Addis Ababa University (AAU)

College of Business and Economics

School of Graduate Studies

Department of Management

The Impact of Total Quality Management (TQM) Dimensions on Employee Performance: A Comparative Study on Selected Commercial Banks Operating in Addis Ababa

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 Quality Management and Organizational Excellence

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Declaration

I, Admasu Deressa, declare that this thesis entitled **''The Impact of Total Quality Management (TQM) Dimensions on Employee Performance: A Comparative Study on Selected commercial banks Operating in Addis Ababa''** is my own original work and it has not been submitted for any degree in any other universities. This thesis is offered for the award of the Degree of Master of Science (M.Sc.) in Management Specialized in Quality Management and Organizational Excellence.

Admasu Deressa	_____	_____
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Statement of Certificate

This is to certify that Admasu Deressa has completed his thesis entitled **‘‘The Impact of Total Quality Management (TQM) Dimensions on Employee Performance: A Comparative Study on Selected commercial banks Operating in Addis Ababa’’**. It is his original work and submitted for examination with my approval as a thesis.

Tilahun Teklu (PhD)	_____	_____
Name of Advisor	Signature	Date

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School of Graduate Studies

This is to certify that the thesis entitled **''The Impact of Total Quality Management (TQM) Dimensions on Employee Performance: A Comparative Study on Selected commercial banks Operating in Addis Ababa''** was carried out by Admasu Deressa under the supervision of Tilahun Teklu (PhD) submitted in partial fulfilment of the requirements for the Degree of Master of Science (M.Sc.) in Management Specialized in Quality Management and Organizational Excellence complies with the regulations of the University.

Approved by the Examiners

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Table of Contents

Contents

List of Tables

List of Figures

Acronyms

ANOVA	Analysis of Variance
Awash	Awash Bank
CBE	Commercial Bank of Ethiopia
CEO	Chief Executive Officer
CI	Continuous Improvement
CMMQ	Continuous Measurement and Management of Quality
DGB	Debub Global Bank
EEI	Employee Empowerment and Involvement
EP	Employee Performance
EPRDF	Ethiopian People's Revolutionary Front
ETE	Employee Training and Education
HR	Human Resource
IFB	Interest Free Banking
IS	Information System
PDCA	Plan-Do-Check-Act
SD	Standard Deviation
SME	Small and Medium Enterprise
SPSS	Statistical Package for the Social Science
TMCL	Top Management Commitment and Leadership
TQM	Total Quality Management
VIF	Variance Inflation Factor

Abstract

This study investigated the impact of total quality management dimensions on employee performance in selected commercial banks operating in Addis Ababa (CBE, Awash Bank and DGB). 501 respondents from managerial levels and senior experts working in the headquarter of the three commercial banks (271 respondents from CBE, 173 respondents from Awash Bank, and 57 respondents from DGB) were chosen as sample. The research method utilized in this study was a survey method. The study used questionnaires, interviews and secondary data records as tools for data collection. The information obtained through survey is analyzed using the statistical package for the social science (SPSS) windows version 24 and Microsoft office package excel-2010. Cronbach's alpha was used to test the reliability of the instrument. Descriptive, correlation and multiple linear regression were used to link TQM to employee performance. Through literature review TQM dimensions (such as top management commitment and leadership (TMCL), employee education and training (ETE), employee empowerment and involvement (EEI), continuous measurement and management of quality (CMMQ), and continuous improvement (CI)) that are relevant to commercial banking sector were identified. The outcome of the study indicated that ETE and CMMQ had a significant positive impact on employee performance in CBE. TMCL, ETE, and EEI had a significant positive impact on employee performance in Awash Bank. On the other hand, only ETE had a significant positive impact on employee performance in DGB. This study result confirmed that only employee training and education had a significant positive impact on employee performance across the three banks.

Keywords: TQM Dimensions, Employee Performance, commercial banks, Addis Ababa, Ethiopia

Chapter One

Introduction

1.1 Background of the Study

Quality is the key component and success factor to any organization to increase organizational performance, productivity, and improvement of employees' performance. Following the declaration of a liberal economic system in Ethiopia, banking industry has been facing a number of internal as well as external challenges to survive. The increasing number of banks operating in Ethiopia brought tough competition. This competition enforced the commercial banks toward the improvement of quality services to reduce costs and increase service efficiency.

Customers have a wide choice of service providers and they would opt for only the best service providers in terms of quality, reliability, and profitability and who are at average with international standards. Quality of service plays a dominant role and is a primary factor in ensuring the survival of the service provider and this has given birth to the concept of Total Quality Management (TQM) in service sector.

TQM refers to meeting the requirements of customers consistently by continuous improvement in the quality of work of all employees. The whole concept of TQM is directed towards meeting the requirements of customers which never remain constant but keep on changing with time, environment, circumstances, needs, etc. Meeting the requirement of customers may require a new process, a new design, use of new technology, use of systematic management approaches.

TQM is a philosophy that calls for development of company-wide culture for quality. TQM is all about fostering a culture that is continuously oriented towards increasing customer satisfaction.

TQM is the concern of all managers and workers in the organization. Delivering quality products or services strongly depending on TQM. TQM is an essential ingredient for the success and growth of an organization.

TQM is a basis for internal and external customer satisfaction. Employees cannot deliver a good value to the customer unless they have a good quality of work life. Employee satisfaction in the workplace leads to much higher levels of productivity. It increases their morale to work harder to improve performance. Banks should make a healthy competitive environment for their employees and encourage them to develop their capabilities and skills which will help them to reach the maximum success in providing quality of services (Alharth, Jastania, & Aziz, 2017). TQM reinforce competitive advantages and organizational performance; it is the core of a bank's success.

There are different dimensions of TQM. Some of these dimensions are top management commitment and leadership, employee training and education, continuous measurement, continuous improvement, customer focus, employee empowerment and involvement, cooperation and teamwork, etc. that must be applied at every level, every stage and in every department of banking organization.

Banking industry is the largest industry in the service sector which caters to the needs of the different categories of people. The service quality of commercial banks tends to play a dominant role in high involvement industries. To better understand service quality it is important to consider employees as determinants of quality.

The Ethiopian financial sector is dominated by commercial banks. Any failure in this sector has a massive implication on the economic growth of the country. This study investigated the

impact of TQM dimensions on employee performance in three selected commercial banks operating in Addis Ababa.

1.2 Overview of commercial banks in Ethiopia

Banking is a rapidly growing industry in Ethiopia. The banking industry in Ethiopia is governed by the directives issued by the National Bank of Ethiopia in accordance with proclamation and regulations issued by the Council of Ministers.

Following the overthrow of the Dergue regime in 1991, the Ethiopian government under EPRDF declared a liberal economy system. The Monetary and Banking Proclamation No.83/1994 and the Licensing and Supervision of Banking Business Proclamation No.84/1994 laid down the legal basis for investment in the banking sector. This economic liberalization of the financial sector started in 1991 laid a foundation for the formation and expansion of private banks in Ethiopia.

In 2008, the Federal Democratic Republic of Ethiopia proclaimed the National Bank of Ethiopia Establishment (as Amended) Proclamation No. 591/2008 and Banking Business Proclamation No. 592/2008. These new proclamations repealed the previous proclamations No.83/1994 and No.84/1994.

Currently there are 17 commercial banks operating in Ethiopia and all of these banks are also operating in Addis Ababa. Of these banks, sixteen are private and one is public. These commercial banks are categorized into three peers based on their asset size; large, medium and small size. Large size includes only Commercial Bank of Ethiopia. Medium size includes Awash Bank S.C., Dashen Bank S.C., Cooperative Bank of Oromia S.C., Bank of Abyssinia S.C. and United Bank S.C. Small size includes Nib International Bank S.C., Oromia International Bank S.C., Wegagen Bank S.C., Lion International Bank S.C., Zemen Bank S.C., Berhan Bank S.C.,

Abay Bank S.C., Bunna International Bank S.C., Enat Bank S.C., Addis International Bank S.C. and Debub Global Bank S.C.

1.3 Statement of the Problem

Employees are a very important resource in any organization including commercial banking sector. Organization productivity and efficiency at the work place can be measured by the real performance of the employees. The success or failure of the organization depends on employee performance. Performance of employees is affected by numerous factors at work place. These factors may enhance or lower the performance of employees.

One of the variables that significantly affect the performance of employees at work place is TQM factors. Employees' performance at work place mainly depends on implementing and practicing of TQM dimensions like top management commitment and leadership, employee education and training, employee empowerment and involvement in the decision making activities, continuous measurement and management of quality, and continuous improvement in quality products and processes.

Intense competition and product proliferation has necessitated the need for developing and implementing effective quality management system and better employee performance within the banks to stand out from competitors and thus enhance the provision of products or services that are fit for purpose and conform to customer requirement. With this current intense competition banks could shift to the use of total quality in providing services. The survival and growth of organizations in an increasingly turbulent environment would depend upon effective utilization of TQM.

The previous studies used different methods, different TQM variables, and different measures in their studies in the area of TQM on different manufacturing and banking industries in

different countries with different culture. For example, Malaysian manufacturing industry (zahari & zakuan, 2016), Pakistan's manufacturing organizations (Hassan, Mukhtar, Qureshi, & Sharif, 2012), and Bangladesh and Malaysian Islamic Bank (Haque, Sarwar, Azam, & Yasmin, 2014).

The studies conducted in developed countries may not work for less developed countries because of their different capacity status. For instance, a study conducted by Ab Rahman and Tannock (2005) indicated that it is easier to implement quality management in developed countries with strong management capabilities, financial resources, technologies and infrastructure than in developing countries with many problems. Understanding the concept of TQM is a hard and complex task for Small and Medium Enterprises (SMEs) with relatively limited skills and knowledge.

Ghobadian and Gallear (1996) argued that the environment in which TQM is developed would also be an important issue if small and large organizations possessed different characteristics. There are significant structural differences between small and large organizations. Differences exist in structure, policy making procedures, and utilizations of resources.

There is lack of study discussing the relationship of TQM dimensions and employee performance in commercial banking industries. Most of the previous studies focused on the impact of TQM towards business or organizational performance. For example, some of these studies include Akhtar, Zameer & Saeed, (2014), Ngambi & Nkemkiafu (2015) and Maheswari & Padmaja (2018).

As a result, this study combined TQM parameters used in different research studies related to banking industries to investigate the impact of TQM dimensions on employee performance in selected commercial banks operating in Addis Ababa. The selection of commercial banks for this

study was due to the realization that the commercial banking sector plays a significant role in many economies.

1.4 Research Questions

Based on the problem statement mentioned before, the following general and specific research questions are constructed. The general question of this study is: Do Total Quality Management (TQM) dimensions have a significant positive impact on employee performance? While the specific questions are:

- Do top management commitment and leadership have a significant positive impact on employee performance?
- Do employee education & training have a significant positive impact on employee performance?
- Do employee empowerment and involvement have a significant positive impact on employee performance?
- Do continuous measurement and management quality have a significant positive impact on employee performance?
- Does continuous improvement have a significant positive impact on employee performance?

1.5 Research Objectives

The main objective of this research is to investigate the impact of TQM dimensions on employee performance in commercial banks operating in Addis Ababa, while the specific objectives are:

- To examine the effect of top management commitment and leadership on employee performance.
- To examine the influence of employee education & training on employee performance.
- To test the effect of employee empowerment and involvement on employee performance.
- To investigate the impact of continuous measurement and management quality on employee performance.
- To examine the influence of continuous improvement on employee performance.
- To draw conclusions about the relationship between employee performance and TQM dimensions.

1.6 Research Hypothesis

Research hypothesis were formulated based on empirical analysis in the literature review. This study has five hypothesis related to the relationship between TQM dimensions and employee performance. Thus, the following hypotheses were proposed.

Hypothesis 1: There is a significant positive impact of top management commitment and leadership on employee performance.

Hypothesis 2: There is a significant positive impact of employee training and education on employee performance.

Hypothesis 3: There is a significant positive impact of employee empowerment and involvement on employee performance.

Hypothesis 4: There is a significant positive impact of continuous measurement and management of quality on employee performance.

Hypothesis 5: There is a significant positive impact of continuous improvement on employee performance.

1.7 Scope of the Study

Even though the concept of TQM is very wide and requires detail investigation in its implementation, practice, effectiveness, and challenges in all banking industries in Ethiopia, this study focused on the practice of TQM dimensions and its impacts on employee performance in three commercial banks operating in Addis Ababa. These banks are Commercial Bank of Ethiopia, Awash Bank, and Debub Global Bank. More specifically, this study focused on employee performance and TQM dimensions. TQM dimensions are top management commitment and leadership, employee training and education, employee empowerment and involvement, continuous measurement and management of quality, and continuous improvement. Based on the review of literatures the study investigated the impact of these TQM dimensions on employee performance in the three banks.

1.8 Importance of the Study

Due to globalization, wide use and availability of modern technology, many organizations are providing the same type of services in a single market. In today's world, banking sectors are facing the growing challenges from global competition and more sophisticated customers in terms of what they want and their changing needs.

The findings of this study therefore will contribute to the following benefits:

1. The study will contribute to the organizations understanding of TQM. The study hopes that the discussion will provide some useful insight to help managers as they and their organization endeavor to make headway along the journey to TQM. It will also identify areas that require further attention to enhance the improvement of employee performance.
2. The research will be expected to shed some light on the importance of TQM to commercial banks and possibly will recognize and appreciate TQM as an important competitive strategy.

3. The study will seek to stimulate interest for further research in TQM, mainly in the banking sector.

1.9 Organization of the Study

This research has five chapters, among which the first chapter is an introduction part containing background of the study, overview of commercial banks in Ethiopia, statement of the problem, research questions, research objectives, research hypothesis, scope of the study, and importance of the study. The second chapter covers the literature review which is the theoretical and empirical review. Moreover, this chapter represents relevant information for understanding the study more. The third chapter is a research methodology containing research design, target population and sampling method, data collection method, validity and reliability, data analysis and interpretation method, and ethical issues. The fourth chapter is data presentation, analysis and interpretation. The fifth chapter covers summary, conclusions, recommendations, limitations of the study and suggestion for further study.

Chapter Two

Literature Review

2.1 Theoretical Review

2.1.1 Some Definitions of Quality

Quality is an important issue in the modern competitive business world. Quality is sometimes expressed as a relative concept and can be different things to different people. Sometimes people visualize quality in absolute terms and for them it can be compared with certain absolute characteristics and the product and services must achieve a pre-set standard in order to obtain a quality rating.

A comprehensive definition of quality has been provided in ISO-8402:1994 standard as "the totality of features and characteristics of a product or services that can bear on its ability to satisfy stated or implied needs" (ISO 9000) (as cited in Jain, 2009). Also ISO 9000:2000 provided the international definition of quality as "the degree to which a set of inherent characteristics fulfils requirements" (as cited in Dale, 2003).

According to some authors (quality gurus), the definition of quality is the capacity of a commodity or service to satisfy human wants and the human wants are complex and may not always be satisfied in a particular way (Dahlgaard, Kristensen, & Kanji, 2005). Hence, users of products make a personal assessment of quality.

In today's business world there is no single accepted definition of quality. There are a number of ways or senses in which quality may be defined. Some of these definitions of quality are indicated as follow:

- Conformance to requirements

This definition is attributed to Crosby (1979). He defines quality as conformance to requirements (as cited in Dale, 2003). Crosby believes that quality is not comparative and there is no such thing as high quality or low quality. A product or service either conforms to requirements or it does not. In other words, quality is an attribute (a characteristic which, by comparison to a standard or reference point, is judged to be correct or incorrect) not a variable (a characteristic which is measurable). To Crosby, quality is either present or not present.

Crosby makes the point that the requirements are all the actions required to produce a product and/or deliver a service that meets the customer's expectations, and that it is management's responsibility to ensure that adequate requirements are created and specified within the organization.

- Fitness for purpose or use

Joseph M. Juran (1988) defines quality as fitness for use (as cited in Madu, 1998; Dale, 2003; Suarez, 1992). How fit a product or service is for use obviously has to be judged by the purchaser, customer or user. Juran stresses a balance between product features and products free from deficiencies.

By features, he does not mean luxury items but technological properties of a product (e.g., fuel consumption of a vehicle) designed to meet the customer's needs. Service organizations also possess features, such as promptness of delivery or courtesy extended.

The second element of Juran's definition of quality addresses products free from deficiencies (e.g., errors in invoices, factory scrap, late deliveries). According to Juran, these failures make trouble for the customers and, as a consequence, they become dissatisfied.

- Predictable degree of uniformity and dependability at low cost and suited to the market

W. Edwards Deming (1993) defines quality as a predictable degree of uniformity and dependability at low cost and suited to the market (as cited in Madu, 1998). The definition by Deming seems to be appropriate since it allows room for variations in quality while guaranteeing a predictable degree of uniformity and dependability. Deming does not define quality in a single phrase. He asserts that the quality of any product or service can only be defined by the customer. Quality is a relative term that will change in meaning depending on the customer's needs. Quality should be aimed at the needs of the consumer, present and future.

- Value for money

Under this definition quality is described as the price you can afford to pay for your requirements at a reasonable cost, which means quality is compared with the level of specification and is directly related to cost (Dahlgaard et al., 2005). However, it ignores the effect of competitiveness which is based on the assumptions of quality improvement.

- What the customer says

According to A.V. Feigenbaum definition, “Quality is what the customer says it is” (as cited in Jain, 2009). It is based on idea that quality is an individual matter and products that best satisfy individual preferences. If the customer says it is quality-it is a quality.

- Excellence

The typical dictionary definition of quality refers to the degree or grade of excellence. In this sense, quality is a relative measure of goodness. Quality is excellence in the product or service that meets or exceeds the expectations of the customer.

According to Evans and Lindsays (2014), everyone defines quality based on their own perspective of it. Typical responses about the definition of quality would include:

- Perfection, consistency, eliminating waste, speed of delivery, compliance with policies and procedures, doing things right the first time, delighting (or pleasing) customers, and total customer service or satisfaction.

2.1.2 Historical Evolution of Total Quality Management

As mentioned by Dahlgaard et al. (2005) the historical evolution of TQM has taken place in four stages. They can be categorized as: (1) Quality inspection (2) Quality control (3) Quality assurance (4) Total Quality Management.

2.1.2.1 Quality Inspection

The first stage of TQM development can be seen in the 1910s when the Ford Motor Company's 'T' Model car rolled off the production line. The company started to employ teams of inspectors to compare or test the product with the project standard. This was applied at all stages covering the production process and delivery, etc. The purpose of the inspection was that the poor quality product found by the inspectors would be separated from the acceptable quality product and then would be scrapped, reworked or sold as lower quality.

2.1.2.2 Quality Control

With further industrial advancement came the second stage of TQM development and quality was controlled through supervised skills, written specification, measurement and standardization. During the Second World War, manufacturing systems became complex and the quality began to be verified by inspections rather than the workers themselves.

Statistical quality control by inspection, the post-production effort to separate the good product from the bad product, was then developed. The development of control charts and accepting sampling methods by Shewhart and Dodge-Roming during the period 1924-1931 helped this era to prosper further from the previous inspection era.

At this stage Shewhart introduced the idea that quality control can help to distinguish and separate two types of process variation; firstly, the variation resulting from random causes and secondly the variation resulting from assignable or special causes. He also suggested that a process can be made to function predictably by separating the variation due to special causes. Further, he designed a control chart for monitoring such process variation in order to decide when to interact with the process.

The main processes which help products and services to meet customers' needs are inspection and quality control which require greater process control and lower evidence of non-conformance.

2.1.2.3 Quality Assurance

The third stage of TQM development, i.e. quality assurance contains all the previous stages in order to provide sufficient confidence that a product or service will satisfy customers' needs. Other activities such as comprehensive quality manuals, use of cost of quality, development of process control and auditing of quality systems are also developed in order to progress from quality control to the quality assurance era of TQM. At this stage there was also an emphasis of change from detection activities towards prevention of bad quality.

2.1.2.4 Total Quality Management

The fourth level, i.e. Total Quality Management involves the understanding and implementation of quality management principles and concepts in every aspect of business

activities. Total Quality Management demands that the principles of quality management must be applied at every level, every stage and in every department of the organization. The idea of Total Quality Management philosophy must also be enriched by the application of sophisticated quality management techniques.

The development of total quality management from 1950 onwards can be credited to the works of various American experts. Among them, Dr Edward Deming, Dr Joseph Juran and Philip Crosby have contributed significantly towards the continuous development of the subject.

2.1.3 Definition of Total Quality Management

A number of important definitions of total quality management have been provided and identified in Jain (2009) as follows:

TQM means meeting the requirements of internal or external customer, consistently by continuous improvement in the quality of work of all employees. Concepts have been evolved by many quality experts like Philip Crosby, Genichi Taguchi, Dr. J.M. Juran and Dr. W.E. Deming to name a few.

TQM is an effective management tool for ensuring continuous customer satisfaction, leading to attainment of organizational growth. It is a systematic way of guaranteeing that organized activities happen the way they are planned.

TQM is an integrated management approach in satisfying customer needs in totality on a continuing basis through involvement each and every employee in the organization making continuous improvement on one side and an appropriate cost effective technology along with proper solving methodology, on the other.

TQM is a management philosophy to a journey to organizational excellence through customer orientation.

TQM is both a philosophy and a set of guiding principles that represent the foundation of a continuously improving organization. TQM is the application of quantitative methods and human resource to improve the material and service supplied to an organization, all the processes within an organization, and the degree to which the need of the customers are met, now and in future. (TQM integrates fundamental management techniques, existing improvement efforts and technical tools under a disciplined approach focused on continuous involvement).

TQM = Summation of (Total + Quality + Management)

Which implies

- Complete 100% not even 99.99%
- In all areas and functions
- Encompassing all activities
- All employees – Every one
- All times – Always

2.1.4 Total Quality Management Dimensions

2.1.4.1 Top Management Commitment and Leadership

Top management acts as the main driver for TQM implementation, creating values, goals and systems to satisfy customer expectations and improve an organization's performance path (Ahire et al., 1996 as cited in Ngambi & Nkemkiafu, 2015).

Quality improvement can be enhanced by a few specific management actions: increasing knowledge about quality, a customer focus, and management involvement (Adam et al., 1997: 869 as cited in Zehir & Sadikoglu, 2012). Top management provide necessary resources to quality-related training such as quality improvement tools (Ho et al., 2001 as cited in Zehir and Sadikoglu, 2012). Leadership must define and address values and performance expectations; participate in

quality activities, facilitate open communication, participation, cooperation, and learning among employees and management; encourage and motivate employees to suggest and implement changes for improvement, and empowering them to solve problems within their area of control so that they will accept changes in the workplace to increase productivity (Das et al., 2000 & Goetsch & Davis, 2010 as cited in Zehir and Sadikoglu, 2012).

A leadership style can be classified as authoritarian if decisions are centralized, and there is little or no participation of employees in activities such as defining the organization's quality mission, establishing performance goals and determining how to work is to be done, or identifying how they are to be evaluated. With this type leadership style, the potential for TQM's success is quite slim indeed since employee involvement and empowerment cannot be achieved. Comparatively a democratic leadership style that encourages employee participation is more suitable to employee empowerment and involvement and to the achievement of TQM objectives.

Good leadership will drive the employees to have higher involvement in the implementation of Total Quality Management process (Negri, 2003 as cited in Zahari & Zakuan, 2016). To create employees ownership and responsibilities, supportive environment, continuous quality improvement and systematic change management process, the strong commitment from top management is very important (Ali Mohammad Mosadeghrad, 2014 as cited in Zahari & Zakuan, 2016).

2.1.4.2 Employee Training and Education

The concept of organizational learning in which organizations must learn to remain competitive has been receiving wider attention among both human resource management academics and managers (Kanji, 1995). McDowall et al. (2010) argue that the recognition of the importance of training in recent years has been heavily influenced by the intensification of

competition and the relative success of organizations where investment in employee development is considerably emphasized (as cited in Asfaw, Argaw, & Bayissa, 2015). They add that technological developments and organizational change have gradually led some employers to the realization that success relies on the skills and abilities of their employees, and this means considerable and continuous investment in training and development.

By the changing time and changing needs, organizations are facing new problems and challenges. Technological advances have changed the requirements of traits and competencies of performing the tasks (Asfaw et al., 2015). The main objective of every training session is to add value to the performance of the employees. Improved capabilities, knowledge and skills of the talented workforce proved to be a major source of competitive advantage in a global market (McKinsey, 2006 as cited in Elnaga and Imran, 2013). All type of businesses design training and development programs of their employees as a continuous activity.

To develop the desired knowledge, skills and abilities of the employees, to perform well on the job requires effective training programs that may also effect employee motivation and commitment (Meyer & Allen, 1991 as cited in Elnaga & Imran, 2013). A well trained and developed workforce is required for increased employee performance and organizational growth. It would also lead to efficiency and effectiveness of banking activities (Wanjala & Kimutai, 2015).

Education and training increases the employees working abilities and experiences, decrease the errors, enhance the knowledge and work skills, improve the teamwork and overcome the turnover rate (Kaynak and Hartley, 2008 as cited in Zahari & Zakuan, 2016). If employees do not have the knowledge about TQM and fail to understand what TQM is, it can lead to lack of their motivation to participate in continuous improvement (Bateman, 2002 as cited in Zahari & Zakuan, 2016).

2.1.4.3 Employee Empowerment and Involvement

A more operational-level and process-oriented definition of empowerment was offered by Bowen and Lawler (1992) (as cited in Ugboro & Obeng, 2000). They defined empowerment as sharing information with front-line employees about an organization's performance, information about rewards based on the organization's performance, knowledge that enables employees to understand and contribute to organizational performance, and giving employees the power to give decisions that influence organizational direction and performance.

According to Ugboro and Obeng (2000), employee empowerment means turning the ''front line'' loose, and encouraging and rewarding employees to exercise initiative and imagination. Empowerment means strengthening the effort to perform expectancy or increasing employees feeling of self-efficacy. The effect of empowerment is initiation and persistence of behavior by empowered employees to accomplish task objective. Empowerment strategy is to free employees from the rigorous control imposed by instruction, policies, and orders and in their place give employees the freedom to take responsibility for their ideas, decisions and actions.

A primary objective of employee empowerment is to create a workforce that is energized by an enhanced ability to produce products or services that meet or exceed internal and external customer's expectations. It is generally held also that empowered employees have higher levels of job satisfaction and performance primarily because of their involvement in goal setting and in making decisions that affect their work.

Quality is not owned by anyone individual and definitely not by the quality manager. It is owned by all those involved in the line operation from the senior manager to the most junior clerk. Many quality programs have fallen over because they have started with motivation without being clear what they were motivating the staff to do (Kanji, 1995). Management needs to do its

homework first before passing the work down to the staff. It is matter of delegation rather than abdication.

Staff must be encouraged to generate ideas and to put them into practice. This can be done in a number of ways; the most frequent approach would be to form small project teams to tackle specific areas of concern (Kanji, 1995). Making the team members involved in implementing TQM has become increasingly important in organization (Zadry & Yusof, 2007 as cited in Zahari & Zakuan, 2016). Workers feel empowered when they are in an environment where their ideas are respected and they feel free to make suggestions without fear of ridicule by superiors or fellow workers (Gaudreau Meyerson, 2012 as cited in Zahari & Zakuan, 2016).

2.1.4.4 Continuous Measurement and Management of Quality

Measurements are the key to any quality program. The quality process starts with measurements (Dahlgaard et al., 2005). Quality measurements for each area of activity must be established where they don't exist and reviewed where they do (Crosby, 1980). Quality status is recorded to show where improvement is possible, where corrective action is necessary, and to document actual improvement later on (Crosby, 1980).

To manage improvement, you need an improvement system i.e. plans, processes and people (Kanji, 1995). Knowledge of customers' experiences of products and services is essential before the processes necessary for creating customer satisfaction can be improved. More and more firms are coming to the conclusion that, to realize the TQM vision, they must first set up a system for the continuous measurement, collection and reporting of quality facts (Dahlgaard et al., 2005).

Focus on the customer and the employee is the cornerstone of TQM. It is only natural, therefore, that both employee and customer satisfaction are included as quality goals. Satisfied customers and satisfied employees are prerequisites for a good business result, as are, of course,

solid and dependable products and services. There is a need for control and checkpoints in the processes the firm is built around. The question ‘where do we want to be’ and ‘how do we get there’ can be answered by means of the benchmarking method (Dahlgaard et al., 2005).

Quality measurement is a goal-orientation with constant performance measurement, often with the use of statistical analysis. The analysis process ensures that all deviations are appropriately considered, measured and consistently responded to (Shores, 1992 as cited in Ngambi & Nkemkiafu, 2015). Successful banks are very interested to improve the quality of their services and keep their competitive level and they use many tools to evaluate the service quality and convenience (Alharth et al., 2017). Measurement and management of quality include the following:

2.1.4.4.1 Measurement of Employee Satisfaction

The first point is meant to show that employees are part of the firm’s processes and that improving quality at lower and lower costs can only be achieved if a company has good, committed and satisfied employees (Dahlgaard et al., 2005).

A firm that manages to build quality into its employees is already half way towards the goal of making quality products. The three building blocks of any business are hardware, software, and ‘humanware’. TQM starts with ‘humanware’ (Dahlgaard et al., 2005).

Only when the human aspects have been taken care of can the firm start to consider the hardware and software aspects. In TQM, the main interest is in human quality. One of the main control points of ‘human quality’ is employee satisfaction; which should be measured and balanced in the same way as customer satisfaction (Dahlgaard et al., 2005).

Employee satisfaction can be measured by employee satisfaction survey method and these measurements are used as a tool for continuous improvements. The best way to involve the

employees in the survey is to ask them which elements of their job are important to them and also which of these elements, in their view, should be improved (Dahlgaard et al., 2005).

2.1.4.4.2 Measurement of Quality Costs

In relation to TQM it is well-known that the level of quality will be improved by investing in the so-called quality management costs (Dahlgaard et al., 2005). Dahlgaard et al. defined total quality costs as the difference between the firm's costs of development, production, marketing and supply of products and services and what the (reduced) costs would be in the absence of defects or inefficiencies in these activities. Dahlgaard et al. also defined it in another way: total costs can be found by comparing the firm with the perfect firm or the perfect processes.

According to Crosby (1980), the first step of measuring quality costs is to put together the fully loaded costs of all efforts involved in doing work over (including clerical work); all scrap; warranty (including in-plant handling of returns); after-service warranty; complaint handling; inspection and test; and other costs of error such as engineering change notices, purchasing change orders, etc. Crosby said the cost of quality is not an absolute performance measurement: it is an indication of where corrective action will be profitable for a company. The higher the cost, the more corrective action that needs to be taken. Crosby also said that the purpose of calculating cost of quality is really only to get management's attention and to provide a measurement base for seeing how quality improvement is doing.

As mentioned by Juran and Godfrey (1999) in Juran's Quality Handbook, the term "quality costs" has different meanings to different people. Some equate "quality costs" with the costs of poor quality (mainly the costs of finding and correcting defective work); others equate the term with the costs to attain quality; still others use the term to mean the costs of running the Quality department.

In Juran's Quality Handbook (1999), the term "quality costs" means the cost of poor quality. Traditionally, components of the cost of poor quality includes cost of nonconformities (i.e. defects in the goods or services delivered to external and internal customers), cost of inefficient processes (i.e. loss of capacity, losses due to cycle time and costs of processes, non-value-added activities, and etc.), and cost of lost opportunities for sales revenue due to quality. Measuring the cost of poor quality is one of four key inputs for assessing the current status of quality (the others are market standing on quality relative to competition, the organization quality culture, and the activities composing the quality system).

According to Juran and Godfrey (1999); Crosby (1980); Campanella (1999), about 1945 a pioneering effort proposed that quality related costs be assigned to one of three categories: failure costs (internal failure costs and external failure costs), appraisal costs, and prevention costs. The pioneers emphasized that these categories were not the only way to organize quality costs; the important point was to obtain a credible estimate of the total quality cost. These categories are:

- ❖ Failure Costs

Failure costs are the costs resulting from products or services not conforming to requirements or customer or user needs that is, the costs resulting from poor quality. Failure costs are divided into internal and external failure costs.

Internal failure costs are costs occur prior to delivery or shipment of the products or furnishing of services to the customer. Examples include the costs of scrap, rework, re-inspection, retesting, material review, downgrading, and inefficient Processes.

External failure costs are costs occur after delivery or shipment of the products or during or after furnishing of services to the customer. Examples include the costs of warranty claims, field

work or allowances, returned materials, customer returns, product recalls, penalties due to poor quality, and lost opportunities for sales revenue.

- Appraisal Costs

Appraisal costs are costs incurred while conducting inspections, tests, and other planned evaluations used to determine whether produced products or services conform to their requirements. Requirements include specifications from marketing and customer, as well as engineering documents and information pertaining to procedures and processes.

Examples include the costs of prototype inspection and test, production specification conformance analysis, supplier surveillance, receiving inspection and test, product acceptance, process control acceptance, packaging inspection, status measurement and reporting.

- Prevention Costs

Prevention costs are the cost of all activities undertaken to prevent defects in design and development, purchasing, labor, and other aspects of beginning and creating a product or service. Examples include the costs of design reviews, product qualification, drawing checking, engineering quality orientation, make certain program, supplier evaluations, supplier quality seminars, specification review, process capability studies, tool control, operation training or quality education and training, quality orientation, acceptance planning, zero defects program, quality audits, preventive maintenance, and etc.

2.1.4.4.3 Process Management

Process management is a systematic approach in which all the resources of an organization are used in most efficient and effective manner to achieve desired performance (Sit et al., 2009; Zairi, 1997 as cited in Talib, Rahman & Qureshi, 2010). Talib et al. (2010) also mentioned the comment given by Motwani (2001) that process management stresses the value adding to a

process, increasing the productivity of every employee and improving the quality of the organization.

Oakland (1993) proposed that process management is one of the major themes of TQM (as cited in Grace, 2003). A business process is the logical organization of people, materials, energy, equipment, and information into work activities designed to produce a required end result (product or service) (Pall, 1986 as cited in Juran & Godfrey, 1999). Process management demands process improvement. Indeed, one of the primary objectives of TQM is to create processes in which individuals or groups will do the right thing the first time and do the right thing right. However due to possible changes in the environment that may hamper with the process and/or the input, and consequently the quality of the output, processes must be effectively managed otherwise quality will regress to mediocrity.

Juran and Godfrey (1999) mentioned that there are three principal dimensions for measuring process quality: effectiveness, efficiency, and adaptability. The process is effective if the output meets customer needs. It is efficient when it is effective at the least cost. The process is adaptable when it remains effective and efficient in the face of the many changes that occur over time.

Improving a product or service means going through successive cycles of measuring, controlling for consistency, and consequently improving the process. Control of the system, on the other hand, means the process is monitored and brought under control by gathering and using data. This leads to a situation of fewer complaints and returns, less scrap, less labor content, fewer equipment failures, better tooling - the route to quality improvement. Continual improvement of the process leads to a continual rise in productivity, bringing higher profits and improved competitive position. Hence, process management should be critically interested and important.

2.1.4.4.4 Employee Performance Appraisal

Performance management is a continuous process of identifying, measuring, and developing the performance of individuals and teams and aligning performance with the strategic goals of the organization. Performance management systems usually include measures of both behaviors (what an employee does) and results (the outcomes of an employee's behavior) (Aguinis, 2013).

Performance management is an essential ingredient in the facilitation of organizational effectiveness. There is need for organization to set up mechanisms where there is assessment and feedback in order to enable the improvement of their efficiency and effectiveness (Wairimu, 2015). The human resource system can become more effective by having a valid and accurate appraisal policy used for rating performances of the employees.

Performance appraisal is a key component in human resource management function which is viewed as a subset of performance management (Wanjala & Kimutai, 2015; Daniel, 2019). Performance appraisal support employees to motivate by visibly define their principles and by setting future course with providing training to achieve the objective performance.

Performance appraisal or employee appraisal is a method by which the job performance of an employee is evaluated generally in terms of quality, quantity, cost and time typically by the immediate line manager or supervisor. It involves the task of obtaining, analyzing and recording information about the relative worth of an employee to the organization. The main purpose of the appraisal is to help managers to closely monitor their subordinates to enable them to perform better on the job (Nwanolue, Obiora, & Ezeabasil 2018).

Performance appraisal is related to employee productivity because it can be used to improve current performance, provide feedback, increase motivation, identify training needs, identify potentials, let individuals know what is expected of them, focus on career development, award

salary increases, and solve job problems. Performance appraisal should be organized periodically to assess an employee's performance measured against the job's stated or supposed requirements (Daniel, 2019). Organizational performance and its resultant efficiency and effectiveness can only be achieved when individuals are continuously appraised and evaluated (Nwanolue et al., 2018).

Performance appraisal policy creates a learning experience that motivates employees to develop themselves and improve on their performance (Wanjala & Kimutai, 2015). Therefore, performance appraisal is vital to manage employee's work effectively. According to Rudman (2003:437), performance appraisal policy is a critical factor in an organization in enhancing the performance of the employee (as cited in Akinbowale, Jinabhai & Lourens, 2013).

2.1.4.4.5 Benchmarking

Benchmarking is recognized as an essential tool for continuous improvement of quality. The important need for continuous improvement can be served well by systematic benchmarking of a company's performance versus that of its competitors or other best-in-class firms (Kanji, 1995). Kanji also mentioned that the level of a firm's overall performance and its relative competitive position can be determined by combining its ratings (measures of closeness to or distance from the ideal performer).

Benchmarking is a process in which an organization continuously compares and measures itself against business leaders anywhere in the world to gain information and provide a guideline for rational performance goals (Boone & Wilkins, 1995 as cited in Ngambi & Nkemkiafu, 2015).

In 1992, American Productivity and Quality Center mentioned that benchmarking is a systematic and continuous measurement process; a process of continuously measuring and comparing an organization's business processes against business process leaders anywhere in the

world to gain information which will help the organization take action to improve its performance (as cited in Dahlgaard et al., 2005).

To attain excellence, an organization has to move far beyond the basics, looking for ways to improve upon existing products and services. The business environment in which organizations are operating is highly competitive, rapidly changing courtesy of information technology thus organizations have been forced to consider, and adopt or implement, a wide variety of innovative management programs and techniques. One such program that has been used extensively is benchmarking (Nyaoga, Mundia, & Irungu, 2013).

2.1.4.5 Continuous Improvement

Satisfying customer requirements involves the continuous improvement of products and processes (Wilkinson, Redman, Snape, & Marchington, 1998). The idea of "Continuous Improvement" pursuing the cycle of management (PDCA) continuously was developed in Japan through intensive quality improvement activities by engineer in 1950's. Next decade, 1960's is characterized as people's participation to continuous improvement in industry (Kanji, 1995).

Quality improvement is a terminology that is used to include a vast array of tools, techniques and methodologies of which continuous improvement is a core methodology (Issah, 2017). Bessant et al. (1994) defined continuous improvement as a company-wide process of focused and continuous incremental innovation (as cited in Issah, 2017). Improvement in business strategy, customer, employee, business results, and supplier relationships can be subject to continual improvement (Issah, 2017).

Continuous improvement is a policy of constantly introducing small incremental changes in a business in order to improve quality and/or efficiency (Muriithi, 2014). Rungtusanatham et al. (1998) argue that continuous improvements in processes, products, or services will reduce scrap

and rework costs, waste, and non-value added activities leading to better productivity, lead time, and delivery performance, and improve customer satisfaction (as cited in Zehir & Sadikoglu, 2012).

According to Kanji (1995), higher quality at lower cost can be achieved through internal and external quality improvements. The main aim of internal quality improvements is to make the internal processes leaner, i.e. to prevent defects and problems in the internal processes which will lead to lower costs. External quality improvements are aimed at the external customer, the aim being to increase customer satisfaction and thereby achieve a bigger market share and higher earnings.

According to Deming, improving the process means continual reduction of waste and continual improvement of quality in every activity: procurement, transportation, engineering, methods, maintenance, locations of activities, instruments and measures, sales, methods of distribution, accounting, payroll, and service to customers (H.S. Gitlow & Gitlow, 1987).

Continual improvement of the process results in less rework, downgrade, etc., and higher quality. This leads to continual rise in productivity, bringing higher profits and improved competitive position. Therefore, management should be critically interested in improving the process (H.S. Gitlow & Gitlow, 1987).

Deming emphasizes continuous improvement and believes that it is management's obligation to constantly and forever improve the system of production and service. The concept of ongoing improvement is illustrated by the Shewhart cycle or the Plan-Do-Check-Act (PDCA) cycle (Suarez, 1992; Carder & Ragan, 2005).

The Shewhart cycle or the Plan-Do-Check-Act (PDCA) cycle is the fundamental method of Deming’s system of quality management for the improvement of a stable system. It begins with

the development of a plan. Planning involves collecting and analyzing data about the system. An important source of data is observations made by people who work within the system. Another sources of data about the system are employees' opinions of obstacles and the rate of product flow through the system. Based on the information you assemble, you determine the obstacles to improved performance and identify potential leverage points in the system. In the do phase, the plan is implemented, on a small scale if possible.

The next phase of the process is the check (or study) phase, where the results of the implementation in the do phase are studied, observed or tested. In act phase, plans found to be effective are implemented on a wider scale. The PDCA cycle repeats again and again to generate continuous improvement in manufacturing and service processes.

2.2 Employee Performance

Success of any organization depends on its valuable human resource. Employees are a primary source of competitive advantage in service-oriented organizations (Luthans & Stajkovic, 1999). Performance is the level of an individual's work achievement after having exerted effort. Employee performance can be defined as the set of competencies that are related to the goals of the organization or the organizational unit in which an employee's works, (Aarabi et al., 2012 as cited in Dedy et al., 2016).

According to the study conducted by Shahzadi, Javed, Pirzada, Nasreen, & Khanam (2014), performance of the employee is considered as what an employee does and what he doesn't do. They also suggested that employee performance involves quality and quantity of output, presence at work, helpful nature and timeliness of output.

Employee performance means employee productivity and output. Good employee performance has been linked with increased consumer perception of service quality, while poor

employee performance has been linked with increased customer complaints and brand switching (Ying, 2012). Organizational efficiency depends on the employee performance (Gruman & Saks, 2011 as cited in Zahari & Zakuan, 2016).

According to Ying (2012), high performing employees will result to high performing organization because they are interrelated to each other. However, if the employee has low performance, it will negatively impact the organization too. Thus, employee performance ultimately affects the organizational effectiveness.

2.3 Empirical Review

2.3.1 TQM and Employee Performance

The results of study accomplished by Al-Saffar and Obeidat (2020) showed a statistically significant impact of TQM practices (customer focus, continuous improvement, employee participation, leadership, and process management) on employee performance in sharing knowledge, which can be attributed to fact that knowledge sharing contributes to exchange of knowledge and experience among employees.

Guest (1997) mentioned in his study that training and development programs, as one of the vital human resource management practice, positively affects the quality of the workers' knowledge, skills and capability and thus results in higher employee performance on job (as cited in Elnaga & Amran, 2013).

Another study conducted by Fatimah, Moelyati, and Syailendra (2016) also revealed that Total Quality Management has a positive and significant impact on employees' performance, the employees' satisfaction has a positive and significant impact on employees' performance. The study concluded that when one satisfies with their job, one also has a good work performance and, an outstanding performance is also caused by a well-practiced of Total Quality Management.

Hasan and Kerr (2003) studied the relationship between TQM practices and organization performance in service organizations and discovered that TQM practices like top-management commitment, employee involvement, training, supplier quality, quality costs, service design, quality techniques, benchmarking, and customer satisfaction leads to higher productivity and quality performance (as cited in Talib et al., 2010).

The study conducted by Zahari and Zakuan (2016) identified 7 critical success factors of TQM which constitutes top management leadership, customer focus, education and training, information analysis, employee empowerment, human resource development, and management policies and strategy. Zahari and Zakuan proved that TQM has significant and positive relationship towards employee performance and They concluded that TQM practices enhance employee performance.

2.3.2 Conceptual Framework of the Study

The review of the literature on TQM dimensions and employee performance was analyzed in order to see TQM dimensions and its effect on employee performance. The analyses provided an important framework for this study in terms of the variables or parameters used for this study.

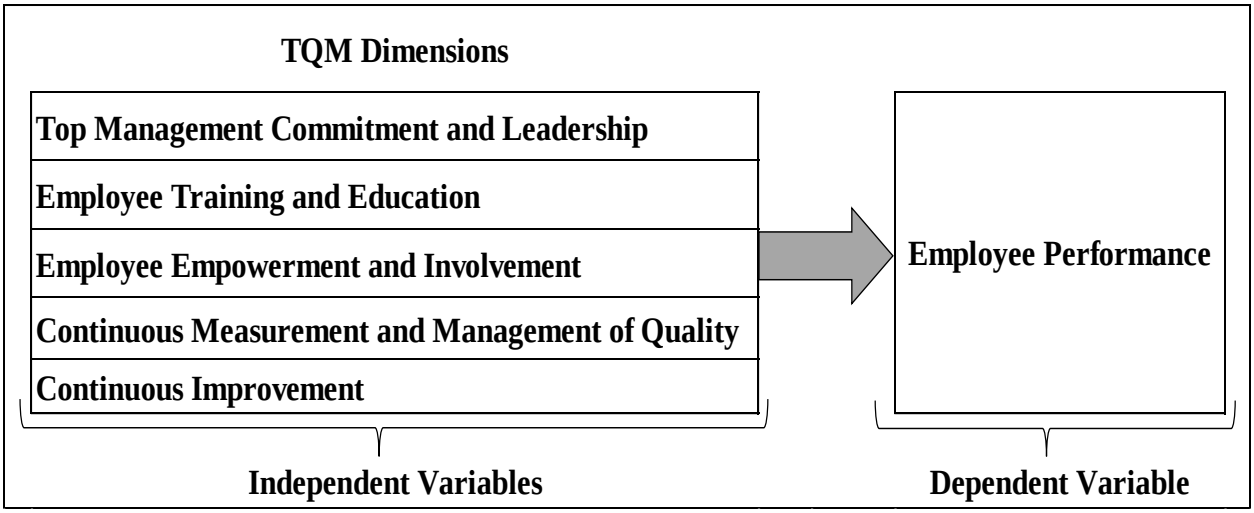
The variables used in the study undertaken by Njeru and Omondi (2016) were training, quality management system, employee participation, and leadership. Zahari and Zakuan (2016) used TQM dimensions such as top management leadership, customer focus, education and training, information analysis, employee empowerment, human resource and development, management policies and strategies as independent variables in their study. The study conducted by Akhtar et al. (2014) used parameters like leadership, employee involvement, continuous process improvement, quality management system, and training and education in their study. The study accomplished by Al-Saffar and Obeidat (2020) used TQM dimensions such as continuous

improvement, employee participation, and leadership as parameters in the study. Another study conducted by Koc (2011) used TQM factors such as top management support, training, workforce management, quality data reporting and benchmarking, customer relationship management, supplier relationship management, process flow management as parameters in the study.

Though a lot of TQM dimensions were identified as parameters in the TQM studies, this study used limited TQM dimensions due to financial problems and time constraints. Therefore, TQM dimensions such as top management commitment and leadership, employee training and education, employee empowerment and involvement, continuous measurement and management of quality facts, and continuous improvement considered as independent variables and employee performance considered as dependent variable.

The proposed research model of the relationship between TQM dimensions and employee performance was illustrated in figure 1.

Figure 1: Conceptual Framework Model



Source: Researcher (2020)

Chapter Three

Research Methodology

3.1 Research Approach and Design

Decisions regarding what, where, when, how much, by what means concerning an inquiry or a research study constitute a research design (Kothari, 2004). A research design is a blueprint or plan for the collection, measurement, and analysis of data, created to answer your research questions (Sekaran & Bougie, 2016).

This research was a quantitative survey research with the aim of predicting the impact of TQM principles on employee performance. Fink (2003) as cited in Sekaran and Bougie (2016) defined a survey as a system for collecting information from or about people to describe, compare, or explain their knowledge, attitudes, and behavior. Explanatory study was used for this research in order to explain the relationships between variables. Explanatory study establishes causal relationships between variables (i.e. dependent and independent variables) (Saunders et al., 2007).

After literatures of different scholars were reviewed regarding instruments used for measuring the impact of TQM on employee performance, the reviewed instruments were modified and combined in developing the new questionnaires in a means to be understandable for respondents. Modification of the instruments were also made in order to align the instruments with the objectives and conceptual framework of the study. The literatures reviewed for the development of instruments included quality management and performance of commercial banks in Kenya (Onyango, 2016), influence of total quality management practices on employee engagement in commercial banks in Nakuru central business district of Kenya (Kimoru & Kwasira, 2017), the relationship between TQM and performance in small manufacturing

enterprises: the mediation effect of failure (Koc, 2011), and assessing total quality management (TQM) in the Ghanaian construction industry: an exploratory study in Kumasi (Adusa-Poku, 2014).

A closed ended questionnaire was designed for this research and it included 6 sections representing TQM dimensions and employee performance. The major issue of designing the questionnaire was to determine measurement questions, which respondents would be asked to answer.

The questionnaire was developed in English and it consisted 76 items. Translation may bias the original design of the questionnaire because a number of quality management terms, such as benchmarking, excellence, quality, etc. would not be precisely translated into Ethiopian terms. Thus, for better understanding and easy to answer, only the English version was distributed to commercial bank employees such as top level managers, middle level managers, lower level managers, and senior professional employees (or senior experts) with a minimum of bachelor degree holder.

3.2 Target Population and Sampling Design

The population refers to the entire group of people, events, or things of interest that the researcher wishes to investigate (Sekaran & Bougie, 2016). Target population refers to those people, events, or records that contain the desired information for the study that determine whether a sample or a census should be selected (Cooper & Schindler, 2014). A sample examines a portion of the target population, and the portion must be carefully selected to represent that population.

The researcher can use one or more sampling units for the study. The sampling unit is the element or set of elements that is available for selection in some stage of the sampling process (Sekaran & Bougie, 2016). Sampling unit may be a geographical one such as state, district, village,

etc., or a construction unit such as house, flat, etc., or it may be a social unit such as family, club, school, etc., or it may be an individual (Kothari, 2004).

The target population for this research constituted bank employees working in commercial banks operating in Ethiopia. Bank employees referred to top level managers, middle level managers, lower level managers, and senior experts/senior professional employees with a minimum of bachelor degree (not nonprofessional employees such as guards, drivers, cleaners, clerks, etc.). The 17 commercial banks operating in Addis Ababa Ethiopia were classified into three categories such as large, medium, and small sizes.

Commercial Bank of Ethiopia, Awash Bank, and Debub Global Bank were selected for investigation based on their sizes, conveniences, and relatively easy for obtaining sufficient information to be used for this study. Commercial Bank of Ethiopia (the public bank) was selected from the large sized commercial banks to represents the large sizes. Awash Bank (the private bank) was selected from the medium sized commercial banks to represent medium sizes and Debub Global Bank (the private bank) was selected from the medium sized commercial banks to represent the small sizes.

In this research the sampling unit was all levels of managers and senior experts working in headquarters of the three selected banks and judgment sampling the most important form of purposive sampling was used due to the fact that managers and senior experts who was very knowledgeable about TQM practices would be contacted to fill in the questionnaire. It was assumed that samples from the headquarters of the three selected banks would represent the whole situation of commercial banks operating in Addis Ababa and the research results would be generalized to all commercial banks operating in Addis Ababa Ethiopia. The sample size

determination for this study was calculated using the mathematical approach developed by Taro Yamane (1967) with 95% confidence level and 5% precision level (Kimoru & Kwasira, 2017).

$$n = \frac{N}{1 + N*(e)^2}$$

Where n = Sample size, N = Population size, and e = Level of precision (the acceptable sampling error) given as 0.05.

Based on June 30, 2019 data record obtained from each bank, the sample size (n) for each bank was calculated using the above formula as shown below.

For CBE, $n = \frac{N}{1+N(e)^2}$ Where N = Population Size (841)
e = the acceptable sampling error (0.05)

$$n = \frac{N}{1+N(e)^2} = \frac{841}{1+841(0.05)^2} = \underline{\underline{271}}$$

For Awash, $n = \frac{N}{1+N(e)^2}$ Where N = Population Size (305)
e = the acceptable sampling error (0.05)

$$n = \frac{N}{1+N(e)^2} = \frac{305}{1+305(0.05)^2} = \underline{\underline{173}}$$

For DGB, $n = \frac{N}{1+N(e)^2}$ Where N = Population Size (67)
e = the acceptable sampling error (0.05)

$$n = \frac{N}{1+N(e)^2} = \frac{67}{1+67(0.05)^2} = \underline{\underline{57}}$$

The sample sizes calculated for the three banks were summarized in table 1.

Table 1: Sample Size

Sample Unit	Population Size of Sample Unit (N)	Sample Size (n)
Commercial Bank of Ethiopia (CBE)	841	271
Awash Bank (Awash)	305	173
Debub Global Bank (DGB)	67	57
Total	**1213**	**501**

Source: Researcher (2020)

3.3 Data Collection Method

Kothari (2004) defined data collection as the precise, systematic gathering of information relevant to the research purpose. In this study survey questionnaires (closed ended), structured interviews, and secondary data records (such as libraries, internets, company profile, employment data, annual reports) were used to collect data. This study used questionnaires as the major tool of collecting primary data. Drop and pick later method was used to administer the questionnaire to allow respondents enough time to fill the questionnaires. Selected respondents from each banks were interviewed.

The responses were provided by respondents on a Likert scale ranging from 1 to 5 categorized as followed: 1 for strongly disagree; 2 for disagree; 3 for neutral; 4 for agree; and 5 for strongly agree.

3.4 Validity and Reliability

Instruments reviewed in the literatures were modified and combined and then new research questionnaire was developed and used to obtain data from the three selected commercial banks operating in Addis Ababa (such as CBE, Awash Bank and DGB) in order to test the theoretical framework hypothesized in this study.

In the questionnaire, there were six sections of measurement instruments used to measure the impact of TQM dimensions on employee performance. Each instrument had measurement scales. Since the new instruments were modified and combined from different past instruments obtained from the literatures, the original validity and reliability may not hold for the new instruments, and it becomes important to reestablish validity and reliability during data analysis for this study.

3.5 Data Analysis and Interpretation Method

The term analysis refers to the computation of certain measures along with searching for patterns of relationship that exist among data-groups (Kothari, 2004). In this study quantitative approaches were used for data analysis. Data were entered and analyzed by using the statistical package for the social science (SPSS) windows version 24 and Microsoft office package Excel-2010. Quantitative data from the questionnaire was coded and entered into the computer for computation of descriptive and inferential statistics. Primary and secondary data from interviews and records was used to reinforce the quantitative data from questionnaires. A multiple linear regression model was used to link TQM dimensions to employee performance based on the regression model shown here below:

$$EP = \beta_0 + \beta_1 TMCL + \beta_2 ETE + \beta_3 EEI + \beta_4 CMMQ + \beta_5 CI + e$$

Where EP = Employee Performance; TMCL = Top Management Commitment and Leadership; ETE = Employee Training and Education; EEI = Employee Empowerment and Involvement; CMMQ = Continuous Measurement and Management of Quality; CI = Continuous Improvement; β_0, β_1, β_2, β_3, β_4, & β_5 are the coefficient of the variables; e is the error term.

3.6 Ethical Issues

All parties in research should exhibit ethical behavior. According to Cooper and Schindler (2014), ethics are norms or standards of behavior that guide moral choices about our behavior and our relationships with others. The goal of ethics in research is to ensure that no one is harmed or suffers adverse consequences from research activities.

Subjects about the nature of this study were explained and respondents were informed that participation in this study is voluntary. The aim of this research and benefits expected from it were

explained for respondents. Personal related information of the respondents was not given on the questionnaire and respondents were told that all information would be used for academic purpose only. Confidentiality of all information given by the respondents with respect to this research was maintained. The right and privacy of the respondents was safeguarded.

Chapter Four

Data Presentation, Analysis, and Interpretation

4.1 Introduction

This chapter presented the analysis of study findings on the impact of total quality management on employee performance in three commercial banks operating in Ethiopia. The analyses of the variables involved in the study was carried out by the estimated model presented in the previous chapter. The data was analyzed using descriptive, reliability, correlation and regression statistics with the aid of statistical package for the social science (SPSS) windows version 24 and Microsoft office package Excel-2010.

4.2 Response Rate

The questionnaires were distributed to a sample size of 501 respondents (271 respondents from Commercial Bank of Ethiopia (CBE), 173 respondents from Awash Bank, and 57 respondents from Debub Global Bank (DGB)). Out of the 501 questionnaires distributed, 378 questionnaires (214 from Commercial Bank of Ethiopia, 124 from Awash Bank, and 40 from Debub Global Bank) were returned and fully completed.

The response rate from Commercial Bank of Ethiopia, Awash Bank, and Debub Global Bank were 79%, 72%, and 70% respectively. It can be inferred that the response rate was good. According to Mugenda (2003) a response rate of 70% and over is excellent for analysis (as cited in Kanorio, 2014).

4.3 Descriptive Analysis

4.3.1 Demographic Characteristics of the Respondent

4.3.1.1 Gender

There have been equity and gender balance in most organizations in employing employees on gender consideration. The study sought to establish gender of the respondents to determine whether the banking organizations observe gender balance in their employment.

Table 2 shows that 285 (75.40%) of the respondents were male employees while 93 (24.60%) were female respondent employees. The study found that male respondent employees were viewed to be more than female respondent employees in all the banks and they formed the greater percentage.

Table 2: Respondent's Gender

Gender	CBE		Awash Bank		DGB		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Male	149	69.60	103	83.10	33	82.50	285	75.40
Female	65	30.40	21	16.90	7	17.50	93	24.60
Total	214	100.00	124	100.00	40	100.00	378	100.00

Source: Researcher (2020)

4.3.1.2 Age Group

The study found it paramount to establish the age of the respondents. This is a demographic feature that affects behaviors or perception of an individual on issues in organizations.

Table 3 shows that 68 (18%) of the respondents are below 31 years, 199 (52.60%) of them are between 31-40 years, 93 (24.60%) of them are aged between 41-50 years, and 18 (4.80%) are over 50 years. It was observed that the majority of the respondents were aged between 31 and 40 years in all the three banks.

Table 3: Respondent's Age Group

Age Group	CBE		Awash Bank		DGB		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
18-30	34	15.90	30	24.20	4	10.00	68	18.00
31-40	103	48.10	68	54.80	28	70.00	199	52.60
41-50	64	29.90	23	18.50	6	15.00	93	24.60
Over 50	13	6.10	3	2.40	2	5.00	18	4.80
Total	214	100.00	124	100.00	40	100.00	378	100.00

Source: Researcher (2020)

4.3.1.3 Level of Education

The respondents were asked to state their highest academic level. The level of education is a key factor when it comes to employee understanding and perception of quality issues in the organization.

Table 4 shows 158 (41.80%) of the respondents have bachelor's degree as their highest level of education, and 220 (58.20%) have reached master's degree level. This indicates the respondents are well educated to understand what is happening in the organization and to provide the right information. The finding also indicates that Ethiopian commercial banks employ educated and professional employees. Thus employees understand the effects of TQM on employee performance.

Table 4: Respondent's Educational Level

Educational Level	CBE		Awash Bank		DGB		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Bachelor's Degree	89	41.60	51	41.10	18	45.00	158	41.80
Master's Degree	125	58.40	73	58.90	22	55.00	220	58.20
Total	214	100.00	124	100.00	40	100.00	378	100.00

Source: Researcher (2020)

4.3.1.4 Job Position

The study found it imperative to establish on the area of position of the respondents. This job position data was intended for the purpose of establishing on the respondents' awareness and level of understanding over TQM issues in commercial banking industries.

Table 5 shows 4 (1.10%) of the respondents were top level managers, 51 (13.50%) were middle level managers, 99 (26.20%) were lower level managers, and 224 (59.30%) were senior professional employees. This implies that senior professional employees form the largest majority in the three banks. With this kind of distribution, the researcher was satisfied that all areas were covered.

Table 5: Respondent's Job Position

Job Position	CBE		Awash Bank		DGB		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Top Level Manager	2	0.90	1	0.80	1	2.50	4	1.10
Middle Level Manager	24	11.20	17	13.70	10	25.00	51	13.50
Lower Level Manager	44	20.60	46	37.10	9	22.50	99	26.20
Senior Prof. Employee	144	67.30	60	48.40	20	50.00	224	59.30
Total	214	100.00	124	100.00	40	100.00	378	100.00

Source: Researcher (2020)

4.3.1.5 Income Level

The respondents were asked to state their income level. The level of income is a key factor influencing the productivity of employees in the banking organizations.

Table 6 shows 16 (4.20%) of the respondents earn a monthly income of less than 15,000 birr, 107 (28.30%) of them earn between 15,001 – 25,000 birr, 175 (46.30%) of them earn between 25,001-35,000 birr, and 80 (21.20%) of them earn more than 35,000 birr. This result indicates majority of the respondents have a better monthly income which encourage them to perform better in their organizations.

Table 6: Respondent's Income Level

Income Level	CBE		Awash Bank		DGB		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Less than 15,000 birr	0	0.00	13	10.50	3	7.50	16	4.20
15,001-25,000 birr	40	18.70	52	41.90	15	37.50	107	28.30
25,001-35,000 birr	131	61.20	38	30.60	6	15.00	175	46.30
More than 35,000 birr	43	20.10	21	16.90	16	40.00	80	21.20
Total	214	100.0	124	100.00	40	100.00	378	100.00

Source: Researcher (2020)

4.3.1.6 Work Experience

The study found it important to establish the current working experience of the respondents. Working experience is an important factor that that influence the individual understanding of quality issues in the banking organizations. The more experienced employees can perform a quality performance.

Table 7 shows 63 (16.70%) of the respondents had a working experience of less than 5 years in the current banking organization they were working in, 125 (33.10%) of the them worked for 5-10 years, 86 (22.80%) of them worked for 11-15 years, and 104 (27.50%) of them worked for more than 15 years. This indicates that majority of the respondents have 5 years and above working experience in all the three banks.

Table 7: Respondent's Work Experience in the Current Organization

Work Experience	CBE		Awash Bank		DGB		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Less than 5 year	19	8.90	27	21.80	17	42.50	63	16.70
5-10 years	65	30.40	39	31.50	21	52.50	125	33.10
11-15 years	47	22.00	38	30.60	1	2.50	86	22.80
More than 15 years	83	38.80	20	16.10	1	2.50	104	27.50
Total	214	100.00	124	100.00	40	100.00	378	100.00

Source: Researcher (2020)

4.3.2 TQM Mean Score

4.3.2.1 TMCL Mean Score

Table 8 indicates mean score for top management commitment and leadership in regard to quality in the three banks. The mean scores in CBE ranged from 3.31 to 3.78. The highest obtained mean score is related to the vision of senior management for implementing quality goals (3.78). The lowest is related to regular review of quality policies and objectives by senior management (3.31). The average obtained mean score of all items for TMCL was 3.55 indicating employees were in agreement in their response to TMCL.

The mean scores in Awash Bank ranged from 3.51 to 3.98. The highest obtained mean score is related to involvement and commitment of top management toward best practice and their vision for implementing quality goals (3.98). The lowest is related to encouragement of employee suggestions by top management in quality management and improvement activities (3.51). The average obtained mean score of all items for TMCL was 3.76 indicating employees were in agreement in their response to TMCL.

The mean scores in DGB ranged from 3.40 to 3.90. The highest obtained mean score is related to involvement and commitment of top management toward best practice and the recognition given by management team that success comes from employees (3.90). The lowest is related to encouragement of employee suggestions by top management in quality management and improvement activities (3.40). The average obtained mean score of all items for TMCL was 3.66 indicating employees were in agreement in their response to TMCL.

The total mean score over the three banks for TMCL ranged from 3.44 to 3.87. The highest obtained mean score is related to top management vision for implementing quality goals (3.87). The lowest is related to encouragement of employee suggestions by top management in quality management and improvement activities (3.44).

The average mean score for TMCL in CBE, Awash Bank and DGB is 3.55, 3.76 and 3.66, respectively. This indicates employees were satisfied with TMCL in the three banks. Accordingly, Awash Bank, DGB and CBE are ranked with 1st, 2nd and 3rd, respectively.

Table 8: TMCL Mean Score

No.	TMCL	CBE (N=214)		Awash (N=124)		DGB (N=40)		Total	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
1	Top management actively encourages change and implements a culture of trust, involvement and commitment in moving towards 'best practice'.	3.68	0.99	3.98	0.74	3.90	0.71	3.85	0.90
2	Senior management has a clear vision for implementing quality goals.	3.78	0.85	3.98	0.80	3.85	0.80	3.87	0.83
3	Senior management empowers all employees to have adequate knowledge in quality procedures.	3.38	0.94	3.61	0.86	3.53	0.78	3.51	0.90
4	Senior management creates a quality awareness among employees.	3.42	0.93	3.68	0.84	3.45	0.96	3.52	0.91
5	Senior management is supportive of technology advancement to improve quality.	3.74	0.93	3.89	0.83	3.83	0.90	3.82	0.89
6	Senior management establishes quality policy and quality objectives and communicates to organization.	3.55	0.95	3.77	0.72	3.73	0.82	3.68	0.87
7	Senior management ensures the availability of resources to achieve quality management objectives.	3.49	0.90	3.77	0.81	3.70	0.65	3.65	0.85
8	Regular review of suitability of quality policies and objectives takes place.	3.31	0.94	3.56	0.84	3.58	0.90	3.48	0.91
9	The senior executives clearly articulate the organization's values relevant to quality and continuous quality improvement.	3.64	0.89	3.85	0.79	3.70	0.85	3.73	0.86
10	The behavior of the senior executives is consistent with values relevant to quality and continuous quality improvement.	3.36	0.92	3.73	0.82	3.73	0.88	3.60	0.90
11	The senior executives have demonstrated an ability to manage the changes (e.g., organizational, technological) needed to improve the quality and services.	3.60	0.94	3.83	0.77	3.80	0.79	3.74	0.88
12	The senior executives act on suggestions to improve the quality and services.	3.64	0.89	3.76	0.81	3.60	0.84	3.67	0.86
13	All major department heads within the organization accept their responsibility for quality.	3.53	0.90	3.75	0.80	3.65	0.95	3.64	0.88
14	Top management is personally involved in quality improvement projects.	3.53	0.96	3.87	0.73	3.45	0.75	3.62	0.89
15	Quality issues are frequently reviewed in the organizational top management meetings.	3.58	0.86	3.80	0.72	3.45	0.88	3.61	0.82
16	Top management strongly encourages employee suggestions in quality management and improvement activities.	3.41	0.96	3.51	0.82	3.40	0.81	3.44	0.90
17	Top management actively participates in quality management and improvement process through training & development.	3.59	0.86	3.87	0.74	3.70	0.76	3.72	0.82
18	The management team recognizes that success comes from employees.	3.71	1.00	3.67	1.02	3.90	0.84	3.76	0.99
19	Managers develop and support improvement teams and make time available for them to work. They check the progress & recognize involvement, then they say "thank you".	3.43	1.01	3.52	0.83	3.55	0.90	3.50	0.94
Mean and Std. Dev.		3.55	0.94	3.76	0.82	3.66	0.84	3.65	0.89

Source: Researcher (2020)

4.3.2.2 ETE Mean Score

Table 9 indicates mean score for employee training and education in the three banks. The mean scores in CBE ranged from 3.16 to 4.04. The highest obtained mean score is related to encouragement given by the bank for employees to accept education and training (4.04). The lowest is related to employee training on how to use quality management methods (tools) (3.16). The average obtained mean score of all items for ETE was 3.64 indicating employees were in agreement in their response to ETE.

The mean scores in Awash Bank ranged from 3.25 to 4.05. The highest obtained mean score is related to encouragement given by the bank for employees to accept education and training (4.05). The lowest is related to employee training on how to use quality management methods (tools) (3.25). The average obtained mean score of all items for ETE was 3.64 indicating employees were in agreement in their response to ETE.

The mean scores in DGB ranged from 3.05 to 3.83. The highest obtained mean score is related to continuous training which enhances performance (3.83). The lowest is related to employee trainings on how to use quality management methods (tools) (3.05). The average obtained mean score of all items for ETE was 3.49 indicating employees were approximately impartial in their response to ETE.

The total mean scores over the three banks ranged from 3.33 to 4.00. The highest obtained mean score is related to encouragement given for employees to accept education and training (4.00). The lowest is related to ideas of functional departments before launching new training initiative (3.33). The average obtained mean score of all items for ETE over the three banks was 3.65 indicating employees were in agreement in their response to ETE.

The average obtained mean score of all items for ETE in CBE, Awash Bank and DGB is 3.64, 3.64 and 3.49, respectively. This indicates that employees in CBE and Awash were similarly satisfied with ETE activities performed in their banks but employees of DGB were approximately impartial with ETE.

Table 9: ETE Mean Score

No.	ETE	CBE (N=214)		Awash (N=124)		DGB (N=40)		Total	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
1	Our organization encourages employees to accept education and training.	4.04	0.82	4.05	0.68	3.83	1.01	4.00	0.80
2	Our organization gives quality awareness education to employees.	3.53	0.99	3.61	0.81	3.25	0.93	3.66	0.93
3	Our organization regards employees as valuable, long-term resources worthy of receiving education and training throughout their career.	3.79	0.98	3.59	0.98	3.65	0.86	3.63	0.97
4	Our organization trains employees in quality concepts, taking care of their needs and developing their competencies.	3.57	0.97	3.58	0.90	3.50	0.85	3.53	0.93
5	Our organization has a training program that includes all the employees.	3.81	0.99	3.66	1.02	3.28	1.11	3.76	1.02
6	Our organization gives regular training to how to gather information concerning client, workforce and general works.	3.52	0.95	3.55	0.85	3.38	0.81	3.60	0.90
7	Continuous training enables me to understand and satisfactorily meet the customers' needs and expectation.	3.87	0.90	3.81	0.89	3.68	1.05	3.79	0.91
8	Employee training programs are regular and are geared towards bridging skill gaps of the employees.	3.73	0.95	3.68	0.76	3.68	0.89	3.66	0.89
9	My decision making abilities are greatly improved by continuous training in the organization.	3.62	1.03	3.90	4.72	3.48	0.88	3.74	2.82
10	Continuous training boosts my confidence which enhances my performance.	3.75	0.98	3.81	0.83	3.83	1.03	3.76	0.94
11	Continuous training enables me to regularly meet my set targets.	3.73	0.97	3.72	0.85	3.73	1.20	3.75	0.96
12	Our organization continuous training reflects on the value the organization places on me as an employee.	3.67	1.00	3.71	0.83	3.45	0.90	3.66	0.94
13	Our organization gives regular training to all employees on the processes for improvement.	3.59	1.02	3.43	0.95	3.28	0.78	3.56	0.98
14	Our organization gives regular training to all employees on client satisfaction.	3.45	0.98	3.46	0.96	3.50	0.85	3.45	0.96
15	Employees received training in quality principles.	3.38	0.94	3.48	0.78	3.33	0.83	3.44	0.88
16	Our organization takes views or ideas of various cross functional departments before launching new training initiative.	3.27	0.99	3.33	0.82	3.30	0.94	3.33	0.93
17	Our organization has training and development program for all the employees from lower to senior level.	3.83	0.92	3.74	0.92	3.48	1.01	3.76	0.94
18	Most employees in our organization are trained on how to use quality management methods (tools).	3.16	0.98	3.25	0.92	3.05	0.85	3.44	0.94
19	Our organization has both on the job and off the job training methodology.	3.69	1.46	3.77	0.78	3.43	0.84	3.67	1.22
20	Post training you find positive change in your competency & technical skills.	3.69	0.91	3.76	0.71	3.73	0.75	3.72	0.83
Mean and Std. Dev.		3.64	1.01	3.64	1.35	3.49	0.94	3.65	1.13

Source: Researcher (2020)

4.3.2.3 EEI Mean Score

Table 10 indicates mean and standard deviation for employee empowerment and involvement in the three banks. The mean scores in CBE ranged from 2.87 to 3.82. The highest obtained mean score is related to teamwork (3.82). The lowest is related to improvement activities without reference to management (2.87). The average obtained mean score of all items for EEI was 3.37 indicating employees were impartial in their response.

The mean scores in Awash Bank ranged from 3.10 to 3.71. The highest obtained mean score is related to self-improvement (3.71). The lowest is related to both decision making about quality and operational issues and improvement activities without reference to management (3.10). The average obtained mean score of all items for EEI was 3.46 indicating employees were approximately neutral in their responses to EET.

The mean scores in DGB ranged from 3.05 to 3.75. The highest obtained mean score is related to self-improvement (3.75). The lowest is related to improvement activities without reference to management (3.75). The average obtained mean score of all items for EEI was 3.47 indicating employees were approximately neutral in their responses to EET.

The total mean scores over the three banks ranged from 3.01 to 3.77. The highest obtained mean score is related to teamwork (3.77). The lowest is related to improvement activities without reference to management (3.01). The average obtained mean score of all items for EEI over the three banks was 3.43 indicating employees were approximately neutral in their responses to EET.

Generally, the average obtained mean score of all items for EEI in CBE, Awash Bank and DGB is 3.37, 3.64 and 3.47, respectively. This indicates that the response of respondents in the three banks are relatively similar.

Table 10: EEI Mean Score

No.	EEI	CBE (N=214)		Awash (N=124)		DGB (N=40)		Total	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
1	Our organization motivates, supports and encourages employees.	3.59	0.95	3.67	0.86	3.73	0.72	3.66	0.90
2	Employees are provided the opportunity for involvement in quality management practices development and implementation.	3.31	0.97	3.44	0.78	3.43	0.81	3.39	0.90
3	Employees are motivated to improve on quality management practices implementation through rewards and incentives.	3.18	1.02	3.54	0.82	3.35	0.98	3.36	0.96
4	Employees effectively look for chances to improve their fitness, learning and experience.	3.78	3.56	3.64	0.83	3.55	0.81	3.66	2.73
5	Employees from different levels are involved in making policies and plans.	3.17	1.05	3.31	0.90	3.18	0.98	3.22	1.00
6	Our organization encourages suggestions from employees.	3.25	1.07	3.34	0.86	3.35	0.83	3.31	0.98
7	Our organization encourage team work rather than individual work.	3.82	0.93	3.73	0.84	3.75	0.84	3.77	0.89
8	Employees are encouraged to express their views and suggestions at work.	3.47	0.96	3.54	0.83	3.65	0.92	3.55	0.92
9	There is a culture of openness in the organization.	3.14	1.08	3.24	0.91	3.28	1.01	3.22	1.02
10	All views relevant to my work area are acted upon.	3.40	0.88	3.42	0.83	3.48	0.82	3.43	0.86
11	Information is routinely shared with me about the organization performance.	3.44	1.04	3.48	0.86	3.48	0.88	3.46	0.97
12	Employees receive feedback for their quality performance.	3.27	1.03	3.42	0.87	3.58	0.93	3.42	0.97
13	Employees are fully participated in decision making about quality and operational issues.	2.95	1.00	3.10	0.95	3.10	0.90	3.05	0.97
14	Employees are allowed to implement improvement activity without reference to management.	2.87	1.03	3.10	0.89	3.05	0.88	3.01	0.98
15	Delegation of responsibility to employees at appropriate level takes place.	3.55	1.00	3.60	0.82	3.83	0.75	3.66	0.92
16	Self-improvement is encouraged to improve skills and performance.	3.71	0.91	3.71	0.86	3.75	0.78	3.72	0.88
Mean and Std. Dev.		3.37	1.34	3.46	0.88	3.47	0.89	3.43	1.16

Source: Researcher (2020)

4.3.2.4 CMMQ Mean Score

Table 11 indicates mean and standard deviation for continuous measurement and management of quality in the three banks. The mean scores in CBE ranged from 3.19 to 3.77. The highest obtained mean score is related to organizational structures like quality control teams for continuous quality improvement (3.77). The lowest is related to dependence of performance

evaluation on quality (3.19). The average obtained mean score of all items for CMMQ was 3.37 indicating employees were nearly impartial in their response.

The mean scores in Awash Bank ranged from 3.12 to 3.79. The highest obtained mean score is related to facts and systematic analysis based problem solving and continuous improvement processes (3.79). The lowest is related to monitoring of employee satisfaction to meet employee expectations. (3.12). The average obtained mean score of all items for CMMQ was 3.49 indicating employees were nearly neutral in their responses to CMMQ.

The mean scores in DGB ranged from 3.08 to 3.73. The highest obtained mean score is related to examining best practices of other organizations for continuous improvement (3.08). The lowest is related to organizational structures like quality control teams for continuous quality improvement (3.08). The average obtained mean score of all items for CMMQ was 3.43 indicating employees were approximately impartial in their responses to CMMQ.

The total mean scores over the three banks ranged from 3.28 to 3.63. The highest obtained mean score is related to examining best practices of other organizations for continuous improvement (3.63). The lowest is related to measuring effectiveness of training and its impact and dependence of performance evaluation on quality (3.28). The average obtained mean score of all items for CMMQ over three banks was 3.43 indicating employees were approximately neutral in their responses to CMMQ.

In general, the average obtained mean score of all items for CMMQ in CBE, Awash Bank and DGB is 3.37, 3.49 and 3.43, respectively. This indicates that the response of respondents in the three banks are comparatively similar.

Table 11: CMMQ Mean Score

No.	CMMQ	CBE (N=214)		Awash (N=124)		DGB (N=40)		Total	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
1	Quality performance data (defects, error, rework etc.) are collected and evaluated periodically in the organization.	3.17	1.06	3.40	0.83	3.38	1.00	3.31	0.99
2	Our organization obtain and report quality data on all functions and departments.	3.29	0.95	3.53	0.87	3.53	0.88	3.45	0.92
3	Our organization regularly monitors improvement in quality of products and processes.	3.43	0.93	3.69	0.73	3.40	0.74	3.51	0.86
4	Employee satisfaction is monitored regularly to know organization actually meet employee expectations.	3.31	1.06	3.12	1.03	3.43	0.81	3.29	1.03
5	Our organization measures effectiveness of training and its impact on employees.	3.21	1.06	3.29	0.87	3.35	0.80	3.28	0.98
6	Processes and quality systems are continuously controlled and improved.	3.31	0.98	3.42	0.83	3.28	0.72	3.34	0.91
7	There are organizational structures like quality control teams for continuous quality improvement.	3.77	0.84	3.31	0.92	3.08	1.05	3.39	0.93
8	Decision-making is based on facts and data.	3.43	0.97	3.57	0.87	3.55	0.88	3.52	0.93
9	Performance evaluation by management depends heavily on quality.	3.19	1.03	3.28	0.94	3.38	0.84	3.28	0.98
10	Problem solving and continuous improvement processes are based on facts and systematic analysis.	3.33	1.00	3.79	4.29	3.55	0.85	3.56	2.59
11	Best practices of other organizations are examined for continuous improvement.	3.45	0.99	3.70	0.86	3.73	0.72	3.63	0.93
12	Our organization has engaged in extensive benchmarking of business processes and products in other organizations.	3.54	0.94	3.76	0.80	3.48	0.82	3.59	0.89
Mean and Std. Dev.		3.37	1.00	3.49	1.50	3.43	0.85	3.43	1.18

Source: Researcher (2020)

4.3.2.5 CI Mean Score

Table 12 indicates mean and standard deviation for continuous improvement in the three banks. The mean scores in CBE ranged from 3.37 to 3.68. The highest obtained mean score is related to employee responsibility for continuous quality improvement (3.68). The lowest is related to employee creativity and innovative in improving processes for better performance (3.37). The average obtained mean score of all items for CI was 3.55 indicating employees were in agreement in their responses to CI.

The mean scores in Awash Bank ranged from 3.52 to 3.86. The highest obtained mean score is related to CI of employees in quality of service and work process (3.86). The lowest is

related to re-training of employees to fill gap (3.52). The average obtained mean score of all items for CI was 3.67 indicating employees were in agreement in their responses to CI.

The mean scores in DGB ranged from 3.48 to 3.78. The highest obtained mean score is related to employee responsibility for continuous quality improvement (3.78). The lowest is related to organizational culture for quality (3.48). The average obtained mean score of all items for CI was 3.64 indicating employees were in agreement in their responses to CI.

The total mean scores over the three banks ranged from 3.52 to 3.73. The highest mean score is related to employee responsibility for continuous quality improvement (3.73). The lowest is related to organizational culture for quality (3.52). The average mean score of all items for CI over three banks was 3.62 indicating employees were in agreement in their responses to CI.

Generally, the average obtained mean score of all items for CI in CBE, Awash Bank and DGB is 3.55, 3.67 and 3.64, respectively. This indicates that the response of respondents in the three banks are relatively similar and they were in agreement in their responses to CI.

Table 12: CI Mean Score

No.	CI	CBE (N=214)		Awash (N=124)		DGB (N=40)		Total	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
1	Employees are encouraged to be creative and innovative in improving processes for better performance.	3.37	0.98	3.60	0.92	3.65	0.83	3.54	0.95
2	Our organization has an improvement perception not just maintaining the traditional work methods.	3.62	0.94	3.68	0.86	3.70	0.82	3.66	0.90
3	Continuous quality improvement is part of all employees responsibility rather than of the quality department alone.	3.68	0.95	3.73	0.88	3.78	0.73	3.73	0.91
4	Management and employees come together to embrace quality management as an organizational culture to be adopted by all.	3.54	0.93	3.53	0.91	3.48	0.82	3.52	0.91
5	There is frequent re-training of employees to fill up any existing knowledge gap.	3.47	1.01	3.52	0.98	3.63	1.00	3.54	1.00
6	Innovation and continuous improvements is the culture and business philosophy.	3.53	0.96	3.69	0.85	3.60	0.90	3.61	0.92
7	Employees are always working to continuously improve the quality of service and work process.	3.65	0.87	3.86	0.80	3.65	0.77	3.72	0.84
8	Employees voluntarily search for any work-related new information and knowledge which may help improve the quality of work they do.	3.53	0.88	3.73	0.87	3.63	0.77	3.63	0.86
Mean and Std. Dev.		3.55	0.95	3.67	0.89	3.64	0.83	3.62	0.92

Source: Researcher (2020)

4.3.3 TQM and Employee Performance Mean Score

Table 13 indicates mean and standard deviation for dependent and independent variables in the three banks. In CBE the mean score of TQM ranged from 3.37 to 3.64. The highest obtained mean score is related to ETE (3.64) indicating that ETE has an influence on employee performance. The lowest is related to both EEI and CMMQ (3.37) indicated that employees were neutral on whether these indicators had an influence on their performance.

In Awash Bank the mean score of TQM ranged from 3.46 to 3.76. The highest obtained mean score is related to TMCL (3.76) indicating that TMCL had an influence on employee performance. The lowest is related to EEI (3.46) indicating that employees were impartial on whether this indicator had an influence on their performance.

In DGB the mean score of TQM ranged from 3.43 to 3.66. The highest obtained mean score is related to TMCL (3.66) indicating that employees agreed in their responses that TQM had an influence on their performance. The lowest is related to CMMQ (3.43) indicating that employees were approximately neutral on whether CMMQ had an impact on their performance.

The total mean scores of TQM over the three banks ranged from 3.43 to 3.65. The highest obtained mean score is related to both TMCL and ETE (3.65). The lowest is related to both EEI and CMMQ (3.43). The mean score of CI over the three banks is 3.62.

The average mean score of TQM in CBE, Awash, and DGB is 3.50, 3.60 and 3.54, respectively indicating respondents were in agreement in their responses that TQM had an influence on employee performance.

The mean score of the perception of respondents on the impact of quality factors on their performance in CBE, Awash, and DGB is 3.66, 3.70 and 3.65, respectively indicating respondents

were in agreement in their responses that employee performance was impacted by quality factors in all the banks.

Table 13: TQM & Employee Performance Mean Score

No.	Variables	CBE		Awash		DGB		Total	
1	TQM	Mean	SD	Mean	SD	Mean	SD	Mean	SD
1.1	TMCL	3.55	0.94	3.76	0.82	3.66	0.84	3.65	0.89
1.2	ETE	3.64	1.01	3.64	1.35	3.49	0.94	3.65	1.13
1.3	EEI	3.37	1.34	3.46	0.88	3.47	0.89	3.43	1.16
1.4	CMMQ	3.37	1.00	3.49	1.50	3.43	0.85	3.43	1.18
1.5	CI	3.55	0.95	3.67	0.89	3.64	0.83	3.62	0.92
Mean and Std. Dev.		**3.50**	**1.07**	**3.60**	**1.13**	**3.54**	**0.88**	**3.56**	**1.07**
2	EP	**3.66**	**0.63**	**3.70**	**0.57**	**3.65**	**0.53**	**3.67**	**0.60**

Source: Researcher (2020)

4.4 Validity and Reliability Analysis

Reducing the possibility of getting the answer wrong means that attention has to be paid to two particular emphases on research design: reliability and validity (Saunders, Lewis, & Adrian, 2007). Sound measurement must meet the tests of validity and reliability. These are the major considerations one should use in evaluating a measurement tool.

Validity is the extent to which any instrument measures what it is intended to measure (Zhang, 2000). Validity of the instrument was ensured through constructive criticism from the research advisor who has had an extensive experience in questionnaire. The items were revised and improved according to the advisor's advice and suggestions.

Reliability estimates the consistency of the measurement or more simply, the degree to which an instrument measures the same way each time it is used under the same conditions with the same subjects (Adams, Khan, Raeside, & White, 2007). That is, if we measure something many times and the result is always the same, then we can say that our measurement instrument is reliable.

Internal consistency reliability is a commonly used psychometric measure in assessing survey instruments and scales. Internal consistency is measured by calculating a statistic known as Crobach's coefficient alpha (Cronbach, 1951; Nunnally, 1967 as cited in Zhang, 2000). Generally, reliability coefficients of 0.70 or more are considered good (Nunnally, 1967 as cited in Zhang, 2000).

Table 14 shows that the reliability coefficients (Cronbach's alpha) ranged from 0.770 to 0.950 for TQM dimensions in all the three banks indicating that more of the dimensions were more reliable. The general reliability coefficients of TQM dimensions for CBE, Awash Bank and DGB are 0.977, 0.960 and 0.974, respectively. Accordingly, the instrument developed for measuring the impact of TQM on employee performance was reliable.

Table 14: Reliability Coefficients

No.	TQM Dimensions	Number of items	Cronbach's Alpha		
			CBE	Awash	DGB
1	TMCL	19	0.949	0.938	0.926
2	ETE	20	0.950	0.850	0.935
3	EEI	16	0.880	0.948	0.926
4	CMMQ	12	0.936	0.770	0.900
5	CI	8	0.912	0.898	0.931
General Reliability Coefficients for TQM Dimensions			**0.977**	**0.960**	**0.974**

Source: Researcher (2020)

4.5 Correlations Analysis

Correlation is a statistical tool which can determine the strength and direction of relationship between two variables (Khalid & Irshad, 2010). Correlation measures the degree of association between two or more variables simultaneously (Njeru & Omondi, 2016). Correlation implies only a relationship rather than a cause-and-effect relationship. The Pearson (product moment) correlation coefficient (denoted as r) varies over a range of +1 through 0 to -1 (Cooper

& Schindler, 2014). Correlation coefficients reveal the magnitude and direction of relationships. A value of +1 represents a perfect positive correlation. A value of -1 represents a perfect negative correlation. A value of 0 meaning the variables are perfectly independent (Saunders et al., 2007).

According to Saunders et al. (2007), testing the probability of a relationship between variables occurring by chance alone if there really was no difference in the population from which that sample was drawn is known as significance testing. If the probability of test statistic or one more extreme having occurred by chance alone is very low (usually $p = 0.05$ or lower), then you have a statistically significant relationship. If the probability of obtaining the test statistic or one more extreme by chance alone is higher than 0.05, then you conclude that the relationship is not statistically significant.

In this study the aim is to establish whether there is linear relation between the dependent variable (Employee Performance (EP)) and independent variables (Top Management Commitment and Leadership (TMCL), Employee Training and Education (ETE), Employee Empowerment and Involvement (EEI), Continuous Measurement and Management of Quality (CMMQ), and Continuous Improvement (CI)) at 95% confidence interval and 5% level of significance.

Table 15-17 indicate the correlation between the independent variables (Top Management Commitment and Leadership (TMCL), Employee Training and Education (ETE), Employee Empowerment and Involvement (EEI), Continuous Measurement and Management of Quality (CMMQ), and Continuous Improvement (CI) and dependent variable (Employee Performance (EP)) at Commercial Bank of Ethiopia, Awash Bank, and Debub Global Bank respectively.

In all the three commercial banks (see table 15-17) the correlation matrix the value of correlation coefficient in each cell of the matrix is strong positive ($r > 0.5$) and the probability of this correlation coefficient occurring by chance alone is less than 0.01. Using the data in this matrix

the finding revealed that there is a statistically significant strong positive relationship between all the independent variables and employee performance ($r > 0.5$, $p < 0.01$).

Table 15: Correlations Matrix (for CBE)

		TMCL	ETE	EEI	CMMQ	CI	EP
TMCL	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	214					
ETE	Pearson Correlation	0.688**	1				
	Sig. (2-tailed)	0					
	N	214	214				
EEI	Pearson Correlation	0.722**	0.693**	1			
	Sig. (2-tailed)	0	0				
	N	214	214	214			
CMMQ	Pearson Correlation	0.700**	0.670**	0.831**	1		
	Sig. (2-tailed)	0	0	0			
	N	214	214	214	214		
CI	Pearson Correlation	0.629**	0.625**	0.735**	0.793**	1	
	Sig. (2-tailed)	0	0	0	0		
	N	214	214	214	214	214	
EP	Pearson Correlation	0.705**	0.772**	0.767**	0.793**	0.704**	1
	Sig. (2-tailed)	0	0	0	0	0	
	N	214	214	214	214	214	214

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

Source: Researcher (2020)

Table 16: Correlations Matrix (for Awash)

		TMCL	ETE	EEI	CMMQ	CI	EP
TMCL	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	124					
ETE	Pearson Correlation	0.583**	1				
	Sig. (2-tailed)	0					
	N	124	124				
EEI	Pearson Correlation	0.668**	0.683**	1			
	Sig. (2-tailed)	0	0				
	N	124	124	124			
CMMQ	Pearson Correlation	0.645**	0.588**	0.760**	1		
	Sig. (2-tailed)	0	0	0			
	N	124	124	124	124		
CI	Pearson Correlation	0.635**	0.551**	0.762**	0.755**	1	
	Sig. (2-tailed)	0	0	0	0		
	N	124	124	124	124	124	
EP	Pearson Correlation	0.677**	0.705**	0.793**	0.703**	0.661**	1
	Sig. (2-tailed)	0	0	0	0	0	
	N	124	124	124	124	124	124

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Researcher (2020)

Table 17: Correlations Matrix (for DGB)

		TMCL	ETE	EEI	CMMQ	CI	EP
TMCL	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	40					
ETE	Pearson Correlation	0.615**	1				
	Sig. (2-tailed)	0.000					
	N	40	40				
EEI	Pearson Correlation	0.742**	0.549**	1			
	Sig. (2-tailed)	0.000	0.000				
	N	40	40	40			
CMMQ	Pearson Correlation	0.706**	0.503**	0.723**	1		
	Sig. (2-tailed)	0.000	0.001	0.000			
	N	40	40	40	40		
CI	Pearson Correlation	0.697**	0.490**	0.791**	0.850**	1	
	Sig. (2-tailed)	0.000	0.001	0.000	0.000		
	N	40	40	40	40	40	
EP	Pearson Correlation	0.716**	0.682**	0.770**	0.764**	0.738**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	
	N	40	40	40	40	40	40

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Researcher (2020)

4.6 Regression Analysis

Regression is the determination of a statistical relationship between two or more variables. Regression analysis is used to predict the values of a dependent variable given the values of one or more independent variables by calculating a regression equation. The process of calculating a coefficient of multiple determination (or multiple regression coefficient) and regression equation using two or more independent variables is termed multiple regression analysis (Saunders et al., 2007). This study conducted multiple regression analysis to establish the influence of total quality management on employee performance of three commercial banks operating in Ethiopia. The findings from the regression analysis are indicated in subsequent sections.

4.6.1 Diagnostics Test Analysis

4.6.1.1 Multi-collinearity Test

Multi-collinearity is an often encountered statistical phenomenon in which two or more independent variables in a multiple regression model are highly correlated (Sekaran & Bougie, 2016). A problem occurs when the explanatory variables are very highly correlated with each other, and this problem is known as multi-collinearity (Brooks, 2014).

According to Sekaran and Bougie (2016), more common measures for identifying multi-collinearity are the tolerance value and the variance inflation factor (VIF - the inverse of the tolerance value). These measures indicate the degree to which one independent variable is explained by the other independent variables. A common cutoff value is a tolerance value of 0.10, which corresponds to a VIF of 10.

Table 18 shows the analysis of collinearity statistics that indicates the tolerance and VIF values for CBE, Awash Bank and DGB ensuring there is no problem of multi-collinearity.

Table 18: Collinearity Statistics

TQM Dimensions	CBE		Awash Bank		DGB	
	Tolerance	VIF	Tolerance	VIF	Tolerance	VIF
TMCL	0.395	2.531	0.475	2.105	0.346	2.887
ETE	0.430	2.328	0.500	2.000	0.600	1.666
EEI	0.252	3.967	0.275	3.632	0.298	3.357
CMMQ	0.227	4.414	0.332	3.011	0.251	3.988
CI	0.344	2.907	0.336	2.976	0.212	4.727

Source: Researcher (2020)

4.6.1.2 Autocorrelation Test

According to Saunders et al. (2007), autocorrelation is the extent to which the value of a variable at a particular time is related to its value at the previous time period. The Durbin-Watson statistic can be used to discover whether the value of dependent variable at time is related to its value at the previous time period. The Durbin–Watson statistic ranges in value from zero to four. A value of two indicates no autocorrelation. A value towards zero indicates positive autocorrelation. A value towards four indicates negative autocorrelation.

Accordingly, table 19 shows Durbin-Watson values of 1.842, 2.172 and 2.047 for CBE, Awash Bank and DGB respectively. These values are near to 2 indicating that there is no autocorrelation problem.

Table 19: Autocorrelation Test

Durbin-Watson statistic		
CBE	Awash Bank	DGB
1.842	2.172	2.047

Source: Researcher (2020)

4.6.1.3 Normality Test

Normality is one of the most common assumptions made in the development and use of statistical procedures (Thode, 2002). Prior to using statistical tests, it is necessary to assess the normality of data. There are two main methods of assessing normality: graphically and numerically.

According to Das and Imon (2016), graphical methods provide powerful diagnostic tools for confirming normality assumption. Some statistical plots such as scatter plots, and residual plots are advised for checking or diagnostic statistical method. Graphical plot (histogram), stem-and-leaf plots, box plots, percent-percent (P-P) plots, quantile-quantile (Q-Q) plots, plots of the empirical cumulative distribution function and other variants of probability plots have most application for normality assumption checking.

In this study histogram and probability-probability (P-P) plot were selected to test the normality pattern of the data. Data represented by bell-shaped histogram showed normal distribution. When a P-P plot looks like straight line (or there is no curve then it contains no outliers), it shows a normality pattern of data. Thus, in all the three banks the graph of histogram and P-P plot showed that the data are normally distributed (see figure 2-7).

Figure 2: Histogram (for CBE)

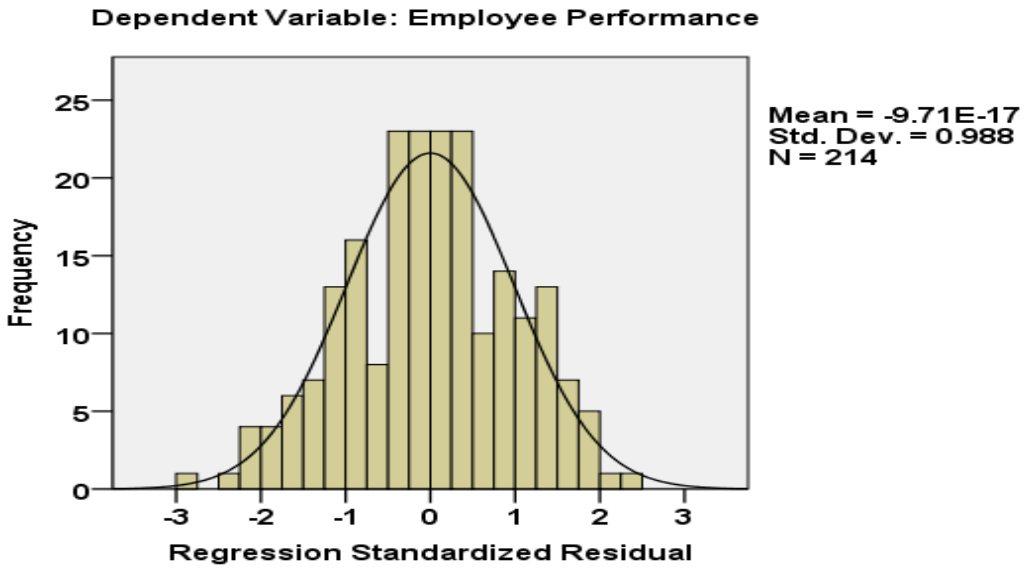


Figure 3: Normal P-P Plot of Regression Standardized Residual (for CBE)

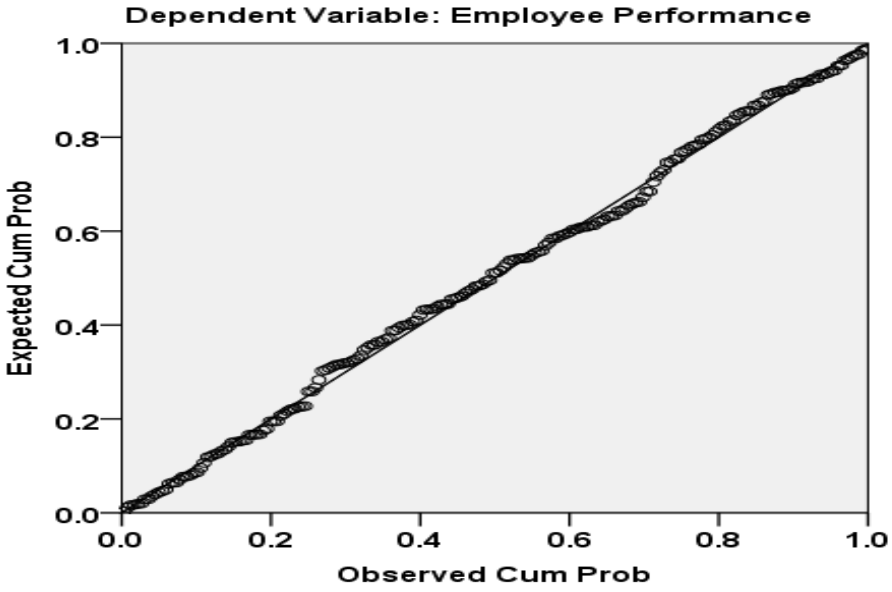


Figure 4: Histogram (for Awash Bank)

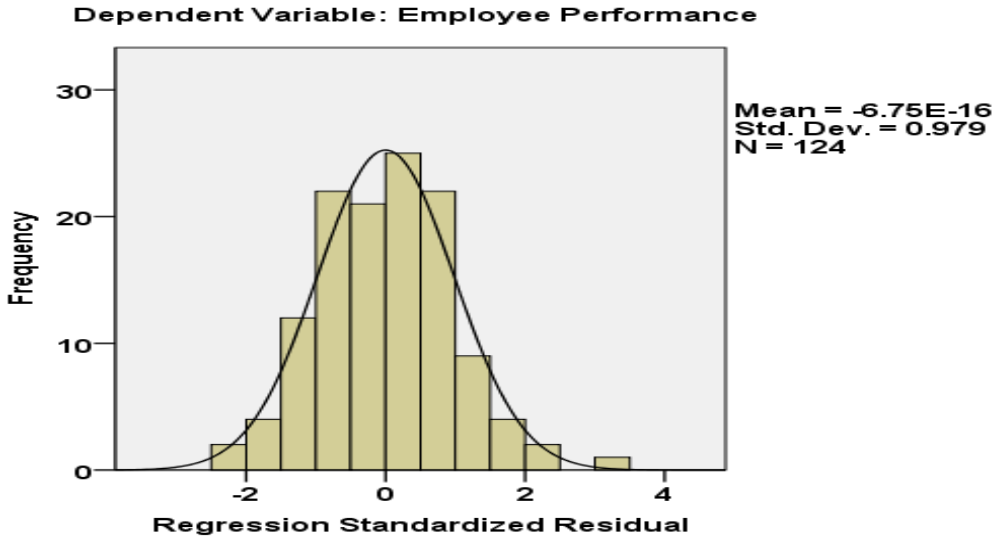


Figure 5: Normal P-P Plot of Regression Standardized Residual (for Awash Bank)

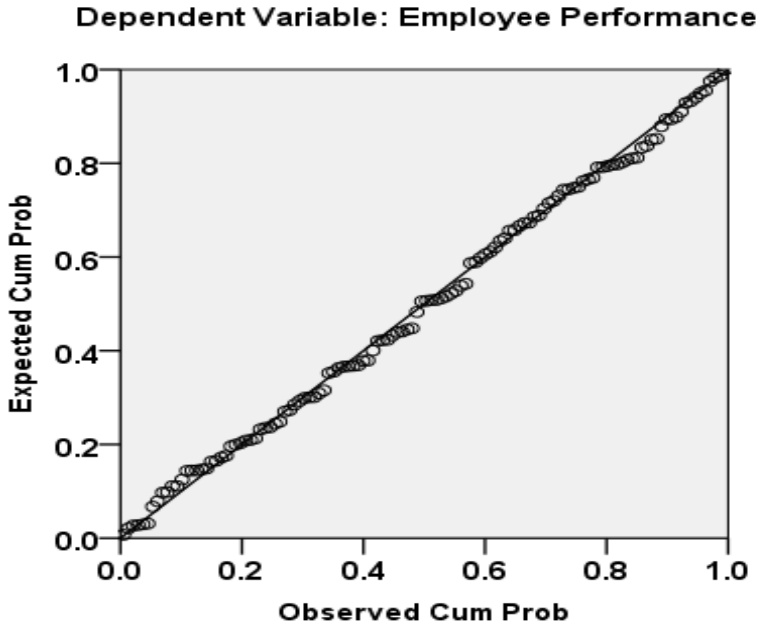


Figure 6: Histogram (for DGB)

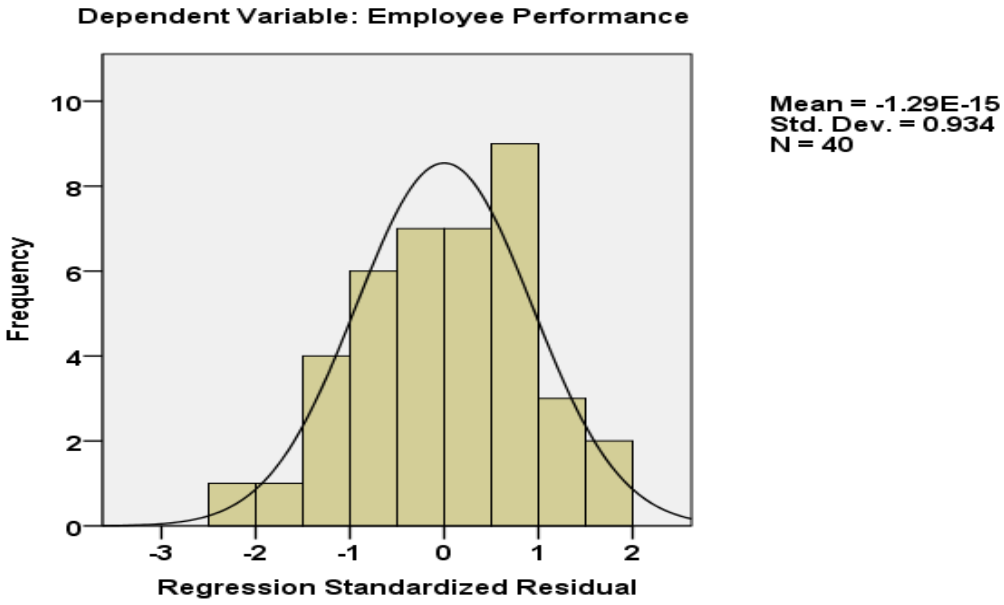
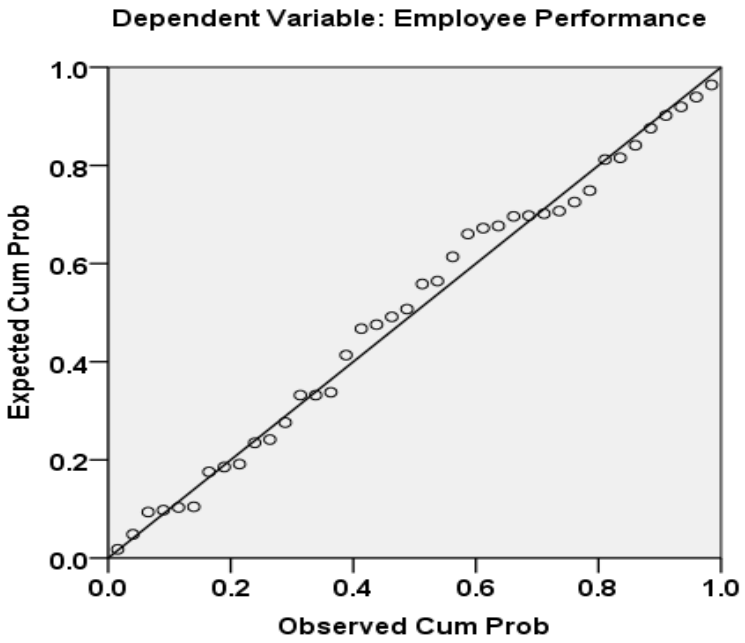


Figure 7: Normal P-P Plot of Regression Standardized Residual (for DGB)



4.6.1.4 Homoscedasticity Test

The assumption of homoscedasticity assumes that the variance of the errors along the line of best fit remain similar (constant) along the line. When the homoscedasticity assumption is met, residuals will form a patternless cloud of dots. This assumption was checked by scatter plot of the residuals against the predicted values of the dependent variable. Thus, in all the three banks the scatterplot showed that the data meets the assumption of homoscedasticity (see figure 8-10).

Figure 8: Scatterplot (for CBE)

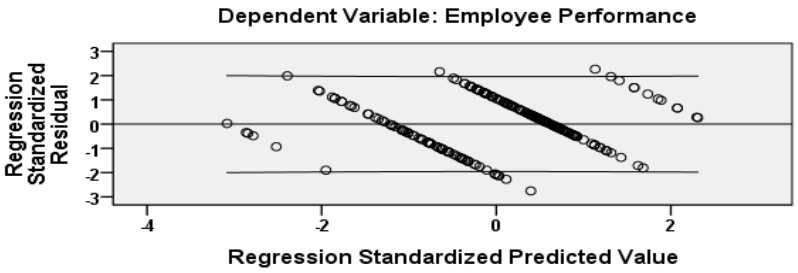


Figure 9: Scatterplot (for Awash)

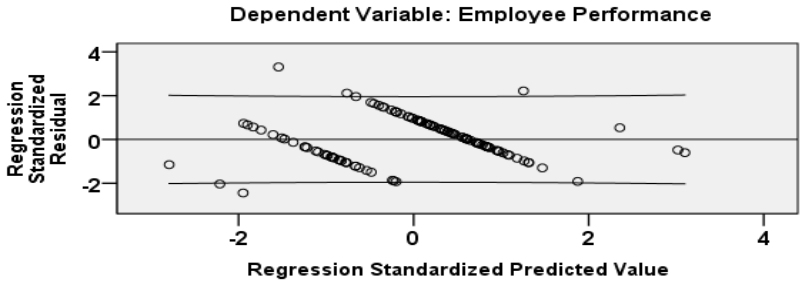
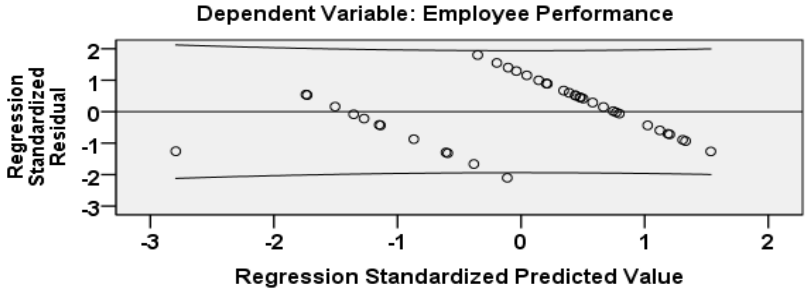


Figure 10: Scatterplot (for DGB)



4.6.1.5 Linearity Test

According to Ganson (2012) there are variety of methods in testing linearity. These methods are graphical methods (scatterplots of standardized residuals against standardized estimates or fitted values), curve fitting with R-squared difference tests, ANOVA test of linearity, and Ramsey's RESET test.

In this study ANOVA test of linearity were selected to test the linearity relationship of the variables. In ANOVA table when F significance value is below the critical value (less than 0.05) then there is significant nonlinearity. In all the three banks F significance values were greater than the critical values (see table 21). Thus, in this study, the relationship existed between variables showed linearity relationship.

4.6.2 Regression Model Summary

The R value represents degree of correlation. The coefficient of multiple determination (R^2) indicates the degree of the goodness of fit for estimated multiple regression equation. It measures the proportion of the variation in a dependent variable that can be explained statistically by the independent variables (Saunders et al., 2007). The value of coefficient of multiple determination (R^2) ranges between 0 and 1, where 0 means no variation explained by independent variables and 1 means 100% variation explained by the independent variables (Khalid & Irshad, 2010).

Table 20 shows model summary for CBE, Awash Bank and DGB. For CBE the value of coefficient of multiple determination (R^2) is 0.748. This result implies that 74.8% variation of employee performance was explained in all the independent variables (top management commitment and leadership, employee training and education, employee empowerment and involvement, continuous measurement and management of quality facts, and continuous

improvement). The remaining 25.2% variation of employee performance was explained by other factors not included in this study.

For Awash Bank the value of coefficient of multiple determination (R^2) is 0.709. This result implies that 70.9% variation of employee performance was explained in all the independent variables (top management commitment and leadership, employee training and education, employee empowerment and involvement, continuous measurement and management of quality, and continuous improvement). The remaining 29.1% variation of employee performance was explained by other factors not included in this study.

For DGB the value of coefficient of multiple determination (R^2) is 0.752. This implies that 75.2% variation of employee performance was explained in all the independent variables (top management commitment and leadership, employee training and education, employee empowerment and involvement, continuous measurement and management of quality, and continuous improvement). The remaining 24.8% variation of employee performance was explained by other factors not included in this study.

The strength of association of independent variables with the dependent variable in DGB, CBE, and Awash Bank was 75.2%, 74.8%, 70.9%, respectively. In all the three banks the value of coefficient of multiple determination (R^2) is greater than 70%. This shows that the independent variables in each models play a strong role in influencing the employee performance.

Table 20: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
CBE	0.865[a]	0.748	0.742	0.31870
Awash	0.842[a]	0.709	0.697	0.31390
DGB	0.867[a]	0.752	0.715	0.28469

a. Predictors: (Constant), Continuous Improvement, Employee Training and Education, Top Management Commitment and Leadership, Employee Empowerment and Involvement, Continuous Measurement and Management of Quality

Source: Researcher (2020)

4.6.3 ANOVA Test

Analysis of variance (ANOVA) reports how well the regression equation fits the data (i.e., predicts the dependent variable). The ANOVA test is used to determine whether the model is important in predicting the employee performance.

Table 21 shows ANOVA test from CBE, Awash Bank and DGB. The ANOVA test from CBE produced an F-value of 123.364 being significant at P = 0.000 which is less than 0.05 level of significance. The ANOVA test from Awash Bank produced an F-value of 57.511 being significant at P = 0.000 which is less than 0.05 level of significance. The ANOVA test from DGB produced an F-value of 20.590 being significant at P = 0.000 which is less than 0.05 level of significance.

At 0.05 level of significance (P = 0.000 < 0.05) the ANOVA test indicated that the regression models for each bank are important and statistically significant in predicting how the independent variables such as top management commitment and leadership, employee training and education, employee empowerment and involvement, continuous measurement and management of quality, and continuous improvement affect employee performance.

The F-value obtained from the study indicated that CBE regression model better fitted to the data than the models for Awash Bank and DGB (see table 21).

Table 21: ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
CBE	Regression	62.649	5	12.530	123.364	0.000[b]
	Residual	21.126	208	0.102		
	Total	83.776	213			
Awash	Regression	28.333	5	5.667	57.511	0.000[b]
	Residual	11.627	118	0.099		
	Total	39.960	123			
DGB	Regression	8.344	5	1.669	20.590	0.000[b]
	Residual	2.756	34	0.081		
	Total	11.100	39			

a. Dependent Variable: Employee Performance

b. Predictors: (Constant), Continuous Improvement, Employee Training and Education, Top Management Commitment and Leadership, Employee Empowerment and Involvement, Continuous Measurement and Management of Quality

Source: Researcher (2020)

4.6.4 Regression Coefficients

This study put emphasis on to establish the extent to which independent variables (TMCL, ETE, EEI, CMMQ, and CI) affect employee performance. Regression coefficients show the most and the least impact of the independent variables on the dependent variable.

Table 22 shows the individual outcome and the effectiveness of the influence of independent variables (TMCL, ETE, EEI, CMMQ, and CI) on the employee performance in the three commercial banks operating in Addis Ababa.

In CBE employee training and education (β = 0.355, P = 0.000) and continuous measurement and management of quality (β = 0.325, P = 0.000) have positive and significant influence on employee performance. Whereas top management commitment and leadership (β =

0.096, P = 0.086), employee empowerment and involvement (β = 0.133, P = 0.056) and continuous improvement (β = 0.066, P = 0.267) have positive and insignificant influence on employee performance.

In Awash Bank top management commitment and leadership (β = 0.174, P = 0.017), employee training and education (β = 0.247, P = 0.001), and employee empowerment and involvement (β = 0.396, P = 0.000) have positive and significant influence on employee performance. Whereas continuous measurement and management of quality (β = 0.138, P = 0.112) and continuous improvement (β = 0.008, P = 0.926) have positive and insignificant influence on employee performance.

In DGB only employee training and education (β = 0.304, P = 0.009) have positive and significant influence on employee performance. Whereas other variables such as top management commitment and leadership (β = 0.050, P = 0.732) employee empowerment and involvement (β = 0.295, P = 0.068) continuous measurement and management of quality (β = 0.323, P = 0.067) and continuous improvement (β = 0.046, P = 0.806) have positive and insignificant influence on employee performance.

Table 22: Regression Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
CBE	(Constant)	0.742	0.130		5.725	0.000
	TMCL	0.005	0.003	0.096	1.724	0.086
	ETE	0.016	0.002	0.355	6.687	0.000
	EEI	0.007	0.003	0.133	1.922	0.056
	CMMQ	0.022	0.005	0.325	4.438	0.000
	CI	0.007	0.006	0.066	1.113	0.267
Awash	(Constant)	0.695	0.205		3.388	0.001
	TMCL	0.009	0.004	0.174	2.418	0.017
	ETE	0.010	0.003	0.247	3.523	0.001
	EEI	0.022	0.005	0.396	4.190	0.000
	CMMQ	0.008	0.005	0.138	1.601	0.112
	CI	0.001	0.009	0.008	0.094	0.926
DGB	(Constant)	0.500	0.329		1.521	0.138
	TMCL	0.003	0.007	0.050	0.346	0.732
	ETE	0.013	0.005	0.304	2.758	0.009
	EEI	0.016	0.009	0.295	1.884	0.068
	CMMQ	0.025	0.013	0.323	1.894	0.067
	CI	0.004	0.018	0.046	0.248	0.806

a. Dependent Variable: Employee Performance

Source: Researcher (2020)

Based on table 22 using standardized beta coefficients the regression equation ($EP = \beta_0 + \beta_1 TMCL + \beta_2 ETE + \beta_3 EEI + \beta_4 CMMQ + \beta_5 CI$) for the three banks become:

1) For CBE: EP = 0.355 ETE + 0.325CMMQ

2) For Awash: EP = 0.174 TMCL + 0.247 ETE + 0.396 EEI

3) For DGB: EP = 0.304 ETE

According to these models, keeping all other independent variables constant, a unit increase in employee training and education (ETE) will lead to 0.355, 0.247, and 0.304 increase in employee performance (EP) in CBE, Awash Bank and DGB, respectively. A unit increase in continuous measurement and management of quality (CMMQ) will lead to 0.325 increase in employee

performance in CBE. A unit increase in top management commitment and leadership (TMCL) will lead to 0.174 increase in employee performance in Awash Bank. A unit increase in employee empowerment and involvement (EEI) will lead to 0.396 increase in employee performance in Awash Bank.

4.6.5 Hypotheses Testing

One method of evaluating quantitative research questions or hypotheses is via a process called hypothesis testing which is sometimes also referred to as significance testing. Saunders et al. (2007) stated that if the probability of your test statistic or one more extreme having occurred by chance alone is very low (usually p = 0.05 or lower), then you have a statistically significant relationship. Statisticians refer to this as rejecting the null hypothesis (H_0). If the probability of obtaining the test statistic or one more extreme by chance alone is higher than 0.05, then you conclude that the relationship is not statistically significant. Statisticians refer to this as accepting the null hypothesis (H_0). Thus, the hypotheses proposed for this study could be analyzed and interpreted based on table 22 as follows:

Hypothesis 1: There is a significant positive impact of top management commitment and leadership on employee performance.

In Awash Bank top management commitment and leadership has a significance value less than 0.05 (P = 0.017) and a positive beta coefficient value (β = 0.174). This result supports the alternative hypothesis of this study. Thus, accept the alternative hypothesis which confirms that it has a significant positive impact on employee performance.

In CBE and DGB top management commitment and leadership has a significance value greater than 0.05 (P = 0.086 for CBE and P = 0.732 for DGB) and a positive coefficient value (β = 0.096 for CBE and β = 0.050 for DGB). This confirms that top management commitment and leadership

has no a significant positive impact on employee performance. Hence, accept the null hypothesis which means there is no significant positive impact of top management commitment and leadership on employee performance.

Hypothesis 2: There is a significant positive impact of employee training and education on employee performance.

In all the three banks employee training and education has a significance value less than 0.05 (P = 0.000 for CBE, P = 0.001 for Awash and P = 0.009 for DGB) and a positive beta coefficient value (β = 0.355 for CBE, β = 0.247 for Awash, β = 0.304 for DGB). This result supports the alternative hypothesis of the study. Hence, accept the alternative hypothesis which means there is a significant positive impact of employee training and education on employee performance in all the three banks.

Hypothesis 3: There is a significant positive impact of employee empowerment and involvement on employee performance.

In Awash Bank employee empowerment and involvement has a significance value less than 0.05 (P = 0.000) and a positive beta coefficient value (β = 0.396). This result supports the alternative hypothesis of this study. Thus, accept the alternative hypothesis which confirms that empowerment and involvement has a significant positive impact on employee performance.

In CBE and DGB employee empowerment and involvement has a significance value greater than 0.05 (P = 0.056 for CBE and P = 0.068 for DGB) and a positive beta coefficient value (β = 0.133 for CBE and β = 0.295 for DGB). This result confirms that employee empowerment and involvement has no significant positive impact on employee performance. Hence, accept the null hypothesis which means there is no significant positive impact of employee empowerment and involvement on employee performance in both banks.

Hypothesis 4: There is a significant positive impact of continuous measurement and management of quality on employee performance.

In CBE continuous measurement and management of quality facts has a significance value less than 0.05 (P = 0.000) and a positive beta coefficient value (β = 0.325). This result supports the alternative hypothesis of the study. Hence, accept the alternative hypothesis which means there is a significant positive impact of continuous measurement and management of quality on employee performance.

In Awash Bank and DGB continuous measurement and management of quality has a significance value greater than 0.05 (P = 0.112 for Awash and P = 0.067 for DGB) and a positive beta coefficient value (β = 0.138 for Awash and β =0.323 for DGB). This result supports the null hypothesis of the study. Hence, accept the null hypothesis which confirms that there is no a significant positive impact of continuous measurement and management of quality on employee performance in both banks.

Hypothesis 5: There is a significant positive impact of continuous improvement on employee performance.

In all the three banks continuous improvement has a significance value greater than 0.05 (P = 0.267 for CBE, P = 0.926 for Awash and P = 806 for DGB) and a positive beta coefficient value (β = 0.066 for CBE, β = 0.008 for Awash and β = 0.046 for DGB). This result supports the null hypothesis of the study. Hence, accept the null hypothesis which confirms that there is no a significant positive impact of continuous improvement on employee performance in all banks.

Table 23: Summary of Hypothesis Testing

Summary of Hypothesis Testing

Hypothesis		CBE				Awash				DGB			
		β Value	**P Value**	**Nature of Relationship**	**Decision**	**β Value**	**P Value**	**Nature of Relationship**	**Decision**	**β Value**	**P Value**	**Nature of Relationship**	**Decision**
Hypothesis 1	**There is a significant positive impact of top management commitment and leadership on employee performance.**	0.096	0.086	Positive	**Rejected**	0.174	0.017	Positive	**Accepted**	0.050	0.138	Positive	**Rejected**
Hypothesis 2	**There is a significant positive impact of employee training and education on employee performance**	0.355	0.000	Positive	**Accepted**	0.247	0.001	Positive	**Accepted**	0.304	0.732	Positive	**Accepted**
Hypothesis 3	**There is a significant positive impact of employee empowerment and involvement on employee performance.**	0.133	0.056	Positive	**Rejected**	0.396	0.000	Positive	**Accepted**	0.295	0.009	Positive	**Rejected**
Hypothesis 4	**There is a significant positive impact of continuous measurement and management of quality on employee performance.**	0.325	0.000	Positive	**Accepted**	0.138	0.112	Positive	**Rejected**	0.323	0.068	Positive	**Rejected**
Hypothesis 5	**There is a significant positive impact of continuous improvement on employee performance.**	0.066	0.267	Positive	**Rejected**	0.008	0.926	Positive	**Rejected**	0.046	0.067	Positive	**Rejected**

Source: Researcher (2020)

4.7 Interview Data Analysis

The respondents of the interview questions were Corporate Quality Assurance Vice President, Business Banking Director and Corporate Services Vice President from Commercial Bank of Ethiopia, Awash Bank and Debub Global Bank, respectively.

4.7.1 Commercial Bank of Ethiopia (CBE)

According to the interview, CBE has established quality assurance organs at district, department, and division levels so as to realize one of its strategic pillars ‘‘Business Excellence’’. The quality management activities involve overseeing all activities and tasks needed to maintain a desired level of excellence through determination of quality framework, standards, inspection, assurance and quality improvement on a continuous manner. The quality management function starts from quality planning and goes all the way to ensuring total quality management in the bank.

The objectives of quality management in the bank includes but not limited to the following:

- To provides services in the bank dependably and accurately as well as with emotion and passion to the expectation of customers and other stakeholders.
- To inspire trust and confidence on the mind of customers and other stakeholders regarding the bank’s products and services.
- To ensure business excellence in the bank through continuous improvement of processes, people, products and services.
- To meet the standards in the physical facilities, office layout and appearance that is appealing and helps to enhance the bank’s image.
- In general, to meet the bank’s strategic theme of ‘‘Business Excellence’’.

The quality management structure of the bank includes a corporate quality assurance division which directly reports to the President/CEO of the bank and the following departments and units which functionally report to the vice president- corporate quality assurance division: banking business quality assurance department, international banking quality assurance department, Credit quality assurance department, HR quality assurance department, IS quality assurance department, facility management quality assurance department, and Interest Free Banking (IFB) quality assurance unit.

The internal control team in the branch is responsible for the quality management functions of the branch and functionally report to the district quality assurance managers. The quality assurance managers in each district offices are the quality ambassadors in all matters like HR, Credit business, Banking business, International banking, IFB, Facility management, and IS. There are also quality assurance managers in all the consumer credit centers which are functionally reporting to the director quality assurance credit business.

Service quality, product quality, technology quality, project quality, process and system quality, resource management quality, inter-sectoral/divisional coordination/integration, and strategy planning quality are key quality management areas of the bank. Thus, quality management implementation ensures better employee performance and customer satisfaction.

4.7.2 Awash Bank

According to the data obtained through interview, Awash Bank has quality assurance organs established at district, department, division, and branch levels. The quality assurance organs of the bank mainly include Asset quality department, Service quality department, Risk and compliance department, and process management or improvement team.

Total quality management is one of the main pillars of the bank. All employees from top levels (CEO) to lower level employees are responsible for quality management activities. Quality is key performance indicator in the bank. Total quality management continuously followed and evaluated at all levels of the bank. Awash Bank is the first commercial bank in Ethiopia that started quality implementation in collaboration with KPMG international consultant.

Asset quality department like credit analysis and portfolio management mainly assures lower level of nonperforming loans. Service quality department like retail & SME banking assures service quality through intelligence workers or quality inspectors and they observe customer service excellence, customer treatments, and cooperativeness of employees. In addition, service quality can be evaluated through call centers, suggestion box and social medias. Risk and compliance department identify problems and prepares training and development programs in collaboration with human resource development department.

The main objectives of quality programs in Awash Bank are to increase employee performance, increase productivity, service excellence, customer satisfaction, process improvement and other related functions. As per the interview, in the absence of knowledge gap, total quality management principles have straight direct positive relationship with employee performance.

4.7.3 Debub Global Bank (DGB)

Debub Global Bank is one of a small sized commercial banks operating in Ethiopia. It has no established quality assurance organs that oversee all activities and tasks needed to maintain a desired level of excellence through quality framework, standards, inspection, assurance and quality improvement on a continuous manner.

Even though the bank has no quality assurance organs, it has internal audit team, risk management team and human resource team organized at department level. Internal audit team conduct independent objective assurance and consulting activity which is guided by a philosophy of adding value to improve operations of the bank. This department assists the bank by bringing systematic and disciplined approach to evaluate and improve the effectiveness of the bank. The risk management team identify, measure, monitor and control inherent risks that pop-up in the course of doing business. The human resource team provide skill upgrading trainings for the employees of the bank to achieve better employee performance, customer satisfaction and business growth.

Chapter Five

Summary, Conclusions and Recommendations

5.1 Summary

The objective of 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. In Awash Bank and DGB top management commitment and leadership represented the highest level with mean score 3.76 and 3.66 respectively as compared with other dimensions and this variable was determined as the most critical success factor for TQM in both banks.

In all the three banks the correlation between all the independent variables and employee performance is greater than 0.5 and the probability of this correlation coefficient occurring by chance alone is less than 0.01. The finding revealed that there is a statistically significant strong positive relationship between all the independent variables and employee performance ($r > 0.5$ and $p < 0.01$).

In CBE the finding revealed that the value of coefficient of multiple determination (R^2) is 0.748. This result implies that 74.8% variation of employee performance was explained in all the independent variables and the remaining 25.2% variation of employee performance was explained by other factors not included in study. In Awash Bank the value of coefficient of multiple determination (R^2) is 0.709. This result implies that 70.9% variation of employee performance was explained in all the independent variables and the remaining 29.1% variation of employee

performance was explained by other factors not included in study. In DGB the value of coefficient of multiple determination (R^2) is 0.752. This result implies that 75.2% variation of employee performance was explained in all the independent variables and the remaining 24.8% variation of employee performance was explained by other factors not included in study. Hence, in all the three banks the value of coefficient of multiple determination (R^2) is greater than 70%. This result shows that the independent variables in each models play a strong role in influencing the employee performance.

The ANOVA test is used to determine whether the model is important in predicting the employee performance. The ANOVA test from CBE produced an F-value of 123.364 being significant at P = 0.000 which is less than 0.05 level of significance. The ANOVA test from Awash Bank produced an F-value of 57.511 being significant at P = 0.000 which is less than 0.05 level of significance. The ANOVA test from DGB produced an F-value of 20.590 being significant at P = 0.000 which is less than 0.05 level of significance. Hence, at 0.05 level of significance (P = 0.000 < 0.05) the ANOVA test indicated that the regression model for each bank is important and statistically significant in predicting how the independent variables affect employee performance.

The individual outcome and the effectiveness of the influence of independent variables (TQM dimensions) on the employee performance in each bank was determined in terms of regression coefficients. In all the three banks all the independent variables have a positive relationship with employee performance.

In CBE only two independent variables such as employee training and education, and continuous measurement and management of quality have a statistically positive significant impact on employee performance. In Awash Bank only three independent variables such as top management commitment and leadership, employee training and education, and employee

empowerment and involvement have a statistically positive significant impact on employee performance. In DGB only employee training and education has a statistically positive significant impact on employee performance.

5.2 Conclusions

The study tried to test the relationship that exists between TQM dimensions and employee performance. The main hypothesis of the study was that TQM dimensions have a significant positive impact on employee performance. Most of the previous TQM models focused on the impact of TQM dimensions towards organizational performance only (Akhtar et al., 2014, Ngambi & Nkemkiafu, 2015). This study filled the gap by emphasizing the employee performance only and it proved that some of TQM dimensions used in the model have significant positive relationship towards employee performance.

Accordingly, training and education has a significant positive impact on employee performance in all the three banks. Top management commitment and leadership and employee empowerment and involvement has a significant positive impact on employee performance in Awash Bank only. Continuous measurement and management of quality has a significant positive impact on employee performance in CBE only. Whereas continuous improvement has no a statistically significant positive impact on employee performance in all the banks.

In general, the study concluded that all elements of TQM did not contribute to enhance productivity and performance of employees in all banks. This indicated that there is inappropriate practices and implementation of TQM in commercial banks operating in Addis Ababa.

5.3 Recommendations

This study examined the impact of TQM on employee performance by analyzing a number of principles relevant to TQM in case of commercial banks operating in Ethiopia. In the light of the result of the findings, developed recommendations to improve employee performance are as follows:

- The banks should develop a quality culture as an organizational behavior and they should establish team building activities that understand and utilize TQM principles.
- Top management of the banks should provide stronger leadership and be more involved at every management level in the bank. Top management should provide staff with required resources to ensure they have all they require to perform.
- The banks should renew the staff information with continuing training and education that may ultimately improves their performance and organizational productivity.
- The banks should create harmonious and positive environment between management and staff, taking the employees' opinions when making decisions. Management should encourage employees to express their views and suggestions at work and giving them recognition for better performance.
- The banks should adopt effective process management systems. Business process should be monitored and brought under control to improve employee performance.
- Continuous improvement of quality in every activity should be a way of life in all the banks.

5.4 Limitations of the study

A number of limitations can be linked to the study.

- First and foremost, the study was limited to head office of three commercial banks operating in Ethiopia.
- Responses were selectively sought from management and senior professionals working at head office.
- Not all the expected respondents did respond as the study managed to get only 79%, 72%, and 70% positive response from CBE, Awash Bank and DGB respectively.
- Sourcing information was difficult in some areas as some respondents were driven by fear of revealing confidential information.
- Financial problems and time constraints affected the study as the study required a lot of study and corrections from time to time. Equally time was not enough to ensure all responses were received as some respondents had lots of pressure at work to fill the questionnaires in time.
- It was not easy to get managers to fill the questionnaires and give adequate time for interview hence most of the respondents were mainly the departmental managers.

5.5 Suggestion for further research

- This study did not cover the all the entire commercial banks operating in Ethiopia. It would therefore be necessary to undertake a research that covers all the entire commercial banks to review the impact of TQM on employee performance for better generalization of the findings and issues.

- This study was limited to few dimensions of TQM such as top management commitment and leadership, employee training and education, employee empowerment and involvement, continuous measurement and management of quality facts, and continuous improvement. Future researches should focus on other factors of TQM that may influence employee performance.
- Pursuing the study in different organizations in Ethiopia and comparing the findings of this research would enable further understanding of the topic.

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Appendix 1: Letter of Assistance from AAU

College of Business and Economics ቢዝነስና ኢኮኖሚክስ ኮሌጅ

Department of Management, Graduate Programs Coordination Office የስራ አመራር ት/ክፍል የድህረ ምረቃ ፕሮግራሞች ማስተባበሪያ ቢሮ

Ref No : CBE/MGPCO/022/12
Date: November 8, 2019

To Whom It May Concern

Subject: **Request for Assistance**

Dear Sir/Madam:

Our M.Sc. in Management student, **Admasu Deressa** *(ID.No: GSE/4647/10)* has requested us to write him a support letter to collect data for his thesis entitled, ***"The Impact of Total Quality Management on Employee Performance: The Study on Commercial Banks in Ethiopia"***. Hence, we would like to request your esteemed organization to extend the necessary support and assistance to our student in the process of data collection and we would like to thank you in advance. At the culmination of the investigation, we will send you a copy of the student's thesis for your files, if needed. We are confident that you will appreciate the merit of such an engaged-scholarship of our students in training and research, some of whom may eventually work for your organization.

Kind regards,

Asres Abitie (PhD)
Coordinator, Graduate Programs of Management Department

Tel. +251 011-1-22 93 55 P.O.Box 5563 Fax +251 011-1-22 37 82

Appendix 2: Letter of Introduction

Subject: Filling Structured Research Questionnaire for M.Sc. Thesis Research at AAU

Dear respondents,

I am Admasu Deressa, a M.Sc. student at College of Business and Economics of AAU specializing in Management (Quality Management and Organizational Excellence). Currently, I am collecting research data for my thesis research entitled as "The Impact of Total Quality Management (TQM) dimensions on Employee Performance: A Comparative Study on Selected commercial banks Operating in Addis Ababa" with the objective to examine the "impact of total quality management dimensions on employee performance in three commercial banks operating in Addis Ababa". Based on your experience and knowledge, I politely request you to fill the attached research questionnaire (6 pages) herewith by marking appropriate response to each of them.

Your participation is essential for the successful completion of the study thesis and enhances the knowledge of total quality management and its impact on employee performance in three commercial banks operating in Addis Ababa. I also want to assure you that all information with respect to this research will be treated with confidence and will be used for academic purpose only.

With kind regards,

Admasu Deressa

Tel: 0923807750

Appendix 3: Questionnaire

Questionnaire

The research questionnaire has two main parts namely general information (part I) and total quality management dimensions and employee performance (part II). Under part I, there are 7 general questions. Part II has 6 sections. Section A (top management commitment and leadership) has 19 questions, section B (employee training and education) has 20 questions, section C (employee empowerment and involvement) has 16 questions, section D (continuous measurement and management of quality) has 12 questions, section E (continuous improvement) has 8 questions, and section F (employee performance) has 1 question.

Part One: General Information

Please tick (√) mark for each question to indicate your most appropriate response.

1) Gender ☐ Male ☐ Female

2) Age group (in years) ☐ 18-30 ☐ 31-40 ☐ 41-50 ☐ Over 50

3) Educational level (Qualification) ☐ Bachelor's Degree ☐ Master's Degree ☐ PhD

4) Your current job position ☐ Top Level Manager ☐ Middle Level Manager ☐ Lower Level Manager ☐ Senior Professional Employee (Senior Expert)

5) Your monthly income level

- ☐ Less than 15,000 birr
- ☐ 15,001-25,000 birr
- ☐ 25,001-35,000 birr
- ☐ Greater than 35,000 birr

6) How long have you worked at this bank?

- ☐ Less than 5 year
- ☐ 5-10 years
- ☐ 11-15 years
- ☐ Greater than 15 years

7) Name of your organization (bank)

- ☐ Commercial Bank of Ethiopia
- ☐ Awash Bank
- ☐ Debub Global Bank

Part Two: Total Quality Management (TQM) Dimensions and Employee Performance

Listed below are statements dealing with various issues of Total Quality Management (TQM) dimensions and employee performance. Please tick (√) mark for each question to indicate your most appropriate response.

A	Top management commitment and leadership	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
1	Top management actively encourages change and implements a culture of trust, involvement and commitment in moving towards 'Best Practice'.					
2	Senior management has a clear vision for implementing quality goals.					
3	Senior management empowers all employees to have adequate knowledge in quality procedures.					
4	Senior management creates a quality awareness among employees.					
5	Senior management is supportive of technology advancement to improve quality.					
6	Senior management establishes quality policy and quality objectives and communicates to organization.					
7	Senior management ensures the availability of resources to achieve quality management objectives.					
8	Regular review of suitability of quality policies and objectives takes place.					
9	The senior executives clearly articulate the organization's values relevant to quality and continuous quality improvement.					
10	The behavior of the senior executives is consistent with values relevant to quality and continuous quality improvement.					
11	The senior executives have demonstrated an ability to manage the changes (e.g., organizational, technological) needed to improve the quality and services.					
12	The senior executives act on suggestions to improve the quality and services.					
13	All major department heads within the organization accept their responsibility for quality.					

A	Top management commitment and leadership	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
14	Top management is personally involved in quality improvement projects.					
15	Quality issues are frequently reviewed in the organizational top management meetings.					
16	Top management strongly encourages employee suggestions in quality management and improvement activities.					
17	Top management actively participates in quality management and improvement process through training & development.					
18	The management team recognizes that success comes from employees.					
19	Managers develop and support improvement teams and make time available for them to work. They check the progress & recognize involvement, then they say “thank you”.					

B	Employee training and education	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
1	Our organization encourages employees to accept education and training.					
2	Our organization gives quality awareness education to employees.					
3	Our organization regards employees as valuable, long-term resources worthy of receiving education and training throughout their career.					
4	Our organization trains employees in quality concepts, taking care of their needs and developing their competencies.					
5	Our organization has a training program that includes all the employees.					
6	Our organization gives regular training to how to gather information concerning client, workforce and general works.					
7	Continuous training enables me to understand and satisfactorily meet the customers' needs and expectation.					
8	Employee training programs are regular and are geared towards bridging skill gaps of the employees.					
9	My decision making abilities are greatly improved by continuous training in the organization.					

B	Employee training and education	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
10	Continuous training boosts my confidence which enhances my performance.					
11	Continuous training enables me to regularly meet my set targets.					
12	Our organization continuous training reflects on the value the organization places on me as an employee.					
13	Our organization gives regular training to all employees on the processes for improvement.					
14	Our organization gives regular training to all employees on client satisfaction.					
15	Employees received training in quality principles.					
16	Our organization takes views or ideas of various cross functional departments before launching new training initiative.					
17	Our organization has training and development program for all the employees from lower to senior level.					
18	Most employees in our organization are trained on how to use quality management methods (tools).					
19	Our organization has both on the job and off the job training methodology.					
20	Post training you find positive change in your competency & technical skills.					

C	Employee empowerment and involvement	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
1	Our organization motivates, supports and encourages employees.					
2	Employees are provided the opportunity for involvement in quality management practices development and implementation.					
3	Employees are motivated to improve on quality management practices implementation through rewards and incentives.					
4	Employees effectively look for chances to improve their fitness, learning and experience.					
5	Employees from different levels are involved in making policies and plans.					
6	Our organization encourages suggestions from employees.					
7	Our organization encourage team work rather than individual work.					

C	Employee empowerment and involvement	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
8	Employees are encouraged to express their views and suggestions at work.					
9	There is a culture of openness in the organization.					
10	All views relevant to my work area are acted upon.					
11	Information is routinely shared with me about the organization performance.					
12	Employees receive feedback for their quality performance.					
13	Employees are fully participated in decision making about quality and operational issues.					
14	Employees are allowed to implement improvement activity without reference to management.					
15	Delegation of responsibility to employees at appropriate level takes place.					
16	Self-improvement is encouraged to improve skills and performance.					

D	Continuous measurement and management of quality	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
1	Quality performance data (defects, error, rework etc.) are collected and evaluated periodically in the organization.					
2	Our organization obtain and report quality data on all functions and departments.					
3	Our organization regularly monitors improvement in quality of products and processes.					
4	Employee satisfaction is monitored regularly to know organization actually meet employee expectations.					
5	Our organization measures effectiveness of training and its impact on employees.					
6	Processes and quality systems are continuously controlled and improved.					
7	There are organizational structures like quality control teams for continuous quality improvement.					
8	Decision-making is based on facts and data.					
9	Performance evaluation by management depends heavily on quality.					
10	Problem solving and continuous improvement processes are based on facts and systematic analysis.					

D	Continuous measurement and management of quality	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
11	Best practices of other organizations are examined for continuous improvement.					
12	Our organization has engaged in extensive benchmarking of business processes and products in other organizations.					

E	Continuous improvement	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
1	Employees are encouraged to be creative and innovative in improving processes for better performance.					
2	Our organization has an improvement perception not just maintaining the traditional work methods.					
3	Continuous quality improvement is part of all employees responsibility rather than of the quality department alone.					
4	Management and employees come together to embrace quality management as an organizational culture to be adopted by all.					
5	There is frequent re-training of employees to fill up any existing knowledge gap.					
6	Innovation and continuous improvements is the culture and business philosophy.					
7	Employees are always working to continuously improve the quality of service and work process.					
8	Employees voluntarily search for any work-related new information and knowledge which may help improve the quality of work they do.					

F	Employee performance	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
1	TQM factors such as top management commitment and leadership, employee training and education, employee empowerment and involvement, continuous measurement and management of quality, and continuous improvement have strong impact on employee performance.					

Appendix 4: Interview Questions

1. Does your banking organization have quality programs?
   a) Yes
   b) No
2. What quality improvement program do your banking organization have?
   a) Inspection
   b) Quality Control
   c) Quality Assurance
   d) Total Quality Management (TQM)
3. Who is responsible for quality in your organization? It may be all departments, everyone in the organization, or inspection (quality) department.

   Please explain your answers:

   ……

   ……
4. What are the major objectives of the quality programs in your organization? For example, increase productivity, cost reduction, involvement of employees in the quality building effort, customer satisfaction, processes improvement and others.

   Please explain your answers in regard to your organization:

   ……

   …..……..
5. There are different kinds of quality factors (principles) such as:
   a) Top management commitment and leadership
   b) Employee training and education

c) Employee empowerment and involvement

d) Quality measurement and management

e) Continuous improvement.

How does these quality factors (principles) influence employee performance in your organization? Are they practicable in your organization?

Please explain your answers:

……..…

…...……..….