability improvement, improved work relations, competitive advantage and efficient use of resources at both intermediate level and organizational level (Parasuraman, 2005). While institutions invest heavily in Total Quality Management both in developing and developed countries, much attention has not been given to the understanding of how TQM implementation creates value in business especially in developing countries (Devaraj 2003).

Most scholars noted, while considering the enormous benefits that are experienced by global telecom company on the execution of TQM, the local business organizations have moved to adopt TQM. due to the dynamic nature of the telecommunications market, provided that high quality service and customer satisfaction and have an important impact on maintaining the current customers and adding more customers to the company. Delivering high quality service is the main key to stable and uninterrupted competitive Advantage.

The clear link between service quality and costs, financial success, customer satisfaction, and customer loyalty has drawn a lot of attention to the topic at the present, since many industry and service sector leaders are discovered to be extremely exceptional customer service oriented, customer happiness is also reliant upon the level of service quality supplied by them. Because of this, businesses operating in the same industry are compelled to evaluate the caliber of the services

they offer in order to draw in and keep clients. Since happy clients are essential to a company's long-term survival, Zenithal et al. (1996).

Telecom sector are getting complex in their operations so that they could be able to satisfy the ever increasing request of customers for a quality product or service the overall organization should strive for creation of a suitable environment so that each service to be deliver is with a standard quality. In order to guarantee this, Ethiotelcom is now adopting a system which enhances quality Measures of Total Quality Management (TQM) in the company.

Total quality management approaches have been done numerous studies on manufacturing area rather than service sector, so they are still observed as gap for service sector Much attention has not been given to the understanding of how TQM implementation creates value in business especially in developing countries (Devaraj 2003).

On the other hand, many scholars argued that customer satisfaction has a positive effect on organization's profitability (Benjamin, 2012). In addition, Zamil and Shammot (2011) stated that customer satisfaction is an indicator of national economic health. Which means, lack of customer satisfaction has its own negative impact on enthusiasm and trustworthiness of the telecom user in order to use telecom service.

For instance, the empirical evidence indicated that Ethiopia is Africa's second-most populous country with 110 million people, is one of the oldest public telecommunications operators, founded in 1894. Despite its age, ethiotelecom is still one of the least developed in the world. According to the ITU, mobile-cellular subscriptions (per 100 persons) were 39% in 2019, with 20% Internet penetration. As of June 2022, the international transmission speed per Internet user was two kbits per second. Various studies largely accept that no modern economy can exist without telecommunications services. It's no surprise that Ethiopia is regarded as one of the world's poorest economies. This study outlines the causes of Ethiopia's extremely bad telecommunications service and makes solutions for near-term improvement. 2012). Similarly, Ethio Telecom have also many implementation gaps for new TQM methodology and enhancement of its dimension so This study was supposed to fill this research gap.

1.4 Research question.

At the end, this research intended to respond to the following research questions.

- What is the effects Process Management on success factors in the case of EthioTelcom?
- What is the effects Continuous improvement on success factors in the case of EthioTelcom?
- What is the effects Customer Focus on success factors in the case of EthioTelcom?
- What is the effects Employee involvement on success factors in the case of EthioTelcom?
- What is the effects management support on success factors in the case of EthioTelcom?
- What is the effects system quality on success factors in the case of EthioTelcom?

1.5 Objective of the research

1.5.1 General Objective

The general objective of the research was to examine the impact of total quality management in customer satisfaction in the case of EthioTelcom.

1.5.2 Specific objective

- To assess how Process Management factors affecting customer satisfaction in the case of EthioTelcom.
- To observe how Continuous improvement factors affecting customer satisfaction in the case of EthioTelcom.
- To evaluate how Customer Focus factors affecting customer satisfaction in the case of EthioTelcom.
- To observe how Employee involvement factors affecting customer satisfaction in the case of EthioTelcom.
- To identify how Top management support factors affecting customer satisfaction in the case of EthioTelcom.
- To identify how System quality factors affecting customer satisfaction in the case of EthioTelcom.

1.6 Scope of the Study

The concept of TQM is very extensive and have need of farther investigation in its execution, exercise, efficiency, and challenges in all telecommunications industry, this study emphasize on the practice of TQM dimensions and its impacts on customer satisfaction in EthioTelecom corporate office and the six (6) zone office. more specifically, this study emphasizes on customer satisfaction and TQM dimensions implementation in the company. TQM dimensions are Process Management,

Continuous improvement, customer orientation, Employee involvement, Top management support and System Quality based on the review of literatures and researches This study was examined the effect of total quality management on customer satisfaction in the case of EthioTelecom.

1.7 Research Hypothesis

The literature of the study was suggesting that the Total Quality Management have a significant implication for customer satisfaction of an organization mainly telecommunication company. Based on the study proposes that the Total Quality Management have substantial consequence for customer satisfaction of a company mainly telecom company. Based on the serious evaluation of the forgoing researches and results of previous studies outlines the following assumption regarding the effects of capacity building and training development on employee performance.

- **Hypothesis** 1: There is a positive significant relationship between Process Management and customer satisfaction.
- **Hypothesis** 2: There is a positive significant relationship between Continuous improvement and customer satisfaction.
- **Hypothesis** 3: There is a positive significant relationship between Customer Focus and customer satisfaction.
- **Hypothesis** 4: There is a positive significant relationship between Employee involvement and customer satisfaction.
- **Hypothesis** 5: There is a positive significant relationship between Top management support positively affects customer satisfaction.
- **Hypothesis** 6: There is a positive significant relationship between System quality and customer satisfaction

1.8 Significance of the Study

To be competitive and effective in the telecom market one must meet or exceed customers' expectations due to globalization, wide use and accessibility of contemporary technology, by systems of government and civil service has been providing the same type of services in a solitary market. Ethio telecom was benefited from the results of this research in that the company is able to understand the concept of TQM in order to attain customers' satisfaction. In today's world, telecom sectors are facing the increasing challenges from global rivalry and additional stylish customers in relations of what they need and their changing wants. By ahead of this sympathetic, the organization

have been able to take actions that contributes in analyzing the inspiration of Total quality. Thus the findings of the study were enhancing the quality of service formulation in the EthioTelecom to add the following benefits for the sector.

- The outcomes of this study was benefit scholar's as it has used as a reference material on the relationship between the effect of TQM on customers' satisfaction and service delivery execution.
- The study will contribute to the organizations to understand the impact of TQM.
- The study will help worker and their organization understand to make progress on the experience of TQM.
- It has also classified gap that need further consideration to contribute the improvement of customer satisfaction.

1.9 Limitation of the Study

The study's main limitation is the lack of published and verified data on connected topics, particularly in our nation. This study relies on subjective self-reports to assess ethiotelecom user satisfaction and TQM implementation due to a lack of defined measures for Service delevery performance in the sector.

Next, sourcing information has been difficult in some areas as some respondents may fear of see-through confidential information.

1.10 Organization of the Study

This study is divided into five chapters, the first of which is an introduction that includes the study's background, an overview of EthioTelecom, a problem statement, a list of research questions, objectives, and hypotheses, as well as information about the study's scope and significance.

The theoretical and empirical literature review is covered in the second chapter. Additionally, this chapter contains relevant facts that has help you comprehend the research better. The research methodology, which includes the research design, target data collection techniques, validity and reliability, data analysis and interpretation techniques, population and sample techniques, and ethical considerations has described in the chapter three. Data presentation, analysis, and interpretation are covered in the fourth chapter and the fifth chapter includes a summary, recommendations, conclusions, study limitations, and ideas for additional research

CHAPTER TWO

REVIEW OF THE RELATED LITERATURE.

INTRODUCTION

This chapter includes corresponding research on the creation and application of total quality management, including the definition of total quality management, the idea of quality, theory, and critical success factor of TQM, as well as the topic of client fulfillment measurement, the relationship between TQM and customer satisfaction, and a discussion of the theoretical framework for TQM.

2.1 The Concept of Total Quality Management in Telecommunications.

However, some other elements are involved, like network technology, information security system, information technology system, and the products and service being offered. The emphasis is more on joining quality systems to gain increased visibility and control of user experiences. It further assistances in classifying the upgrading areas and create new facilities to meet the ever-growing customer. A healthy quality management software helps telecommunication companies to demonstrate the promise to product quality and distributing customer value by reducing the cycle times and return rates, safeguarding timely distributions, reliability, and deficiency management.

Total Quality Management process or unconcerned attitude on the part of the organization concerning Total Quality Management, the Total Quality Management influence in the Ethiopia industries which the Telecommunications industry is share of, becomes difficult hence, the weak or poor service delivery of the industry in the actualization of its desired goals and objectives(Aluko,2004). It is therefore, in the bright of the foregoing that the study is set to investigate the reality in some problems and additional identify and determine other Total Quality Management tests; similarly, the prospects that are likely to emerge in the proper implementation of total quality management.

Following current developments in the world, stress has been assumed in each and every aspect of a product and service which gave rise to the idea of quality. Quality is a complex concept that has become one of the most generally appealing in all of management theory. A quality revolution is truly afoot in business today. While this concern with quality has historical roots, suffice it is to say Today, every company aspires to offer quality goods and services, by which they mean goods and services that are above average, deliver what is required, and are cheap.

Quality is a sense of appreciation that something is better than something else. It changes in a lifetime, and it changes generation to generation, and it varies by facets of human activity. Many people perceive attention to quality as one of the most important competitive issues of today and tomorrow. In fact, quality may be one of the most important ways a manager can add value to products and service to set them apart from those of a competitor. At one time, managers believed that there was an inevitable trade-off between productivity and quality. They thought that the two were diametrically opposed that increasing one meant decreasing the other. Today, however, effective managers consider productivity and quality as two sides of the same coin- one that can increase profits and build customer loyalty. (Dale H. Besterfield.2003: 453). Total Quality Management (TQM) has its origins in the early 1920s, when the Hawthorne experiment demonstrated that employee engagement affects production. In the 1930s, Walter Shewhart developed a statistical theory for quality control as a result (Westcott, 2005). The idea was further developed in Japan in the late 1940s when unions, engineers' government officials, and academics committed themselves to enhancing production and their quality of life after the war (Powell, 1995). This can also be referred to as TQM's starting point, Deming and Juran, two quality gurus, began to train and teach statistical quality control and a managerial innovation to Japanese engineers in the 1950s (Westcott, 2005). The idea evolved over time from the quality of products to the quality of everything, including internal organizational manufacturing and non-manufacturing tasks, as well as potential application in service and nonprofit organizations. (Powell,1995). In both manufacturing and non-manufacturing enterprises nowadays, TQM is being used with amazing ubiquity (Chonga Rundusb, 2004). The construction sector can also use this notion. For instance, TQM was first implemented by Japanese construction companies in 1970. 9 This demonstrates that TQM is suitable to businesses with innovative and one-time processes, such as building firms, in addition to enterprises that engage in mass production. (1997, Arditi & Gunaydin).

Different theories and approaches of total quality management have been put forth by various academics and quality experts. The most significant figures in the quality management movement can be categorized as Crosby, Deming, Feigenbaum, Ishikawa, and Juran (Martnez-Lorente, Dewhurst Angel R., Dale Frank, & Barrie G. Dale, 1998). Although they took different approaches, it is because to their writings that the TQM concept can be understood. William Edward Deming, one of the TQM pioneers, saw TQM as a management approach that is management-led, based on a continuous process of improvement, scientifically-based, and aims to serve the customers more

effectively every single time (Zairi, 1991, p. 21). Joseph Juran, another expert on quality, suggests what he terms the "quality trilogy": quality planning, quality control, and quality improvement. This idea applies to all job functions, managerial levels, and product categories (Amitva Mitra, 2008, p. 78–79).

In accordance with Juran, quality control focuses on preventing flaws in the product or services and fixing them to produce a defect-free product. A proactive approach to quality improvement means making improvements before problems arise, and quality planning is motivated by satisfying the requirements and expectations of customers. According to Juran and Godfrey (1995, p. 25; Amitva Mitra (2008), p. 78–79; Zairi (1991, p. 22), the Juran trilogy was the first to assess the expenses associated with low quality. The idea that quality should be taken into account at all phases of the process, not just during production, was initially put forth by Armand V. Feigenbaum (Zairi 1991, p. 25).

2.2 Definition of Total Quality Management

Although TQM is an important but less expensive sources, it is important to adjust its impact to the achievement of the association's goals and purposes in addition to sustaining long-term customer retention, revenue generation, and benchmarking in order to ensure the source's continued financial and operational presentation.

Customer satisfaction is the result that customers feel when they receive performance from a firm that meets their expectations. Following the results, researchers and academics contend that a company's future success is positively impacted by customer happiness. Additionally, there is proof that customer satisfaction, loyalty, and retention are positively correlated.

The degree to which a customer's prior expectations are met or exceeded influences the quality of the services that are rendered to them. 2011; Faiza Sajad. According to Jain (2009), there are several key definitions of total quality management that include the following, TQM refers to continuously raising the caliber of work produced by all employees in order to constantly meet the needs of clients, whether they be internal or external. TQM is a useful management method for maintaining ongoing customer satisfaction, which achieves the growth of the organization. It is a methodical approach to ensuring that planned operations are carried out as intended. Total Quality Management (TQM) is a system of management that strives to consistently meet every client's requirement by integrating all staff members into the business and emphasizing both acceptable, accessible

technology as well as suitable problem-solving techniques on the one conjunction, and continuous improvement on the other.

Owing to the intense rivalry in the telecom sector, retaining present clients and attracting new ones depends heavily on offering top-notch service, loyalty, and customer happiness. Providing excellent service is the primary means of maintaining a steady and continuous competitive advantage. Customer satisfaction has been shown to positively affect an organization's performance and productivity. Any successful business is built on its foundation of happy consumers, since they are more likely to make repeat purchases, show brand loyalty, and spread good word of mouth. It has been discovered by researchers that happy consumers tend to tell five or six other people about their opinions and experiences with a product or service, whereas unhappy customers are more likely to tell ten or eleven individuals. (2011, International Journal of Academic Research in Social Sciences and Business).

There are numerous domains where TQM is evident. A successful TQM implementation aids in keeping the organization's attention on the demands of the market, makes it easier to motivate top performers in all areas of the business, offers the framework required to attain quality performance, and aids in the ongoing analysis of all processes to eliminate wasteful and ineffective activities. Put differently, the advantages of effective Total Quality Management (TQM) encompass decreased operating expenses, a rise in market share, enhanced employee morale, and a guarantee of a company's competitive advantage (Himanshu, 2009).

Numerous academics and experts in the field of quality have put forth distinct theories and approaches concerning management of total quality. The most influential figures in the quality management movement are perhaps Crosby, Deming, Feigenbaum, Ishikawa, and Juran (Martínez-Lorente, Dewhurst, Angel R., Dale, Frank & Barrie G. Dale, 1998). Despite the differences in their methods, their writings serve as the basis for understanding the theory of TQM. William Edward Deming, one of the pioneers of Total Quality Management (TQM), saw TQM as a management approach that is scientifically grounded, management-led, and focused on continuously improving the quality of service provided to customers (Zairi, 1991, p. 21).

Another outstanding master the quality trilogy—quality planning, quality control, and quality improvement—is Joseph Juran's universal framework for thinking about quality. This idea works for all product lines, functions, and management levels (Amitva Mitra, 2008, p. 78–79). Juran states that the goal of quality control is to prevent flaws in the goods or services and to address them so

that the final product is flawless. Quality improvement is a proactive strategy that aims to address issues before they arise, and quality planning is informed by customer wants and expectations. The Juran trilogy was the pioneer in evaluating the expenses associated with subpar quality (Juran & Godfrey, 1995, p. 25; Amitva Mitra, 2008, p. 78–79; Zairi 1991, p.

after reading the writings of the quality leaders listed above, we can draw the conclusion that although each has their own interpretation and justification of the concept of quality management, many researchers have defined the dimensions of TQM in varies way related to their topic in clouding many variables like customer focus, leadership, employee commitment, process, system management, continual improvement, data-driven decision, top management support, communications, benchmarking and preventing rather than detecting defects. there are some commonalities among them, including the significance of process management, continuous improvement, customer focus, employee involvement, top management support and system quality as a dimensions of researcher.

2.3 Total Quality Management Dimensions

2.3.1 Process Management

Process thinking is emphasized heavily in TQM. An internal or external supplier's inputs are transformed into outputs that are given to clients through a sequence of steps known as a process. The procedures needed to complete the process are laid out, and performance metrics are regularly checked for unforeseen deviations.

According to Anderson et al. (1994), process management is a collection of procedures used to manage and enhance the processes that result in goods and services. These procedures integrate methodological methods with human resource management.

In order to decrease process variances and raise quality, it incorporates proactive and preventive techniques to quality management (Sadikoglu & Oclay, 2014). Jorgensen and Nielsen (2013) state that a process-based approach, as part of the TQM philosophy, validates the need for procedures that are created to satisfy the quality standards of the organization. To ensure that the necessary resources are available for these processes to be inspected and improved, it is crucial that the fundamental processes be recognized and supported, as a result, telecom companies must concentrate on process management to keep up with the evolving business environment.

2.3.2 Continuous improvement

TQM places a lot of emphasis on ongoing process improvement. An organization must be analytical as well as creative in order to develop solutions to meet stakeholder expectations and increase its competitiveness through continuous improvement.

W. Edwards Deming stressed the value of continual improvement in 1950 while assisting Japan with its postwar reconstruction efforts The relationships between inputs, processes, and outputs are shown in this diagram along with the functions of suppliers and customers, the interdependence of organizational processes, the value of consumer research, and the necessity of constant improvement of all production system components.

Deming advised the Japanese that planning for quality required a thorough grasp of suppliers and customers. He counseled them that the secret to taking advantage of global markets is constant improvement of both products and production methods via a deeper comprehension of client needs. Deming predicted that Japanese producers would have a significant portion of the global market and be producing the best-quality goods in the world in five years. In less than four years, the Japanese were able to break into multiple international markets by using these concepts!

Both breakthrough improvements which are big and happen quickly and incremental changes which are little and happen gradually are referred to as continuous improvement. One of the cornerstones of complete quality is continuous improvement. In marketplaces where there is competition, it is a crucial business strategy.

2.3.3 Customer Focus

Any institution's fundamental goal is to satisfy its customers, and this is also the TQM telescoping framework's primary objective. An organization is required to provide its 171 clients with high-quality goods or services that satisfy their requirements, reasonable prompt delivery, and exceptional customer care (Dean & Terziovski 2001:613). Some of the fundamental TQM techniques include listening to the "customers" and acting fast in response to their shifting requirements, expectations, and perceptions. Institutions can determine the demands of their clients, learn about client trends, and compare their services to those of their rivals by staying in constant contact with them (Vavra 2002:71). According to Behara, Fontenot, and Gresham (2002:603; Eng & Yusof 2003:65), this can be an effective tactic for attracting new clients and keeping existing ones loyal. A definition of a "customer" is any individual who utilizes the products or services that you provide; this definition include both internal and external clients. An alternative interpretation

defines a customer as any anyone who utilizes an organization's goods and services; this definition emphasizes the external client. Additionally, suppliers are allowed admission into the customer chain by the first definition, as are their rivals (Vavra 2002:71).

As Sadikoglu & Oclay (2014) noted in their research, production can be planned with the requirements, expectations, and complaints of the customers in mind by employing effective customer focus initiatives. This was assist businesses in delivering more dependable, high-quality goods and services on schedule, with more effectiveness and productivity. Companies ought to comprehend and ascertain the necessities of their clients by fulfilling their demands and making an effort to surpass their anticipations (Lewis et al, 2006).

Consequently, it can be said that a key prerequisite for sustained organizational success is consumer's satisfaction, and in order to get this, the entire business must concentrate on meeting the wants of its consumer's.

2.3 4 Employee involvement

Involvement is where engagement starts. The term "employee involvement" (EI) describes any action wherein workers take part in decisions and enhancements relating to their jobs, with the aim of enhancing their motivation and unleashing their creative potential.

Tom Peters advocated getting everyone involved in everything, including developing budgets, hiring and recruiting, evaluating new technologies, measuring and tracking outcomes, improving quality and productivity, answering calls from customers, and hosting customer visits.

Utilizing the suggestion system is among the simplest methods for individually involving staff members. An employee suggestion system is a management tool used to submit, assess, and execute suggestions made by staff members to save costs, improve quality, or enhance other aspects of the job, like safety. For example, at Toyota, staff members come up with about three million ideas annually (60 ideas on average per employee), of which 85 percent are carried out by management. Employers usually provide their staff rewards for implemented suggestions.

Employee idea generation and implementation must be encouraged. There are several ways to accomplish this, but the most popular one is to organize small project teams to focus on certain issues (Kanji, 1995). (Zadry & Yusof, 2007 as cited in Zahari & Zakuan, 2016) Making the team members involved in adopting TQM has become increasingly vital in organizations. When employees work in a setting that values their opinions and allows them to offer suggestions without worrying about being mocked by managers or coworkers, they feel more empowered (Gaudreau

Meyerson, 2012 as referenced in Zahari & Zakuan, 2016). Basic recommendation systems can be very advantageous. Even routine tasks become more pleasant when one considers solutions to problems at work; putting down the ideas helps employees become better writers and reasons.

A concept that is implemented and a task that is made simpler, safer, or better result in satisfaction. Acknowledgment for recommendations results in increased drive, recognition from peers, and even financial benefits. Employees learn more about what they do, which could result in promotions and improved relationships with coworkers.

2.3.5 Top management support

The primary force behind TQM implementation is top management, which develops the processes, goals, and values needed to meet customer expectations and enhance an organization's performance trajectory (Ahire et al., 1996 as referenced in Ngambi & Nkemkiafu, 2015).

Increasing quality expertise, putting the customer first, and involving management can all help to improve quality (Adam et al., 1997: 869 as cited in Zehir & Sadikoglu, 2012). Tools for quality improvement are among the resources that top management provides for training linked to quality (Ho et al., 2001 as referenced in Zehir and Sadikoglu, 2012). In order to increase productivity in the workplace, leadership must establish and communicate performance expectations and values, engage in quality activities, encourage open communication, participation, cooperation, and learning between staff members and management, and empower staff members to solve problems within their purview in order to gain their acceptance. (Das et al., 2000 & Goetsch & Davis, 2010 as cited in Zehir and Sadikoglu, 2012).

It is true that upper management should assist in implementing TQM by offering all essential resources, providing strategic guidance, and fostering a positive work environment. As a result, staff members become more motivated and involved in TQM initiatives (Shegaw, 2019). According to Flynn et al. (1995) and Anderson et al. (1994), which were referenced by Shegaw (2019), senior management commitment is required to have an impact on the organization's overall attitude and strategic direction. Authoritarian leadership is characterized by centralized decision-making and minimal or nonexistent employee involvement in tasks like defining the organization's quality mission, setting performance goals, deciding how work is to be done, or figuring out how it was evaluated.As a result of a high-quality system, employees may be more adaptable and procedures and practices may be improved, allowing individuals or groups to integrate duties and work into a new stage even in complex processes (Goh, 2000).

2.3.6 System Quality

Along with an objective, mission, and vision for the caliber of the business's goods and services as well as its dedication to its clientele, a well-managed organization could develop a system of quality policy (Goh, 2000).

As a result of a high-quality system, employees may be more adaptable and procedures and practices may be improved, allowing individuals or groups to integrate duties and work into a new stage even in complex processes (Goh, 2000).

Because a well-designed system can enable workers to be adaptable and ensure that processes and procedures are improved, allowing individuals or groups to integrate jobs and work into a new stage even in complex processes (Goh, 2000).

The organization has benefited financially from the facilitation of the ISO 9001 quality management system implementation. Employees can grow more accustomed to document gathering in a typical work environment by following the system's principles and organization norms (Nabavi, Azizi, & Faezipour, 2014). The definition and documentation of a system that guides performance has led to a more scientific approach to management and system quality.

2.4 Empirical Review

Table 1 Summary of Literature Gaps

Author	Findings	Knowledge Gap
Hesbon Ondiek Yala (2018)	❖ positive relationship between implementation of the impact of TQM policy of service delivery and customers' satisfaction. Specifically, there exists a positive correlation between TQM policy on service delivery quality on customers' satisfaction achievement and the two dimensions (the core and the relational) of customers' satisfaction.	❖ The research focused on TQM policy of service delivery and customers' satisfaction. and its challenge rather than factors affecting implementation of TQM.
Anyango (2013)	❖ This current study contributes in providing further evidence that may contribute to enhancing our understanding and knowledge of the relationship between quality management and competitive advantage. In addition, thus far, limited studies have been conducted using mixed methods to widely explore the quality management phenomenon in Malaysia hotel setting	❖ This study is focused on assist the hoteliers for identifying the proper TQM practices and then evaluating the available practices that best fitted the hotel industry in Malaysia which could concomitantly help the Ministry of Tourism and Culture

Author	Findings	Knowledge Gap
Getee Habibi 2020	❖ According on the consequences of the study, it became clear that Total Quality Management has a significant impact on customer satisfaction. Although the respondents were aware of the various aspects of Total Quality management despite its new emergence in the Afghanistan telecommunications sector.	❖ The studies focused on Total Quality Management, on customer satisfaction, benchmarking, profit generation, minimizing customer complaints
Admasu Deressa (2020)	❖ This research is to investigate the impact of TQM on employee performance in three commercial banks operating in Ethiopia (such as CBE, Awash Bank and DGB). In CBE employee training and education represented the highest level with mean score 3.64 compared with other dimensions and it was ranked at first place and determined as the most critical success factor for TQM in the bank.	❖ The studies focused on to test the relationship that exists between TQM dimensions and employee performance.
Abel Shawel (2020)	❖ This research is to investigate The major factors influence implementation of total quality management of building construction firms include; Firm's emphasis on short term objective is the primary problem of TQM.	❖ The studies focused on to The major factors influence implementation of total quality management of building construction firms.
Betremariam Melese (2019)	❖ The main objective of this study is to examine how the total quality management practices can affect effectiveness of organization by taking the case of Nile Insurance Company Share Company. The descriptive statistics shows that TQM practices (Strategic planning, Communication, Employees Involvement, Customer Orientation, and Leadership) have significant and positive relationship with employee's satisfaction and company's profitability.	❖ This study has examined the impact of TQM practices on effectiveness in Nile Insurance Share Company. In this regard, the study is significant to yield to data and information that are useful to insurance sector.

Source: developed by the author, 2023

2.5 Customer Satisfaction Measurement

Researchers have defined "customer satisfaction" differently depending on the sector. Customers would be satisfied if a certain business could give the good or service in accordance with their needs, wants, and demands. Customer satisfaction is strongly correlated with supply levels that are

on time, of the highest caliber, and meet or exceed expectations. (Schindler, Rams, and Gerpott, 2001). Retaining current clients depends heavily on their level of satisfaction. (Gaudreau Meyerson, 2012 as referenced in Zahari & Zakuan, 2016) of mockery by superiors or coworkers (Gua, Xiao & Tang, 2009).

Customer satisfaction is frequently cited as being crucial to the business's ability to generate future income. In 1994, Haber, Simester, and Wernerfelt. Researchers (Lin & Wu, 2011) state that it is not anticipated that disgruntled clients who received poor-quality, delayed service was continue to do business with the company in the long run. (2011) Lin and Wu.

Inadequate service delivery can also lead to discontent. For example, consistently receiving subpar services that fall short of expectations can be a major source of discontent among both individual and business clients. (1993, Rust & Zahorik). Scholars have discovered that regular fluctuations in the caliber and worth of goods and services also lead to fluctuations in the loyalty of customers. (Johnson & Ah, 2005).

Numerous academics have attempted to define customer satisfaction, and they typically define it as the interaction between two parties or a business and its customers. "A summary of psychological state resulting when the emotion surrounding disconfirmed expectations is coupled with the consumer's prior feelings about the consumption experience" is how Oliver (1981), cited in Hansemark and Albinsson (2004), defined contentment. According to Kotler (2000), referenced in Angelova and Zekiri (2011), satisfaction is the state in which one feels satisfied or disappointed by their subjective sentiments, depending on their prior experiences in relation to their perceived expectations of the service.

According to Trasorras, Weinstein, and Abratt (2009), a customer's emotional attachment to a product or service, together with their inner thoughts about it, determines their level of engagement, loyalty, and adherence, which in turn affects customer satisfaction rates.Based on the America satisfaction model, Angelova and Zekiri (2011) measure customer happiness using three different metrics, including customer perception, customer expectations, and customer loyalty.

2.5.1 Customer Perception.

It is possible to define customer expectations as the wishes or desires of the customer. The fundamental idea is that consumers' expectations are what they believe the company should provide them, or what they anticipate to get from it in terms of its array of goods and services. Most of the time, these expectations differ from what the consumer actually receives from the company in real-

world circumstances. Here, it's crucial to pay attention to how the consumer perceives the service rather than how the performance actually is (Brink and Berndt, 2005, p.59).

Lovelock and Wright (2002) state that customer expectations encompass a range of factors, such as anticipated, adequate, and desired services, as well as a tolerance zone that is in between expected and adequate service levels (pp. 81–82). Desired Services, the level of service quality that a consumer feels is both possible and appropriate to receive.

The lowest quality of service that a client was take without becoming unhappy is known as adequate service. Predicted Service. the degree of quality of service that a client anticipates a business to provide.Customers' tolerance threshold for differences in the quality of the services they receive is known as their "zone of tolerance." For any one consumer, the zone of tolerance may go up or down based on the level of competition, the cost, or the significance of particular service features. These elements typically have an impact on appropriate service levels, which can fluctuate depending on situational factors. In contrast, desired service levels typically rise very slowly as a result of a build-up of client experiences.

2.5.2 Customer Expectations

A customer's expectations are influenced by five main variables, according to Peter and Angela (2006, pp. 241-242): prior experience, word-of-mouth communication, personal requirements, explicit service communications, and implicit service communications. An organization's services satisfy the needs and desires of its clients. Beyond meeting their consumers' expectations, they improve the success of the company (Hansemark & Albinsson, 2004).

Customers' expectations are mostly influenced by their individual demands, their prior interactions with service providers, and internal and external contacts between service providers and customers, according to Parasuramanet al. (1988), quoted in Tilahun (2017).

But, a customer would not be happy if the service fell short of their expectations (Ali et al., 2015 cited in Ani, 2017). On the other hand, when expectations are lower than the quality of service provided, customers are satisfied (Kalkidan, Nigist, & Haset, 2016). Customers' primary expectations from the company included quick and efficient service as well as kind and accommodating employees. According to Zeithaml, Parasuraman, and Berry (1990), a customer's expectation is derived from their past experiences and what they hope to achieve from the services. However, Singh and Khanduja (2010) suggested that a variety of uncontrolled factors, such as customers' psychological experiences from prior service delivery, their prior experience with other

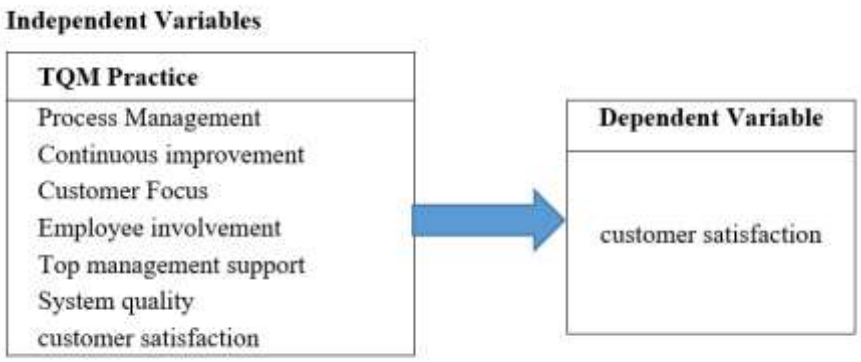
organizations, and other people's opinions and influence, create the basis of customers' expectations.

2.6 Conceptual Framework

This study aims to examine the impact of total quality management on customer satisfaction in the case of EthioTelcom, based on research by Salaheldin (2009), Fuzi & Gibson (2013), Haile & Raju (2016), and Cua et al. (2001), the conceptual model that follows is put forth. By examining the aggregate direct effects of seven TQM practices that have been discovered in the literature on operational performance, the conceptual framework illustrates the link between TQM practices, operational performance including the significance of process management, continuous improvement, customer focus, employee involvement, and top management support as a dimensions of the researcher, TQM dimensions that are highlighted in this study.

In part as a reaction to the flaws in earlier organizational management ideas, Total Quality Management (TQM) theory emerged. In the 1930s, the two people most responsible for the development of TQM are Edwards Deming and Joseph Juran.Deming and Juran worked with Walter Shewhart, the creator of the statistical quality control (SQC) theory, during the 1930s. According to SQC, "costs go down and productivity increases as quality improves." SQC made it possible to continuously improve productivity and quality by identifying problem areas with data. In order to increase customer satisfaction at Ethiotelecom, the company's efforts to evaluate the effect of the TQM strategy, Policy and process on customer satisfaction are influenced by all of these elements. Nonetheless, there are variables that affect how the independent and dependent variables are related to one another

Figure 1 Conceptual Framework



Source: developed by the author, 202

CHAPTER THREE

RESEARCH METHODOLOGY

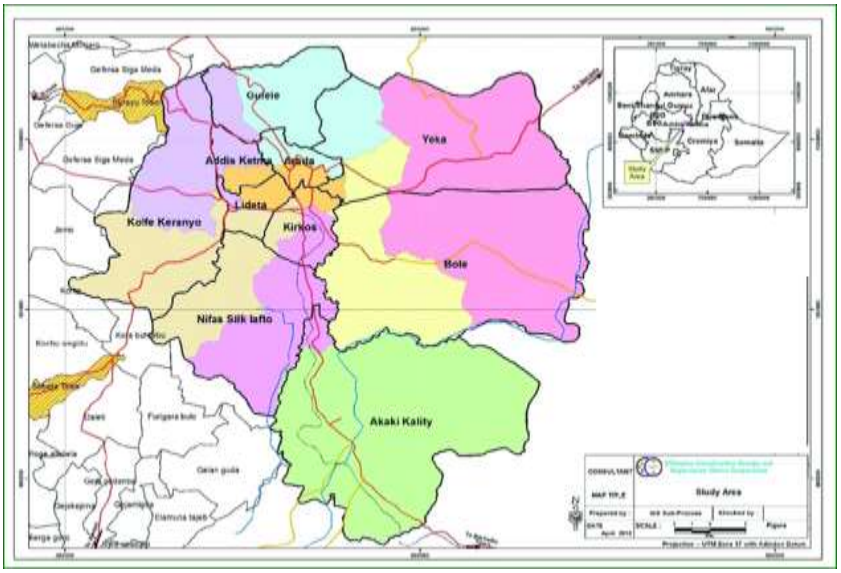
INTRODUCTION

This research methodology part has covered different topics that includes the research design, data collection methods, sampling techniques, method of data analysis and description the study of area. In addition, this chapter should adhere to acquiring essential data to meet the study's goals. Therefore, the following approach was used in this study: research design; population of the study; sampling techniques; data collection instruments; data analysis pilot study; validity and reliability; and how EthioTelecom applies TQM and the impact of total quality management in customer satisfaction.

3.1. Description of the study area

The area description of this study was focused on Addis Ababa head office and zonal area locations based on the company organizational structure. These study areas include corporate head office (HQ), Central Addis Ababa zone (CAAZ), North Addis Ababa (NAAZ), West Addis Ababa (WAAZ), East Addis Ababa zone (EAAZ), South Addis Ababa zone (SAAZ), and South West Addis Ababa zone(SWAAZ), staffs that are mainly enegaded on front line and back office customer centered areas.

Figure 2 Location of study area



Source: Addis Ababa city administration.

The total area of population considered for this study reneges from 300- 500 employees who is working in the mentioned EthioTelecom corporate (head) and zonal office staffs, specifically in titled withe back office and front office located in corporate and within six Addis Ababa Zones office as per EthioTelecom geographic area.

The investigator of this study was trusts that the EthioTelecom workers in Addis Ababa corporate (head) and zonal office has representational truthfulness of all employees inside Addis Ababa head office and zonal office for the basic reason of this study area was that quality management or CXQMD (Customer Experience and Quality Management) division is located in Addis Ababa and also this can give a good obligation of the TQM practices that are applying in telecom company in Ethiopia.

The target population area of this study has been selected from chief officer, directors, operational managers, quality control & assurance managers, senior experts, specialists and analyst who are expected to offer the most applicable information of TQM practice in the EthioTelecom.

To investigate these TQM domains, the research approaches employed in this study include a survey of the literature to comprehend current trends in the field and value the contributions of other academics. Because TQM practices are implemented and managed centrally from head office, surveys, questionnaires, and interviews was conducted to investigate the impact of total quality management on customer satisfaction in the case of EthioTelecom.

3.2 Research Design

This research paper adopted a descriptive and explanatory research design technique. The reason behind the selection of this research design technique is to better explain and describe the relationship between Total Quality Management(TQM) practices and customer satisfaction in Ethio Telecom.

Statistical study, another name for descriptive research, is typically conducted by researchers who wish to learn more about a subject. These are typically the most effective ways to gather data that was shown connections and characterize the world as it is. Descriptive methods can respond to inquiries like "what is" or "what was." Establishing the connections between the variables of interest and the causal effects is the main goal of this investigation. It's crucial to remember that relationships between variables do not always imply that one causes the other. Therefore, the study was employ both descriptive and regression methods of data analysis approaches in order to meet its objectives.

Explanatory research seeks explanations of observed phenomena, problems, or behaviors (Bhattacherjee, 2012). According to Cooper & Schindler (2014), causal-explanatory study is helpful to predict the effect of one or more independent variables on the dependent variable. To explain the effect of the selected independent variable of TQM dimensions such as process management, continuous improvement, customer focus, employee involvement, top management support and system quality on the dependent variable of customer satisfaction and its dimensions are customer expectation and perceptions.

This is because, the adoption of explanatory research design is; it's easiness to understand, for discovering a problem, that hasn't ever been studied clearly, to make definition and explanations that haven't made before and improve final results, and provide to increasing understanding, the flexibility of sources, and better conclusion. Hence, the explanatory and descriptive survey design method was appropriate and very useful to find the study insights because it explain inferences about the causality (relationship) between independent and dependent variables TQM and customer satisfaction respectively.

3.3 Research Approach

In the world of science, various researchers may interpret the collaborative research approach differently. In some publications, the term "research approach" may refer to generic data gathering and processing methodologies, as well as variations between qualitative and quantitative methods. This study was used a quantitative and qualitative survey approach to forecast how TQM principles would affect customer satisfaction in EthioTelecom. This research deployed an explanatory and descriptive study methods to clarify the correlations between the variables. According to Saunders et al. (2007), an explanatory investigation establishes causal links between variables, or dependent and independent variables.

3.4 Data Source

3.4.1 Primary Data Source

In order to acquire primary data for this study, questionnaires and interviews was used as a data collection method. Both closed-ended and open-ended questions gather the data. The primary purpose of this is to make it possible to gather all the necessary data, whether it be qualitative or quantitative. When examining a program's benefits and unintended repercussions in more detail, qualitative methods are useful (Kabir, 2016).

Questionnaires

Both closed-ended and open-ended questionnaires was employed in the study. While responders to closed-ended questions could select from a list of potential answers, those to open-ended questions are free to express their answers anyway they saw fit. The surveys included an introduction to the respondents, a general respondent profile, and closed-ended questions designed to gather the respondents' opinions about the variables influencing the implementation of total quality management in EthioTelecom. Closed-ended questions captured the Ethio telecom total quality management implementation impact related to customer satisfaction knowledge areas. On the other hand, open-ended questions were used to collect general opinion of respondents on the impact TQM implementation in Ethio telecom.

Interviews

For the primary reason for interview is that Addis Ababa is home to the Customer Experience and Quality Management Division (CXQMD) or Quality Management Department, which oversees quality management, face-to-face interviews with respondents at the corporate (head) and zonal offices of Addis Ababa. These interviews include directors, operational managers, quality control & assurance managers, senior experts, specialists, and analysts who are expected to provide the most pertinent information regarding TQM practices in EthioTelecom.

3.4.2 Secondary Data Source

The findings from primary data was compared with the findings from the secondary data. Secondary data were collected from literature review of the research undertaken by other researchers and scholars on the same topic in the recent past, from publications of books, journals, reports, and bulletins etc. Even though it is hardly to find any research undertaken on the impact of total quality management in customer satisfaction in the case of Ethio telecom company.

Documentary review

In order to collect secondary data from sources including books, journals, bulletins, work governances, Quality manual, published reports, and reports on Ethiotelecom's overall quality management and documentary review was used in the study. The researcher is able to collect the information required to produce trustworthy study results and respond to the research questions with the aid of the two data sources.

3.5 Sampling Techniques

This study employed simple random sampling techniques, because the population of this study are homogeneous. Since, all EthioTelecom employees are the population of this study & they have similar characteristics, it is logical to use simple random probability sampling technique which enables all members of the population to have equal chance of selection.

The total population size of this study were 4608 employees who are working in Addis Ababa city EthioTelecom offices including corporate and other six (6) zonal office locations.

3.6 Target Population

A population refers to a group of individuals, objects or items from which samples can be drawn for measurements (Kombo & Tromp, 2014). The total population consider for this study range from 300-500 employees who is working in different EthioTelecom corporate head office (HQ) and zonal offices Central Addis Ababa zone (CAAZ), North Addis Ababa (NAAZ), West Addis Ababa (WAAZ), East Addis Ababa zone (EAAZ), South Addis Ababa zone (SAAZ), and South West Addis Ababa zone(SWAAZ), staffs that are mainly on front line and back office customer centered areas. The target population was drawn up from a group of individuals who are actively involved in the implementation of total quality management (TQM) practices. The population of this study is employees who are working in EthioTelecom front line on customer area. Currently, a total of 300-500 employees are working in EthioTelecom front line and back office customer centered areas but employees are not proportionally distributed among the corporate head office (HQ) and zonal offices

Table 2 Target Population

Area of Operation	Population	% Share
HQ	2673	57.6 %
CAAZ	317	6.9 %
NAAZ	308	7 %
WAAZ	351	7.6 %
EAAZ	371	8.1 %
SAAZ	292	6.3 %
SWAAZ	296	6.5 %
Total	**4608**	**100 %**

Source: Source: Ethio telecom Oct 2023

3.7 Sampling Size Determination

An established strategy for selecting a sample from a particular population is known as a sample design (Polit, 2005). The target population was used to create a sample frame.

A sampling frame is a collection of instances or people from which a sample can be chosen to create the study's units of observation (Orodho, 2004).

The study was selected one corporate office and 6 zone EthioTelecom offices. The sample size of the study was determined based on the mathematical approach developed by Taro Yamane (1967) with 95% confidence level and 5% precision level (Kimoru & Kwasira, 2017).

n = N/(1+N(e)2

Where:

n = Sample size

N = Population size

e = Level of precision (the acceptable sampling error) given as 0.05.

Based on June 30, 2022 data record and obtained from Addis Ababa EthioTelecom office indicated that the total population of the study from EthioTelecom head office and all zonal offices was 10000 staffs (N=10,0000) including managerial and non-managerial.

Hence, the total sample size was calculated as

n =4608/ (1+4608(0.05)2

n=4608/12.52

n=368

3.8 Method of Data Analysis

The purpose of this study is to examine how the dependent variables (Customer satisfaction) was affected by the independent variables (TQM) performance measures. To achieve the research objective, multiple linear regressions model was deployed to analyze the combined effect of forecaster variables (independent) on dependent variables, to test the research model and predict operational effect of TQM dimensions on customer satisfaction

For this study both quantitative and qualitative method of data analysis was used to identify the factors affecting the success and failure of total quality management in EthioTelecom. Quantitative data was analyz using multiple linear regression model, ANOVA and correlations coefficients and others to test hypothesis and qualitative data were analyzed using five steps (Compiling, disassembling, reassembling, interpreting and concluding) of data. All data was gained from key

informants' questionnaire, interview, and secondary data. The data collected from head office and six EthioTelecom zonal office and departments offices from directors, managers, supervisors and employees.

The collected data was analyzed using Statistical Package for Social Sciences (SPSS) or other latest statistical tool and updated computer programmer version.

The regression equation was defined as follows:

$Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5X5 + \beta 6X6 + \varepsilon.$

Where: Y = Total Quality Management (TQM)

$\beta 0$ = Constant Term

β = Beta coefficients

X1 = Process Management (PM)

X2= Continuous improvement (CI)

X3 = Customer Focus (CF)

X4= Employee involvement (EI)

X5= Top management support (PMS)

X6= System Quality (SQ)

ε = Error Term

3.89Reliability & Validity of the Instrument

3.9.1 Reliability Test

A crucial research instrument is a questionnaire or survey's validity and reliability (Taherdoost, 2016). Validity refers to the measurement's meaning and objectivity. It is an instrument's capacity to measure what it is designed to measure. Several respondents, including the officer of EthioTelecom, directors, managers, and experts as well as employees, assessed the questionnaire's validity early on and they used the total quality management manual. In addition to offering helpful recommendations for enhancement, they replied that the questionnaire's contents were well-written and simple to comprehend, suggesting that the instrument satisfies content validity requirements. The degree to which a test assessed consistently, independent of the subject matter or whether the test yielded consistent findings when administered again is known as reliability analysis. When respondents provided the same response in many contexts, the metric is considered dependable. If a question contains language that could be interpreted incorrectly and lead to confusion, it may not

be credible. Hence, Cronbach alpha serves as a gauge for how closely or not a set of questions are related to one another. Cronbach's alpha values vary from 0 (observed items are inconsistent) to 1 (completely correlated and very trustworthy). This means that internal consistency was acceptable if Cronbach's alpha is high, dependability (accuracy, stability, and robustness) of the instrument being used that greater value for reliability test, or the more items that are used to evaluate a factor, the more dependable it may be. According to Cohen (2007) and Hair et al. (2010), Cronbach's alpha should be equal to or greater than 0.70 or 0.60 for a valid inquiry. Another researcher explains that Cronbach's alpha values less than.60 are regarded "poor," those in the.70 range, "acceptable," and those above.80, "good" (Sekaran, 2003).

Table 3 Reliability Test Criteria

Cronbach's Alpha Value	Internal Consistency
Above 0.9	Excellent
0.8 – 0.9	Good
0.7 – 0.8	Acceptable
0.6 – 0.7	Questionable
0.5 – 0.6	Poor
Less than 0.5	Unacceptable

Source: Sekaran,2003

Table 4 Measurement of Cronbach 's Alpha

Measurement Parameter	N of Items Cronbach's	Cronbach's Alpha
	7	0.852
TQM_CI	8	0.853
TQM_CF	7	0.861
TQM_EI	7	0.943
TQM_TMS	7	0.853
TQM_SQ	7	0.871
CSM	8	0.862

Source: The researcher's Survey data output, 2023

Every customer satisfaction measure employed was internally consistent when compared to the methods previously discussed. This indicates that customer satisfaction (CSM), the dependent variable, could be measured using all of the independent variables (TQM). Consequently, every

construct was deemed appropriate, and out of the five7 constructs in the study, a total of 51 items were kept. Only the seven criteria used to gauge customer satisfaction were included in the computation of the aforementioned Cronbach's alpha value. As a result, the table below displays the total Cronbach's alpha value and assesses the questions' overall dependability.

Table 5 Reliability Statistics Cronbach's Alpha

Cronbach's alpha	N of Items
.889	51

Source: The researcher's Survey data output, 2023

3.9.2 Validity Test

The degree to which a scale or collection of measurements faithfully captures the topic of interest is known as validity. Validity, which Mujis (2004, p. 82) describes as essentially addressing whether or not we are measuring what we intend to measure, is arguably the most significant component of measurement According to Hair et al. (2014), content validity is the assessment of how well the items selected to comprise a summated scale correspond with its conceptual description (p. 90). The literature on the empirical investigation of operational performance and quality management practices was thoroughly examined in order to develop constructs that were relevant to the study's content. For the purpose of carefully choosing the variables and their measures, the researcher modified tools from other studies (Cua et al., 2001; Seth & Tripathi,2005; Phan & Matsui,2011; Powell, 1995; Sadikoglu & Oclay, 2014; Boyer & Pagell, 2000; Boyer & Lewis,2000; Flynn et al., 2014; Phan & Matsui,2006).

3.10 Ethical Consideration

The research received ethical approval from Addis Ababa University's College of Business and Economics Studies ethics review panel. In order to obtain authorization from the Ethio telecom corporate head office (HQ) and zonal office managers, the researcher obtained a supportive letter from the Addis Abeba university management department.

Following that, management of the EthioTelecom were made aware of the study's goal, which is to provide data linked to customer satisfaction and essential for Total Quality Management (TQM).

The researcher was briefed about the purpose, significance, and location of the study after obtaining authorization from the EthioTelecom corporate head office (HQ) and zonal office managers.

The participant was informed by the researcher that the data collected from them was only be used for research and was held strictly confidential.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

INTRODUCTION

In the context of EthioTelecom in Addis Ababa, this chapter focuses on the analysis, interpretation, and discussion of the research findings relative to the impact of Total quality management on customer satisfaction. The information gathered from the completed questionnaires is analyzed and presented in accordance with the goals of the study.

4.1. Data Presentation

4.1.1. Response rate

The research is involved 368 participants, and questionnaires were distributed to each segment within the EthioTelecom work domain. Out of the total distributed questionnaires 309 were completed, resulting in an overall response rate of 84 %. The remaining 53 questionnaires did not receive responses, yielding an unsuccessful response rate of only 16%. According to Thornhill et al. (2016), a response rate between 50% and 80% (excluding refusals or no answers) is considered a partial or satisfactory response rate and is deemed very good. Given that the overall response rate for this study was 84%, it can be characterized as excellent for analysis.

According to the Office Location Related To Company Area category in which the respondents were distributed, the Corporate HQ office accounted for 56.6% (175 participants), NAAZ office for 6.1% (19 participants), SAAZ office for 6.1% (19 participants), CAAZ office for 8.7% (27 participants), EAAZ office for 7.1% (22 participants), WAAZ office for 7.8% (24 participants) and SWAAZ office for 7.4% (23 participants) Each stratum was fairly represented in the study, according to this response rate distribution, as outlined in the table 7 below.

Table 6 Response Rate by office location related to company area

Office Location Related To Company Area				
		Frequency	Percent	Valid Percent
Valid	Corporate HQ	175	56.6	56.6
	NAAZ	19	6.1	6.1
	SAAZ	19	6.1	6.1
	CAAZ	27	8.7	8.7
	EAAZ	22	7.1	7.1
	WAAZ	24	7.8	7.8
	SWAAZ	23	7.4	7.4
	Total	309	100.0	100.0

The Source: researcher's Survey data output, 2023

4.1.2. Profile of respondents

4.2.2.1. Response Rate by Organizational Work Domain

According to the Organizational Work Domain category in which the respondents were distributed, the Technical office accounted for 34.6% (107 participants), the Commercial office for 30.8% (95 participants), and the Support office for 34.6% (107 participants). Each stratum was fairly represented in the study, according to this response rate distribution, as outlined in the table 8 below.

Table 7 Response Rate by Organizational Work Domain

Response Rate by Organizational Work Domain			
Response		Frequency	Percent
Valid	Technical	107	34.6
	Commercial	95	30.8
	Support	107	34.6
	Total	309	100.0

Source: Own Field Survey, 202

4.2.2.2. Gender distribution of respondents

Out of the total responders, 309 (66.4%) were men, and the remaining 33 (33.6%) were women. Male poll respondents exceeded female respondents by a large margin. This disparity is explained by the fact that there are more male employees than female employees in the selected EthioTelecom area.

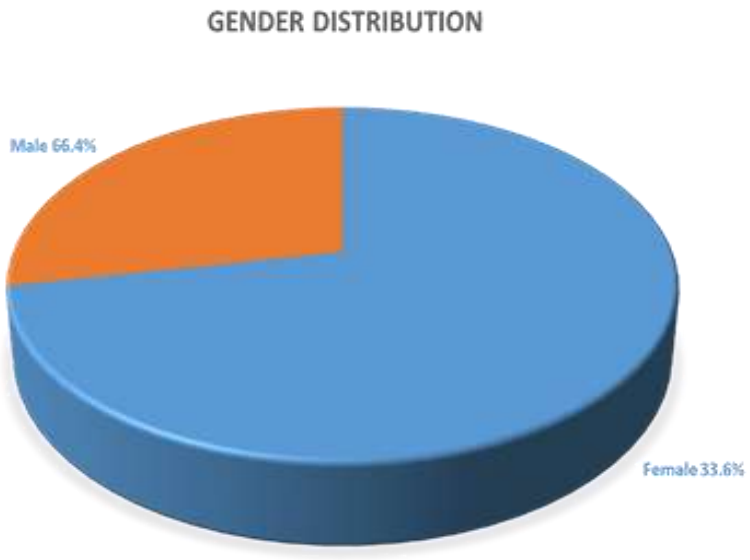
Table 8 Gender Distribution of Respondents

Gender Distribution of Respondents			
Gender		Frequency	Percent
Valid	Male	206	66.4
	Female	103	33.6
	Total	309	100.0

Source: Own Field Survey, 2023

The majority of respondents in the study were male, totaling 309 in number and constituting 66.4% of the distribution. This suggests that the tasks related to EthioTelecom company affairs predominantly involve male workers, be more than them of female counterparts in the company.

Figure 3 Respondents Gender distribution



Source: Own Field Survey,2023

Based on the provided information, it can be inferred that the predominant gender among the respondents was male.

4.2.2.3. Respondents experiences in the Company

The majority of respondents, comprising 101 staff members, fell within the age range of 5 to 10 years. Conversely, 59 respondents had a minimum age distribution of less than 5 years. The remaining 149 respondents represented age ranges between 10 to 15 years and more than 15 years.

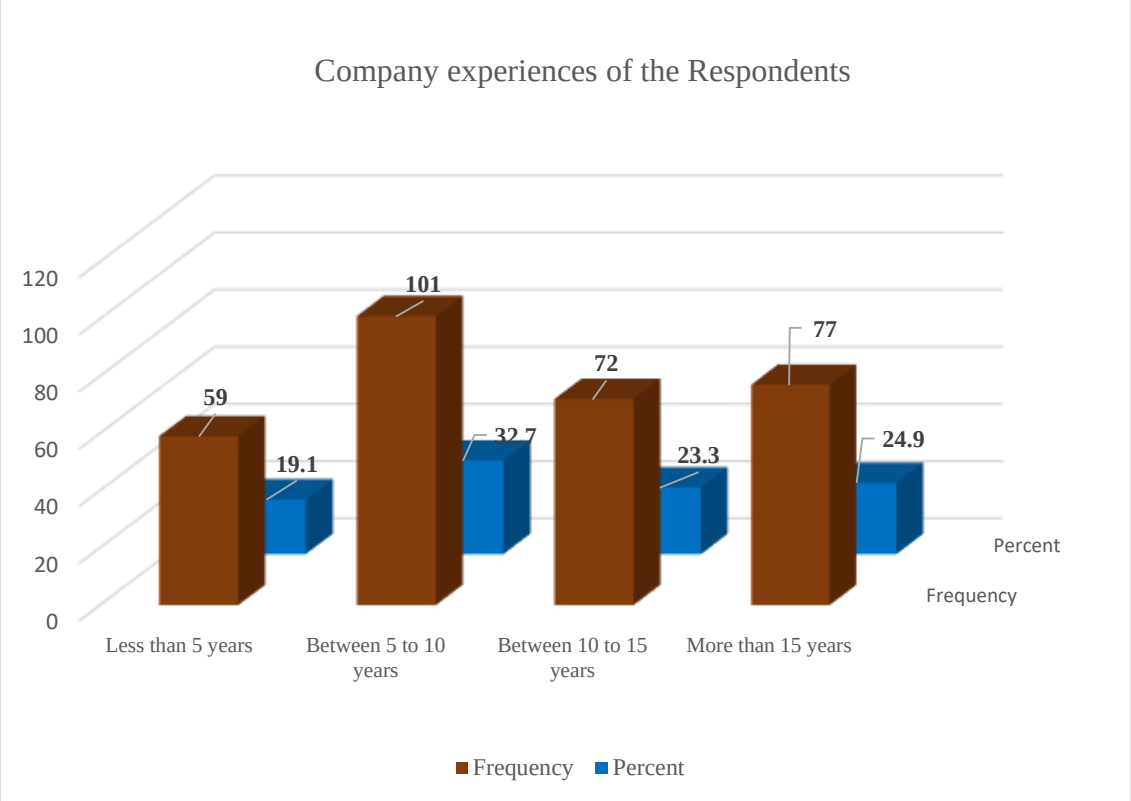
The summary and representation of the age distribution of respondents are provided in the table below. EthioTelecom boasts a substantial number of energetic and younger staff members, equipped to effectively manage the quality of work associated with customer satisfaction activities.

Table 9 Distribution Respondents of experiences in the Company

Distribution of Respondents of experiences in the Company				
Respondents of experiences in the Company		Frequency	Percent	Valid Percent
Valid	Less than 5 years	59	19.1	19.1
	Between 5 to 10 years	101	32.7	32.7
	Between 10 to 15 years	72	23.3	23.3
	More than 15 years	77	24.9	24.9
	Total	309	100.0	100.0

Source: The researcher's Survey data output, 2023

Figure 4 Respondents of experiences in the Company



Source: The researcher's Survey data output, 2023

4.2.2.4. Educational level distribution of respondents

The education level distribution of respondents can be summarized as Diploma 1(0.3%), Bachelor Degree 119(38.5%) and Master Degree 189(61.2%).

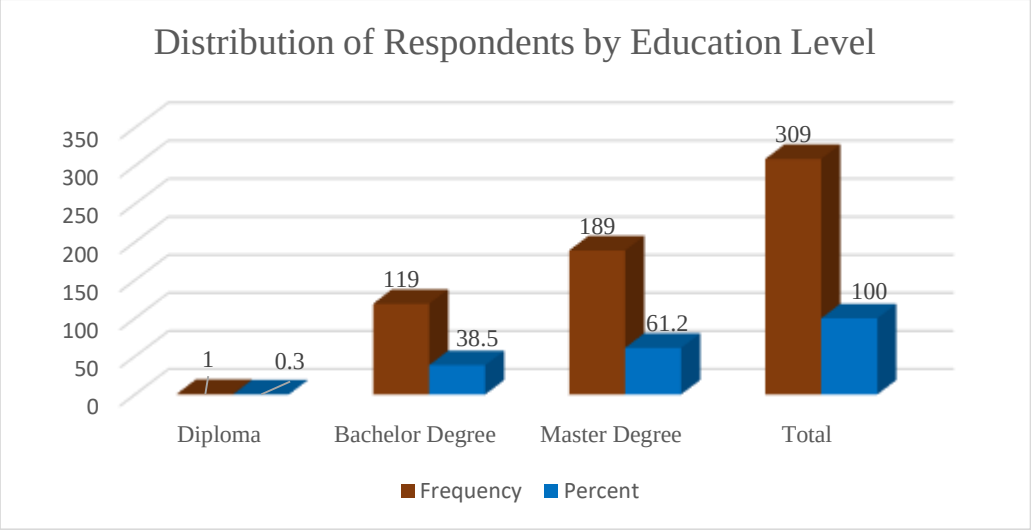
Table 10 Distribution of Respondents by Education Level

Distribution of Respondents by Education Level				
		Frequency	Percent	Valid Percent
Valid	Diploma	1	.3	.3
	Bachelor Degree	119	38.5	38.5
	Master Degree	189	61.2	61.2
	Total	309	100.0	100.0

Source: Researcher's Survey data output, 2023.

Based on the provided information, it can be inferred that the majority of respondents held Bachelor's and Master's Degrees. This suggests that the respondents possessed the necessary qualifications to offer reliable responses to the distributed questionnaires concerning the implementation of Total Quality Management practices in customer satisfaction activities.

Figure 5 Educational levels of the Respondents



Source: Researcher's Survey data output, 2023

Table: - Showed that The distribution of respondents based on their education levels can be succinctly summarized as follows: 1 individual (0.3%) with a Diploma, 119 individuals (38.5%) with a Bachelor's Degree, and 189 individuals (61.2%) with a Master's Degree.

4.2.2.5. Job level distribution of respondents in the company

As depicted in the table provided, the distribution of respondents based on job levels can be summarized as follows: 3 individuals (1.0%) held the position of Chief Officer, 16 (5.2%) were Directors, 24 (7.8%) were Managers, 198 (64%) were Workers, and 69 (22.7%) were categorized as Experts. All of them were part of the sample group from EthioTelecom.

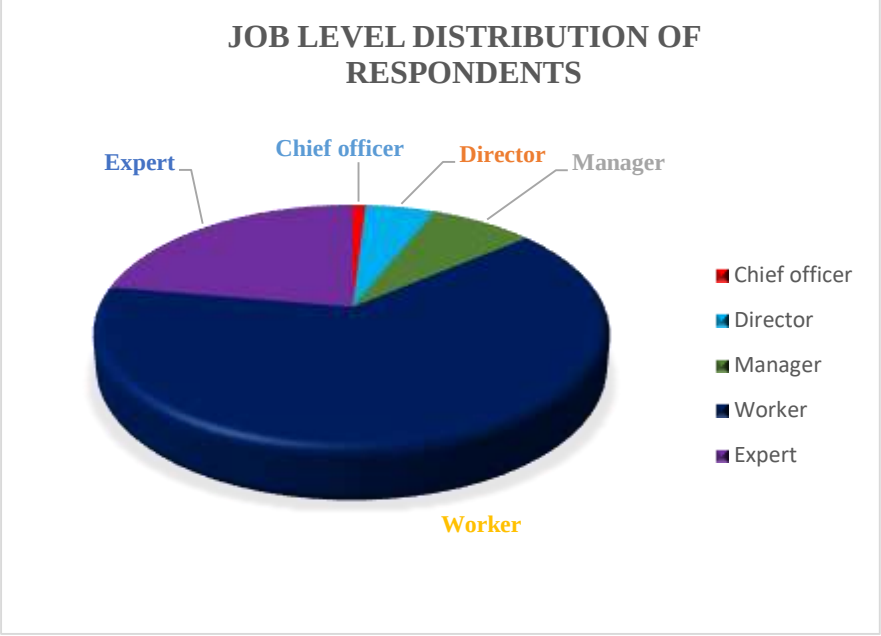
Table 11 Job Level Distribution of Respondents

Job Level		Frequency	Percent	Valid Percent
Valid	Chief officer	3	1.0	1.0
	Director	16	5.2	5.2
	Manager	24	7.8	7.8
	Worker	198	64	64.0
	Expert	69	22.3	22.3
	Total	309	100.0	100.0
Total		30	100.(	

Source: The researcher's Survey data output, 2023

Based on the job level categorizations presented in the table above, a significant proportion of the respondents held the job level of Workers, actively involved in the implementation of Total Quality Management at EthioTelecom.

Figure 6 Job Level of Respondents



Source: The researcher's Survey data output, 2023

4.2. Data Analysis

4.2.1 TQM and Customer Satisfaction Descriptive Statistics

A statistical method employed to assess equivalence between groups involves conducting simple analyses of means and standard deviations for the relevant variables within each group studied. The mean and standard deviation values of the Total Quality Management (TQM) constructs identified in this research were analyzed utilizing SPSS V 25 software, and the results are detailed in the table below.

Table 13 Mean Value of Constructs

TQM Variables	N	Mean	Std. Deviation
Process Management	309	4.4364	.41548
Continuous improvement	309	4.2683	.32225
Customer Focus	309	4.6741	.37153
Employee involvement	309	4.1845	.34135
Top management support	309	4.5432	.38568
System quality	309	4.4623	.37193
customer satisfaction	309	4.6127	.27310

Source: The researcher's Survey data output, 2023

Examining the summary mean scores, it is evident that the overall mean score ranges from 4.1845 to 4.6741, with a minimum standard deviation of 0.27310 and a maximum standard deviation of 0. 41548 for all variables, as outlined in the above table. The mean value serves as an indicator of the average response from respondents regarding a specific dimension, while the standard deviation offers insights into the diversity among respondents for a given variable.

Within the six total quality management (TQM) elements, customer focus received the highest mean rating of 4.6741 with a standard deviation of 0.37153, followed by top management support with a mean of 4.5432 and a standard deviation of 0.38568. The results suggest that, according to respondents, the least practiced TQM element, as reflected by a minimum overall mean rating of 4.2683 and a standard deviation of .32225. Likewise, an examination of the mean for customer satisfaction measures revealed a mean rating of 4.6127 with a standard deviation of 0.27310.

In accordance with Lai Kee-Hang et al. (2002), a company achieving a level of quality management implementation above the mean value of 3 is considered to have a "positive" level of implementation. Conversely, a company with a level of quality management implementation below the mean value of 3 suggests a lack of efforts to practice or implement quality management systems.

As the overall mean rating for all total quality management (TQM) constructs surpasses the midpoint on the likert scale, the majority of respondents express the belief that TQM practices are being implemented to some extent in the surveyed telecom industry. it is noteworthy that customer focus and top management support received the highest responses, aligning with the nature of telecom industries heavily involved in these activities to uphold the quality of their products. these findings align with the conclusions drawn by Fuzi and Gibson (2013) in their study on the impact of TQM implementation in Libyan telecom industries.

4.2.2 Quantitative Data Analysis

This section of the study has attempted to analyze, discuss, and present the data collected through questionnaires from respondents using Pearson correlation and a multiple linear regression model. In research projects involving multiple variables, understanding the relationships between them is crucial. This knowledge helps reveal the nature, direction, and significance of the bivariate relationships among the variables utilized in the study (Field, 2000). Multiple linear regression (MLR), also referred to as multiple regression, is a statistical technique employing several explanatory variables to predict the outcome of a response variable. The objective of MLR is to model the linear relationship between the explanatory (independent) and response (dependent) variables, creating a linear relationship that best approximates all individual data points (Kenton, 2019).

4.2.2.1 Correlation Analysis

The correlation coefficient serves to depict the direction and strength of a linear relationship among the variables incorporated in the model. A correlation matrix, in turn, is a tabular representation illustrating the correlation coefficients of the variables within the study. Correlation analysis assesses the relationship between two variables, although it does not quantify the extent of their association. The variables involved in correlation typically include dependent and independent variables, with 'independent variables' acting as predictors and 'dependent variables' as outcomes, as outlined by Leech and Morgan (2005).

In this study, Pearson correlation was employed to explore the linear relationships among the variables. This method gauges the existence (indicated by a p-value) and strength (represented by the coefficient 'r' within the range of -1 to +1) of a linear relationship between two variables. It is crucial to apply Pearson correlation only when its underlying assumptions are met. If the outcome is deemed significant, it implies the presence of a correlation (Samuels, 2014). The magnitude of 'r'

is classified as small when the absolute value is 0.1, medium at 0.3, and large at 0.5, following Cohen's classification (1988).

Table 14 Correlation Matrix

	TQM_PM	TQM_CI	TQM_CF	TQM_EI	TQM_TMS	TQM_SQ	CSM
Process Management							
Continuous improvement	.805**						
Customer Focus	.786**	.741**					
Employee involvement	.265**	.339**	.62				
Top management support	.813**	.760**	.829**	.60			
System quality	.684**	.622**	.663**	.65	.773**		
customer satisfaction	.814**	.806**	.751**	.259**	.754**	.586**	

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

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

Source: The researcher's Survey data output, 2023

As illustrated in the table above, the various knowledge areas of Total Quality Management (TQM) (including Process Management, Continuous Improvement, Customer Focus, Employee Involvement, Top Management Support, and System Quality) – exhibit robust and statistically significant correlations with the implementation of customer satisfaction in EthioTelecom. All chosen independent variables demonstrate statistically significant correlations with the dependent variable of customer satisfaction implementation, supported at both the 95% and 99% confidence intervals, denoted by the inclusion of double asterisks.

The table above indicates a robust positive correlation between individual Total Quality Management (TQM) elements and customer satisfaction, with statistical significance at $p < 0.01$ for most variables. The correlations between TQM practices and customer satisfaction range from 0.259(Employee involvement) to 0.814(Process Management). All TQM variables exhibit significant and positive correlations with the dependent variable customer satisfaction. The highest correlation is observed between Top management support and Customer Focus ($r = 0.829$), the minimum relationship was found between customer satisfaction and employee engagement with value of ($r = 0.259$). This correlation outcome aligns with findings from prior studies, including those by Salaheldin (2009), Hassan et al. (2012), Demirbag et al. (2006), Musran (2011), and several others, highlighting a strong relationship between TQM factors and customer satisfaction.

4.2.3 Linear Regression Assumptions Test

4.2.3.1 Continuous variables

All of the regression analysis's variables need to be continuous in order for the results of the multiple linear analysis to be considered valid. Through data transformations, the study calculates composite means, which transforms all variables into continuous form. Customer satisfaction is the dependent variable in this study, and the independent variables that were employed are process management, continuous improvement, customer focus, employee involvement, top management support, and system quality variables.

4.2.3.2 Normality test

Multiple regressions necessitate that the independent variables under analysis exhibit a normal distribution. A normality test is employed to ascertain whether the sample data is drawn from a population with a normal distribution (within an acceptable tolerance). If the normality test assumption is not met, the results of the test become unreliable (Origin Lab, 2020). When the Shapiro-Wilk value exceeds 0.05 (5%), we accept the null hypothesis; otherwise, we reject the null hypothesis in favor of the alternative hypothesis.

H0: errors are normally distributed

H1: errors are not normally distributed

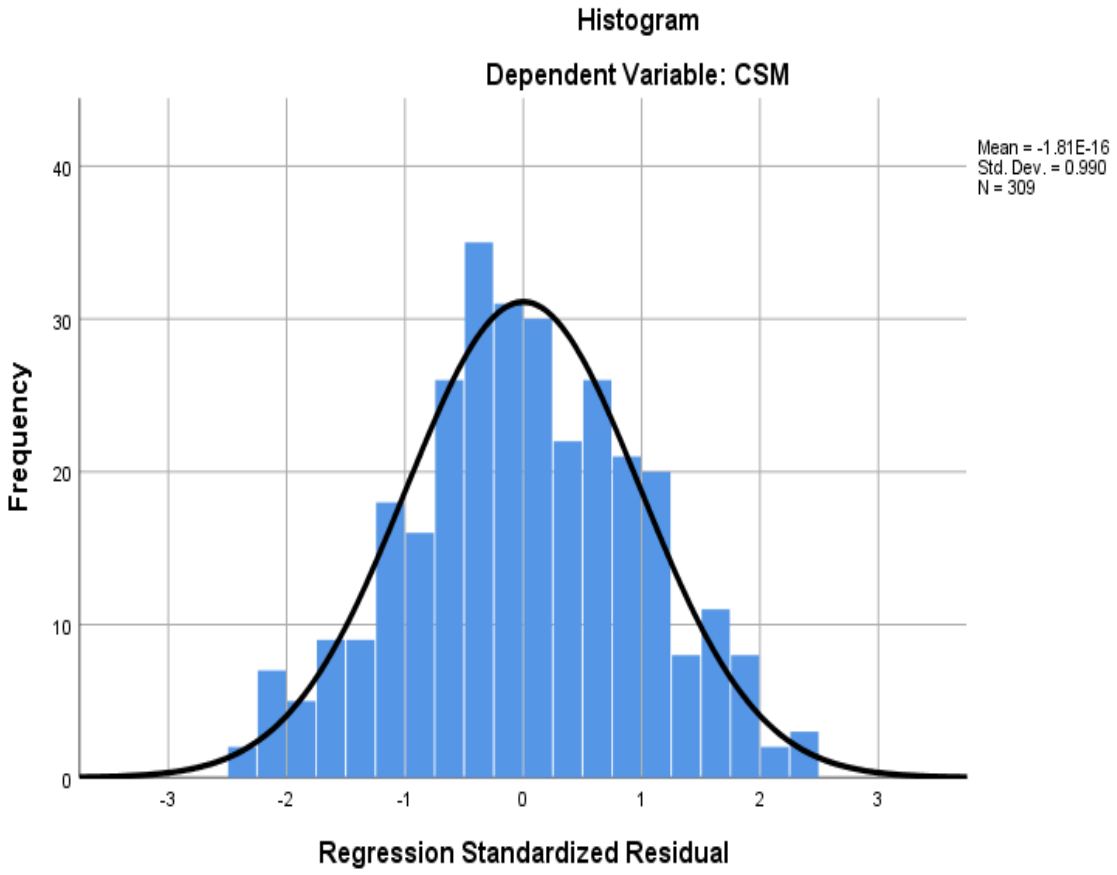
Table 15 Tests of Normality

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Studentized Deleted Residual	.024	309	.200*	.996	309	.537
*. This is a lower bound of the true significance.						
a. Lilliefors Significance Correction						

Source: The researcher's Survey data output, 2023

With a Shapiro-Wilk value of 0.537 (5.37%), it is indicated that the residuals in this research follow a normal distribution, as the significance value is greater than the 5% significance threshold.

Figure 7 Normal Distribution Graph



Source: The researcher's Survey data output, 202

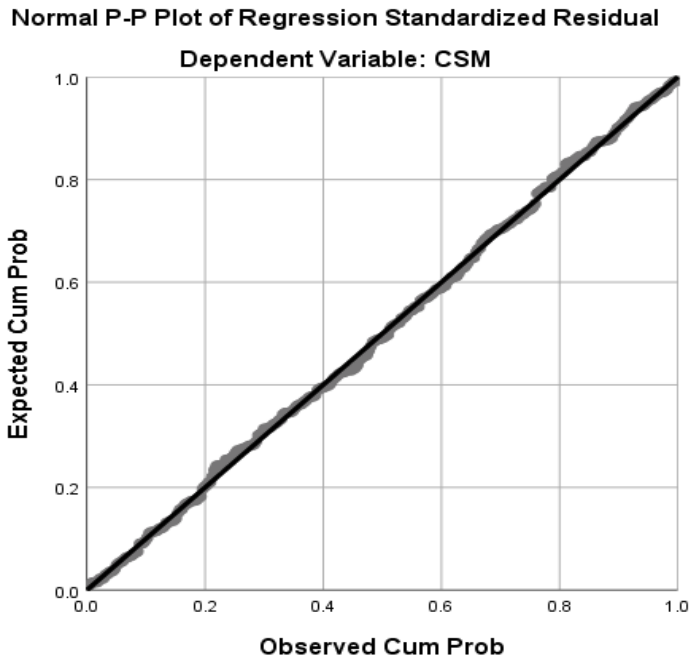
4.2.3.3 Linearity test

A linear relationship between the independent and dependent variables is assumed in multiple regression analysis. This presumption states that there must be a linear relationship with a fairly constant variation between the dependent and independent variables. Regression analysis only looks for a linear relationship between the independent and dependent variables, hence this assumption is crucial. The linearity assumptions can be found using both graphical and statistical approaches. To support the linearity assumptions, the researcher employed graphical techniques. Points must be gathered around the diagonal line in linear relationships. Conversely, a point's deviation from the diagonal straight line indicates a non-linearity issue.

You can use a bivariate scatterplot, which is a graph with the independent variables on one axis and the dependent variable on the other, to test for linearity between an independent and dependent variable. The scatterplot was oval if there is a linear relationship between the two variables

(Abrams, 2007). Using SPSS software, scatter plots of the regression residuals for each model were created to observe if there was a linear relationship between the dependent and independent variables. The best way to verify the linearity assumption is to examine a scatter plot, a histogram, or a P-P-Plot. The normal probability plot depicted in the following picture demonstrates how the linearity relationships are represented by the majority of the points being drawn together around the diagonal straight line.

Figure 8 Test of Linearity



Source: The researcher's Survey data output, 2023

4.2.3.4 Heteroscedasticity

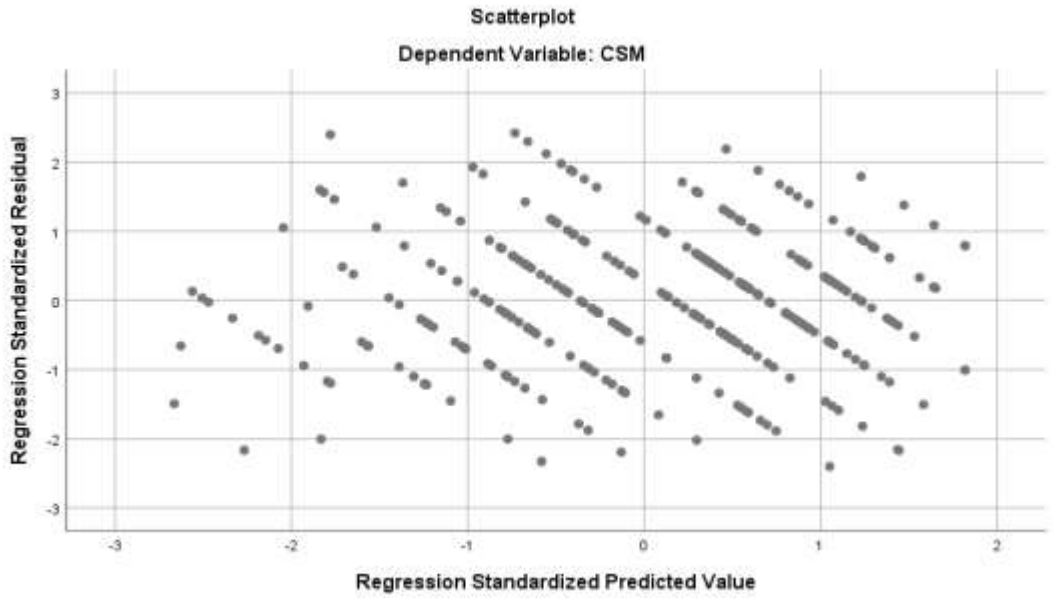
The assumption known as homoscedasticity states that the dependent variable shows comparable levels of variance for an independent variable over its whole range of values. When data are homoscedastic, the residual plot has the same width for all predicted dependent variable values. This implies that the residuals are roughly equal for all predicted dependent variable scores. Another way to look at it is that the variability in scores, the independent variable, is the same at all dependent variable values (Abrams, 2007). The researcher developed a hypothesis test, as indicated below, to assess the heteroscedasticity problem.

H0: Heteroscedasticity (no problem) exists

H1: No homoscedasticity (heteroscedasticity problem)

The scatter plot below shows that there is no issue with heteroscedasticity in the data series because the spots are dispersed and do not form a distinct pattern. Thus, it may be said that heteroscedasticity is not an issue for the regression model.

Figure 9 Heteroscedasticity Test



Source: The researcher's Survey data output, 2023

4.2.3.5 Independent of Residuals

The Durbin-Watson statistic is used to conduct the independent of residuals test. A statistical regression analysis's independent residuals are checked for autocorrelation using the Durbin Watson test. If the Durbin Watson value is between 1.5 and 2.5, there is no substantial correlation between the independent variables and the residuals. Therefore, it can be concluded that there is no relationship between the independent and residual variables based on the Durbin Watson value of 2.003 for this study (Dr. Abenet Y, 2023).

Table 12 Independent of Residuals Model Summary

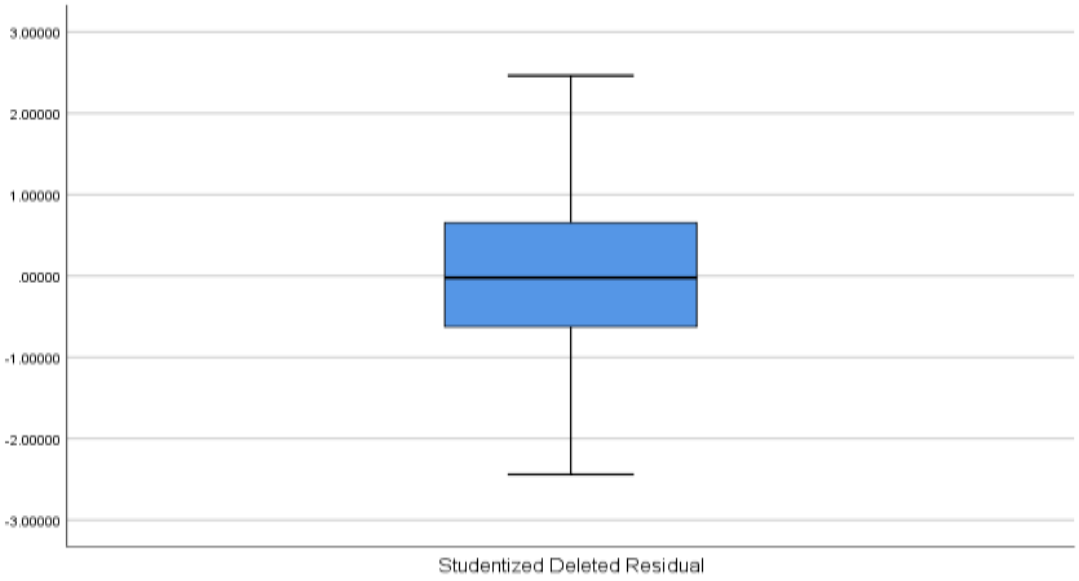
Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.864	.74(	.74	.1391(	2.00
a. Predictors: (Constant), Process Management, Continuous improvement, Customer Focus, Employee involvement, Top management support, System quality.					
b. Dependent Variable: customer satisfaction					

Source: The researcher's Survey data output, 2023

4.2.3.6 Outliners

Asterisks or the circle shapes (* or o) that would indicate the presence of outliers in the study are absent from the TAs given in the image below. There are no outliers in the data set if there are circles or asterisks on each side of the box plot. However, there was an outlier problem in the distribution if there were numbers before circles or asterisks on either side of the box plot. Consequently, there are no outliers in this study that could alter the distribution of the data series as a whole.

Figure 10 Box Plot Outlier Test



Source: The researcher's Survey data output, 2023

4.2.3.7. Multicollinearity

When two or more of the independent variables employed in the study have a strong linear connection, there is a concern with multi-collinearity. The term "orthogonally" is another way to describe multicollinearity: if the explanatory variables are orthogonal, meaning they are not linked to one another, then all of the Eigen values equal one. If, however, one of these Eigen values is less than one, particularly if it is equal to or close to zero, then it is not orthogonal, which causes the problem of linear multicollinearity (Bahr et.al, 2017). There are two techniques to determine whether multicollinearity exists in the study: for each independent variable, the variance inflation factor (VIF) and tolerance values are computed. When tolerance is greater than 10% or if the average variance inflation factor (VIF) less than or equal to 10, there is a muticollinearity problem in both scenarios. The tolerance value for this study is over 10% and the VIF value is less than 10,

as can be seen in the table below. Thus, it may be said that this study's multi-collinearity is not an issue.

Table 13 Multicollinearity Test

Model		95.0% Confidence Interval for B		Collinearity Statistics	
		Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.774	1.278		
	TQM_PM	.186	.394	.224	4.461
	TQM_CI	.184	.371	.267	3.747
	TQM_CF	.047	.215	.247	4.041
	TQM_EI	-.009	.075	.713	1.403
	TQM_TMS	.008	.197	.184	5.435
	TQM_SQ	-.127	.006	.393	2.544

Source: The researcher's Survey data output, 2023

4.2.3.8 Analysis of variance test

According to Field (2005), the ANOVA indicates whether the model produces an overall significantly good degree of prediction of the outcome variable. This statistical test uses a variance to test mean differences and determine whether or not there is a statistically significant difference between two or more categorical groupings.

CSM = b0 + b1PM + b2CI + b3CF + b4CEI + b5TMS + b6SQ

Where:

b(s) are Coefficients of explanatory variables

PM = Process Management

CI = Continuous improvement

CF = Customer Focus

EI = Employee involvement

TMS= Top management support

SQ = System Quality

The researcher can evaluate the multiple linear regression model's overall significance with the aid of the analysis of variance test. The alternative hypothesis is accepted and the null hypothesis is

rejected if the p-values in the ANNOVA table are less than the 5% significance level. This was put to the test in the manner described below.

H0: b1, b2, b3, b4, b5, b6 = 0 (All Beta coefficients are zero)

H1: b1, b2, b3, b4, b5, b6 # 0 (At list one of the Beta Coefficients are different from zero)

The model significance level was 0.00, which is less than 0.05, as the ANNOVA table below demonstrates. As a result, the total regression model that was chosen fit the data well.

Table 14 ANOVA Test

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.128	6	2.855	147.548	.000[b]
	Residual	5.843	302	.019		
	Total	22.971	308			
a. Dependent Variable: CSM						
b. Predictors: (Constant), TQM_PM, TQM_CI, TQM_CF, TQM_EI, TQM_TMS, TQM_SQ						

Source: The researcher's Survey data output, 2023

4.2.3.9 Multiple Linear Regressions Analysis

After completing the pre-estimation tests, the study used multiple linear regression analysis to evaluate the relationship between the model's variables. MLR looks at the relationship between several independent variables and a single dependent variable. Once each independent factor's ability to predict the dependent variable has been established, the information on various variables can be used to accurately estimate the impact each variable has on the outcome variable (Seo et al., 2012; Kenton, 2019).

The degree to which each explanatory variable affected the dependent variables is indicated by the βeta value. The standard deviation of the beta value is calculated. According to Cohen et al. (2007), the greater the beta (β)value of the independent variables, the greater their impact on the dependent variables.

4.2.3.10 Goodness of fit

According to the table below, the model summary adjusted R2 was 74.1%. Generally speaking, greater overall model fitness is indicated by higher R2 values. This shows that the combined effects of Process Management, Continuous Improvement, Customer Focus, Employee Involvement, Top Management Support, and System Quality Issues accounted for 74.1% of the changes in Customer

Satisfaction. Conversely, other unidentified factors not covered by this model accounted for 25.9% of the variations in Ethiotelecom customer satisfaction.

Table 15 Goodness of Fit

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.864[a]	.746	.741	.13910	2.003
a. Predictors: (Constant), TQM_SQ, TQM_EI, TQM_CF, TQM_CI, TQM_PM, TQM_TMS					
b. Dependent Variable: CSM					

Source: The researcher's Survey data output, 2023

4.2.4. Multiple Linear Regressions Analysis

Table 16 Multiple Linear Regressions Analysis

Coefficients[a]										
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	1.02	.12		8.01	.000	.774	1.278		
	TQM_PM	.29	.05	.335	5.46	.000	.186	.394	.224	4.461
	TQM_CI	.27	.04	.328	5.83	.000	.184	.371	.267	3.747
	TQM_CF	.13	.04	.178	3.05	.002	.047	.215	.247	4.041
	TQM_EI	.03	.02	.053	1.55	.122	-.009	.075	.713	1.403
	TQM_TMS	.10	.04	.145	2.14	.033	.008	.197	.184	5.435
	TQM_SQ	-.06	.03	-.083	-1.78	.076	-.127	.006	.393	2.544
a. Dependent Variable: CSM										

Source: The researcher's Survey data output, 2023

The aforementioned table's regression coefficients showed that activities related to process management, continuous improvement, customer focus and top management support have a favorable impact on customer satisfaction at EthioTelecom. Customer satisfaction at Ethio Telecom was negatively and statistically insignificantly impacted by employee involvement and System Quality.

With a p-value of less than 0.05%, the following factors have a high and statistically significant impact on customer satisfaction: process management, continuous improvement, customer focus, and top management support. However, as the p-value is more than 5%, the impacts of the System

Quality and Employee Involvement variables on the company's customer satisfaction are statistically insignificant.

The study found that the effect of process management on customer satisfaction (0.335) is greater than the effect of the other independent variables. The next effects on customer satisfaction that were found to have a standardized beta coefficient value of 0.328, 0. 178, 0. 145, 0.053, and -0.083 were those of continuous improvement, customer focus, top management support, employee involvement, and system quality respectively.

With reference to this analysis, the following algebraic formulation of the regression equation represents the customer satisfaction of the studied company:

CSM = 0.335 (PM) + 0.328 (CI) + 0. 178 (CF) + 0.053 (EI) + 0.145 (TMS)¬-0.083 (SQ).

Customer satisfaction is expected to rise by 33.5%, 32.8%, 17.8%, 5.3%, and 14.5%, respectively, when process management, continuous improvement, employee involvement, customer focus, and top management each increase by 1%, according to the regression equation above. Conversely, a 1 percent unit increase in system quality can result in an 8.3% drop in overall customer satisfaction (a threat of less than 10%), but this effect is statistically negligible(insignificant).

Table 17 Summary Result of the Regression Analysis

Independent variable	Standardized Beta Coefficients	Statistical Significance	Rank of Influence
process management	.335	.000 < 0.05 (Significant)	1st
continuous improvement	.328	.000 < 0.05 (Significant)	2nd
customer focus	.178	.002 < 0.05 (Significant)	3rd
Top management support	.145	.033 < 0.05 (significant)	4th
Employee Involvement	.053	.122 > 0.05 (Not Significant)	5th
System Quality	-.083	.076> 0.05 (Not significant)	6th

Source: Researcher Survey Data,2023

4.2.5 Hypothesis Testing

Process management, continuous improvement, customer focus, and top management support are the entire quality management knowledge areas that have a strong and statistically significant impact on EthioTelecom's customer satisfaction rate.

However, Employee Involvement and System Quality knowledge areas are statistically insignificant to affect the effective on Ethiotelecom customer satisfaction Practices.

4.2.5.1 Process management

H1: process management has strong and statistically significant effect on the effective implementation of customer satisfaction Practices. From the table 24 above, the regression coefficient for process management is 0.335which is interpreted as a 1 percent increase in the company process management practice leads to increase the company customer satisfaction Practices by 33.5%.

The researcher concludes that there is enough evidence to support a positive and statistically significant relationship between process management and customer satisfaction practices, as evidenced by the significance value (P-value < 0.05) Level, and rejects the null hypothesis (H0) in favor of the alternative hypothesis (H1).

4.2.5.2 Continuous improvement

H1: continuous improvement has strong and statistically significant effect on the effective implementation of customer satisfaction Practices. From the table 24 above, the regression coefficient for process management is 0.328which is interpreted as a 1 percent increase in the company continuous improvement practice leads to increase the company customer satisfaction Practices by 32.8%.

The researcher rejects the null hypothesis(H0) in favor of the alternative hypothesis (H1) and concludes that there is sufficient evidence that, there is positive and statistically significant relationship between continuous improvement and customer satisfaction Practices since significance value (P-value < 0.05) Level.

4.2.5.3 Customer focus

H1: customer focus has strong and statistically significant effect on the effective implementation of customer satisfaction Practices. From the table 24 above, the regression coefficient for customer

focus is 0.178which is interpreted as a 1 percent increase in the company customer focus practice leads to increase the company customer satisfaction Practices by 17.8%.

The researcher rejects the null hypothesis(H0) in favor of the alternative hypothesis (H1) and concludes that there is sufficient evidence that, there is positive and statistically significant relationship between customer focus and customer satisfaction Practices since significance value (P-value < 0.05) Level.

4.2.5.4 Top management support

H1: Top management support has strong and statistically significant effect on the effective implementation of customer satisfaction Practices. From the table 24 above, the regression coefficient for customer focus is 0.145 which is interpreted as a 1 percent increase in the company Top management support practice leads to increase the company customer satisfaction Practices by 14.5%.

The researcher rejects the null hypothesis(H0) in favor of the alternative hypothesis (H1) and concludes that there is sufficient evidence that, there is positive and statistically significant relationship between Top management support and customer satisfaction Practices since significance value (P-value < 0.05) Level.

4.2.5.5 Employee Involvement

H0: Employee Involvement has positive and statistically insignificant effect on the effective implementation of customer satisfaction. From the table 24 above, we observe the 2nd least strong positive relationship between Employee Involvement and customer satisfaction compared from others independent variables.

The regression coefficient Employee Involvement was 0.122 with significance value of (P-value 0.053). This indicates that, since the P-Value is above the 0.05 significance level, the researcher accepts the Null Hypothesis (H0) in favor of the alternative hypothesis at 95% confidence level. Hence, it is possible to conclude that, there is positive and statistically insignificant relationship between Employee Involvement and customer satisfaction of EthioTelecom.

4.2.5.6 System Quality

H0: The company System Quality practice was the negative and statistically insignificant effect on EthioTelecom customer satisfaction compared to other explanatory variables. From the table 24

above, the coefficient for company System Quality was (- 0.083) with P-value of 0.076. Since, the significance level value is above the standard 0.05, the effect was statistically insignificant on customer satisfaction.

The study accepts the null hypothesis(H0) and rejected the alternative the hypothesis (H1) and concludes that there is sufficient evidence that, there is negative but statistically insignificant relationship between company System Quality and customer satisfaction of EthioTelecom.

4.3 Discussion

The data collected from various EthioTelecom work domain office workers, experts, managers, directors, and other concerned staff members have been presented in this discussion section. This helps to triangulate and compare the relationship between the quantitative and qualitative data for identifying the differences in the study findings, making the rationality of this research finding more reliable and meaningful to well answer the study objectives. Also, this study finding is compared with other researchers' findings and theoretical evidences.

The findings of multiple linear regression analysis showed that the company's customer satisfaction had a strong positive and significant link with the four independent variables (process management, continuous improvement, customer focus, and top management support). Nonetheless, with negative and positive correlations, respectively, the independent variables System Quality and Employee Involvement had little impact on the company's customer satisfaction.

This implied that the evaluated overall knowledge area for quality management According to the theoretical underpinnings of the entire quality management field, process management, continuous improvement, customer focus, and top management support variables have an impact on EthioTelecom's performance in terms of customer satisfaction. However, System Quality's impact did not line up with the business's customer satisfaction procedure.

This regression study results showed that top management support, process management, continuous improvement, and customer focus are important determinants of the customer satisfaction of the Ethiotelecom service sectors. Measures of customer satisfaction have shown that process management and continual improvement are the most significant influencing factors.

It is noteworthy to note that Customer Focus is the most significant TQM variable contributing significantly to customer satisfaction metrics across all regression models. This is consistent with research by Chin et al. (2002), which found that the most crucial TQM component in Hong Kong's

manufacturing sectors is customer attention. According to Dean and Bowen (1994), the organization's attempt to create and provide goods and services that meet customer wants is how it expresses the primary TQM goal of customer satisfaction.

Finally, the study established a statistically insignificant and negative association between the two variables: system quality and customer satisfaction measurement. This result did not align with the knowledge area of TQM. The results of key informant interviews indicate that the system quality of Ethiotelecom is not fully utilized, and there is a knowledge gap in the working area of system utilization. Additionally, the majority of the system is owned and developed by foreign companies, such as ZTE, HUAWEI, ERICSSON, NOKIA, and ORANGE...The study indicated a negative and statistically negligible association between System Quality and customer satisfaction assessment because of these and other factors.

CHAPTER FIVE
SUMMARY, CONCULUSION AND RECOMMENDATION

INTRODUCTION

This chapter has attempted to provide an overview of the study's key findings, conclusions, and suggestions based on the data analysis. This last chapter also includes recommendations for additional research.

5.1. Summary of Findings

In order to fulfill the research goal of determining how comprehensively factors affecting impact of total quality management in customer satisfaction in the case of EthioTelecom, in Addis Ababa. A linear multiple regression analysis model was used in the investigation. To address the research questions and achieve certain study aims, other descriptive statistical analyses were investigated in addition to the regression model.

- The overall findings of the study, which were based on the research data analysis and discussions section, showed that, in the case of EthioTelecom, Process Management, Continuous Improvement, Customer Focus, Employee Involvement, and Top Management Support are statistically significant to affect customer satisfaction. However, in the instance of EthioTelecom, Employee involvement and System Quality variables are statistically insignificant in terms of their impact on customer happiness.
- According to the study descriptive analysis, EthioTelecom has acquired potential manpower assets since most of them 308 (99.7%) were more than degree holders and above (23.3%) employees have Between 10 to 15 years' telecom company work experience.
- For the study variables (Process Management, Continuous Improvement, Customer Focus, Employee Involvement, Top Management Support, and System Quality), the frequency and percentage distribution of respondents mean scores out of five points were summarized as 4.43, 4.16, 4.18, 4.67, 4.34, and 4.5, respectively. The maximum and minimum number of survey respondents mean scores were given to Employee involvement and Continuous improvement.
- Process Management had the strongest correlation, while Employee Involvement had the lowest correlation with customer satisfaction in the case of the EthioTelecom company. The results of the correlation analysis showed a strong and statistically significant relationship between the selected TQM knowledge areas: "Process Management, Continuous Improvement, Customer Focus,

Employee Involvement, Top Management Support and system quality" and customer satisfaction in the case of the EthioTelecom company, with a Pearson Correlation Coefficient value of 0.814**, 0.806**, 0.751**, 0.259**, 0.754**, and 0.586**, respectively.

- At the end of the study's regression analysis result showed that, in the case of the EthioTelecom company, process management, continuous improvement, customer focus, and top management support had a strong and significant impact on customer satisfaction. Similarly, employee involvement affects customer satisfaction positively but statistically insignificantly; however, system quality had a negative impact on the company's customer satisfaction despite statistically insignificant impact.

5.2 Conclusions

This study's objective was to determine and investigate how comprehensive quality management, as applied to Ethiotelecom in Addis Ababa, affects customer satisfaction. Six distinct study hypotheses were put out in order to accomplish this goal, assess the variables influencing customer satisfaction in the context of EthioTelecom, and provide answers to the research questions.

- It was able to draw the conclusion that EthioTelecom's overall customer satisfaction performance was ordinary based on the study's findings. The TQM total quality management knowledge areas of Process Management, Continuous Improvement, Customer Focus, Employee Involvement, and Top Management Support had a major impact on Ethiotelecom's customer satisfaction. However, there was no statistically significant relationship between the company's customer satisfaction with employee involvement and System Quality knowledge areas.
- In the case of EthioTelecom, process management also has a strong and positive significant influence on customer satisfaction. Process management is crucial for reaching customer happiness since it helps the business create convenient working systems that may raise customer satisfaction levels. Additionally, in the case of EthioTelecom, continuous improvement in the services provided to customers has a good and significant impact on customer satisfaction.
- In general, this study has shown that there is a strong positive association between the majority of TQM dimensions & customer satisfaction in the case of the EthioTelecom company, the directors of that company should generally consider implementing the TQM dimensions on their operational activities.

5.3 Recommendations

Based on the study's empirical findings, the research has recommended that EthioTelecom and other relevant authorities focus on the successful application of TQM knowledge areas in order to achieve successful customer satisfaction in EthioTelecom's situation. In order to keep up with the technological dynamism of the industry, every effort should be made to grow the business and find ways to improve consumer happiness.

The study's findings lead to the following suggestions for successfully putting TQM into practice to raise customer satisfaction in EthioTelecom situation:

- The study suggests that prioritizing the integration of Total Quality Management (TQM) concepts is crucial for the effective execution of customer satisfaction, resulting in satisfied customers and business success. Hence, in order to retain its current clientele in the face of potential new competitors in this fiercely competitive worldwide market, EthioTelecom needs to improve customer satisfaction in terms of TQM practice delivery.
- In terms of market share, service delivery, productivity, profitability, and overall business performance, the company's success can be attributed to a number of factors, including Process Management, Continuous Improvement, Customer Focus, Employee Involvement, Top Management Support, and System Quality. EthioTelecom should also take the role of Process Management seriously in light of the adjustments that must be made to improve customer satisfaction in terms of TQM practice delivery.
- To improve customer satisfaction related to system quality side, the company, need to develop in house system development strategy, the company should have minimized vender dependency, should have to give continues system capacity development training for the company employee.
- Process management, continuous improvement, customer focus, employee involvement, top management support, and system quality are the TQM dimensions that this study found to be most prevalent in the surveyed EthioTelecom company. As a result, the EthioTelecom company is advised to concentrate on implementing these TQM dimensions in order to significantly increase customer satisfaction.
- This study also showed that Process Management activities have a significant impact on the company EthioTelecom's customer satisfaction. As a result, EthioTelecom should collaborate closely with its clients to determine and satisfy their objectives and goals.

5.4. Implication for Future Research

The TQM of coefficient of determination adjusted R^2 value was 0.741 which implies that there is quite significant explanatory power and also 74.1%. variation on dependent variable is caused by independent variables and the remaining 25.9% is because of other unknown variables. Therefore, depending on this statement still there is a room for other studies to conduct. Therefore, other variables which could affect the implementation TQM in Ethiotelecom is a potential area for further study. Therefore, interested academicians and professionals can be study further research on explore the impact of TQM on customer satisfaction success and examine effective utilization of TQM in Ethiotelecom. Thus, Ethio telecom TQM implementations and operations should be in competitive approach and its focus should be on results and effects not on process of making customer satisfaction of services or simply provide best customer satisfaction service to customers it should be increase customer loyalty.

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APPENDIXES

ADDIS ABABA UNIVERSITY COLLEGE OF BUSINESS AND ECONOMICS RESEARCH PROJECT QUESTIONNAIRE FOR FULFILLMENT OF M.SC. IN MANAGEMENT

To the particular EthioTelecom Management and staff members:

I appreciate your participation in this research.

INTRODUCTION

In partial fulfillment of the requirements for an MSc in Management, the questionnaire is intended to gather information for a study on the " The Impact of Total Quality Management in Customer Satisfaction in The Case of Ethio telecom".

Your precise responses to the questions are required in order for my study to be solid and comprehensive. Feel free to express your genuine thoughts on each item; whatever you choose to answer is deemed correct.

Your sincere reaction will be crucial to the research's successful completion, and it will serve as a priceless source of primary data for the investigation. Because of this, we sincerely ask that you take a few minutes out of your hectic day to complete this form.

Please be confident that the information you provide will be used exclusively for academic purposes and all responses will remain confidential.

Please use the following address to reach me at any time if you have any questions or inquiries:

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PART I. General Information

PART I. Personal information.

Would you kindly give us some basic details about your company and yourself?

1. Kindly select your gender?

☐ Male ☐ Female

2. Please indicate your highest Educational Level?

☐ Diploma ☐ Bachelor Degree ☐ Master Degree ☐ PhD Degree

3. Years of experiences in your Company:

☐ Less than 5 years ☐ Between 5 to 10 years

☐ Between 10 to 15 years ☐ More than 15 years

4. Where is your office location related to company area?

☐ Corporate HQ ☐ NAZZ ☐ SAAZ

☐ EAAZ ☐ WAAZ ☐ SWAAZ

5. Your Organizational Work Domain?

☐ Technical ☐ Commercial ☐ Support

6. Would you kindly specify your role within the organization?

☐ Managing director ☐ Manager ☐ Analyst ☐ Specialist

☐ Quality Assurance/Control Manager ☐ Expert/Technician

☐ Other (please specify): .....

7. Do you have any information about quality certification?

☐ Yes ☐ No

8. Does your company win a quality award, either locally or internationally?

☐ Yes ☐ No

9. Does your organization have any immediate plans to earn international quality certifications?

☐ Yes ☐ No

PART II. TQM Practices & Customer Satisfaction.

Direction: 1 TQM Practices Measurement.

This portion of the questionnaire focuses on TQM implementation in the company's service related processes. Please select the appropriate number (√) on the following Likert's five-point scale under the space that most accurately reflects your point of view.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

No	PROCESS MANAGEMENT	1	2	3	4	5
1	Company procedures are thoughtfully created to reduce the possibility of staff error.					
2	Process and policy section provide workers with detailed, exhaustive, and uniform documentation regarding work procedures and process guidelines.					
3	Company regularly conduct internal or external audits to ensure that the goods and services we provide are of the highest caliber.					
4	There is any process control tool in our service.					
5	When an issue with the quality of a product or process is discovered, corrective action is done right away.					
6	When sections and department are discover process or procedure gap, is the process and policy section investigate usage quality tool like VMA, BPM,PDCA…					
7	A complaints process and procedures are established, complaints are properly recorded					
	CONTINUOUS IMPROVEMENT	1	2	3	4	5
1	Instead of being the exclusive domain of the quality department, continuous quality improvement is the duty of every employee.					
2	The company's philosophy is one of innovation and ongoing development.					
3	Workers actively seek out any new knowledge and information relevant to their jobs that could raise the caliber of the work they produce.					
4	To monitor overall organizational performance, our company has an efficient performance measuring system.					
5	Our company regularly benchmark against other businesses to enhance own systems or subsystems to carry out and oversee initiatives.					

6	The company's culture is one of innovation and ongoing development.					
7	Together, the staff and management accept quality management as an organizational culture that should be embraced by all.					
8	The plan-do-check-act (PDCA) cycle is widely used in our organization for process control and improvement.					
CUSTOMER FOCUS		1	2	3	4	5
1	Positive remarks about the company are provided by customers.					
2	In order to understand our customers' requirements and expectations, we actively and frequently seek their opinion.					
3	We receive suggestions from our clients regarding delivery performance and quality.					
4	We use customer concerns as a feedback to enhance our procedures.					
5	Customers trust an effective implementation of organization rule and regulation.					
6	The company services are cater to the individual demands of the client.					
7	Products or service designs are based on meeting the needs of the customer					
8	Customers believe that the company is protecting their personal data.					
EMPLOYEE INVOLVEMENT		1	2	3	4	5
1	It is recommended for me to resolve customer problems on my own.					
2	I am often provided information regarding the performance of the organization.					
3	I am encouraged to handle customer problems by myself					
4	Employees receive feedback for the quality performance.					
5	I'm free to take practically any action to address customer concerns.					
6	I consider any opinions that are pertinent to my field of work.					
7	obtain favorable acknowledgment when I provide exceptional customer service					
8	self-improvement is encouraged to improve skills and performance.					
TOP MANAGEMENT SUPPORT		1	2	3	4	5

1	Enhancing the organization's performance and management system is the responsibility of the top management.					
2	Top management disseminates information related to TQM.					
3	The top managers encourage staff members to assume accountability for organizational tasks.					
4	Quality enhancement and high-quality service are supported by the personal leadership of the top management.					
5	The senior management in our organization accept responsibility for excellence and quality.					
6	Top management assessed their work based on quality of work.					
7	Top management placed a great value on employees' potential.					
8	The organization's decision-making process is quite centralized.					
SYSTEM QUALITY		1	2	3	4	5
1	The company is managed as a system for continuously improving the quality of service delivery					
2	The company link customer satisfaction with the internal performance indicators					
3	The company use TQM system to insure customer satisfaction and achieve organizational strategy.					
4	The company provides better customer service with user friendly customer care system.					
5	The company has a good method of communication system that transmit quality information’s.					
6	The business analyzes company performance and customer satisfaction by effectively utilizing of system data.					
7	Utilizing a system-based performance management system, the organization utilized for evaluating employee performance.					

Direction 2: Customer Satisfaction Measurement.

The following parts of the questionnaire focuses on Customer Satisfaction Measurement implementation in the company's service related Ethio telecom, indicate your response using the five point of Likert's scale level by putting (√) in to the appropriate box.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

No	Customer satisfaction Measurement	1	2	3	4	5
1	Carries our operations to enhance the value for the customers in our services.					
2	Compared to other company, customers have a simpler and faster process for carrying out their operations in the organization.					
3	Customers receive the high-quality service from the company as promised.					
4	The company provides better customer service than other organizations.					
5	Customers have faith in the efficient execution of organizational policies and procedures.					
6	Ethio telecom staff are indifferent in providing good customer service.					
7	Ethio telecom have enhanced technological capability (e.g. communication, networking of operations etc..) to service customers more effectively.					
8	Employees at Ethio Telecom are concerned with providing excellent customer service.					

I appreciate you taking your valuable time to complete in responding to this survey questioner. A single collection of responses will be recognizable, and all contributions will be handled with the highest confidentiality.

Remarks (which is optional).

……..……

……...……

……..……...……

……...……

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PART III: Interview Questions

1. Are there any high-quality programs offered by your Company?
2. In your company, who is in charge of quality? It could be the inspection (quality) department, all departments, or every employee in the company.
3. Do you have any information about quality certification?
4. Does your company win a quality award, either locally or internationally?
5. Which quality improvement program is in place at your institution? Total Quality Management (TQM), Inspection, Quality Control, Quality Assurance.
6. What is your beast experience of TQM related to customer experience?
7. What are the major objectives of the quality programs in your organization?
8. Do you have any achievement related to TQM practice in your organization?