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MSc Thesis

**The Impact of ISO 9001 Certification on Organizational
Performance: The Case of Adama Spinning Factory.**

BY:

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June, 2021

Addis Ababa, Ethiopia

The Impact of ISO 9001 Certification on Organizational Performance: The Case of Adama Spinning Factory.

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A THESIS SUBMITTED TO ADDIS ABABA UNIVERSITY, SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE (MSc) DEGREE IN QUALITY MANAGEMENT AND ORGANIZATIONAL EXCELLENCE

June, 2021

Addis Ababa, Ethiopia

Declaration

I the undersigned declare that this thesis entitled ‘The Impact of ISO 9001 Certification on Organizational Performance: The Case of Adama Spinning Factory’ is my original work; prepared under the guidance of my advisor Dr. Zelalem G/Tsadik. All source of material used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher institutions for the purpose of earning any degree. It is offered for the award of the degree of Master of Science in Management Specialization in Quality Management and Organizational Excellence from Addis Ababa University.

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Statement of Certification

This is to certify that the thesis prepared by Merertu Tezera entitled: ***The Impact of ISO 9001 Certification on Organizational Performance: The Case of Adama Spinning Factory***, and submitted in partial fulfillment of the requirements for the degree of Master of Science in Management Specialization in Quality Management and Organizational Excellence compiles with the regulations of the university and meets the accepted standards with respect to originality and quality.

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Abstract

The Ethiopian Textile industry is growing rapidly and the government has set the sector as a focus for the country's growth and development. Currently, ever than any time before competition between companies has been increasing in domestic and international market. To have a very good performance and competence to face the tough market competition, companies adopt and reconcile with different international standards. One of the standards is certification in ISO 9001 QMS. Certification of these organizations in ISO 9001 QMS believed to contribute in improving organizational performance. This research has been conducted to examine the impact of ISO 9001 QMS Certification on the Organizational Performance of Adama Spinning Factory. The study is necessitated by whether ISO 9001 QMS certification have an impact on the company's organizational performance or not. The research has employed a descriptive and explanatory research and used quantitative methods, where both primary and secondary data were used. Questionnaires are used as primary data source and different literatures reviewed are used as secondary data source. The general population of the research were all 424 employees of ASF. These 424 employees are of different departments, experience and exposure to quality related issues. Since quality is a factor of all the parties in an organization, all 424 employees from all departments are included in the sample. A total sample size of 175 employees were selected for the study. Probability and non-probability sampling techniques were used for the study. Descriptive, correlation and multiple regression statistical tools were used in testing the impact of ISO 9001 QMS certification on organizational performance. Analysis was done using SPSS version 26, a computerized statistical package, for the questionnaires by encoding responses from the respondents. The findings of the questionnaire analysis result showed that ISO 9001 QMS certification has a positive and statistically significant impact on the organizational performance of the company. This research has surfaced the impact of quality management system on organizational performance, and so the case company, researchers, practitioners, affiliated institutes and organizations will be benefited from the research findings.

Key words: ISO 9001, certification, Organizational performance

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Acronyms

ANOVA	Analysis of Variance
ASF	Adama Spinning Factory
ASQ	American Society for Quality
E.C	Ethiopian Calendar
EFQM	European Foundation for Quality Management
EIC	Ethiopian Investment Commission
EQA	European Quality Award
ESA	Ethiopian Standards Agency
ETIDI	Ethiopian Textile Industry Development Institute
G.C	Gregorian Calendar
ISO	International Organizations for Standardization
JUSE	Japanese Scientists and Engineers
MBNQA	Malcolm Baldrige National Quality Award
NIST	National Institute of Standards and Technology
OP	Organizational Performance
PDCA	Plan Do Check Act
QMP	Quality Management Principles
QMS	Quality Management System
RQAS	Research and Quality Assurance Service
SMEs	Small to Medium-sized Enterprises
SPSS	Statistical Package for Social Sciences
TQM	Total Quality Management

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Chapter One: Introduction

1.1. Background of the Study

Increases in international trade during the 1980s created a need for the development of universal standards of quality. Then in 1987 the International Organization for Standardization (ISO) published its first set of standards for quality management called ISO 9000. ISO 9000 is a set of international quality standards and a certification demonstrating that companies have met all the standards specified. Over past 60 years quality management has shown its importance in increasing competitiveness of companies and economies. Quality management means what the organization does to ensure that its products or services satisfy the customer's quality requirements and comply with any regulations applicable to those products or services. Quality management also means what the organization does to enhance customer satisfaction, and achieve continual improvement of its performance. There are various quality management systems include six sigma, benchmarking, ISO 9001, total quality management (TQM), and Kaizen are some of them. Quality Management Systems certification is the world's best known business management standard and the most widely used leadership model, based on a philosophy of continuous improvement. It is an excellent tool to improve business, processes (i.e. working methods, decision making procedures and responsibilities) and leadership in all organizations whatever their size.

Today, more than ever, there is a worldwide trend towards increasingly stringent customer expectations regarding quality, and accompanying this trend has been a growing realization that continuous quality improvements are necessary to achieving and sustaining excellent organizational performance (Isuf Lushi, Ana Mane, Ilir Kapaj and Remzi Keco, 2016). Quality products and services will provide satisfaction for the customer who will have an impact on increasing sales, increasing profit and sustainability of company (Koernia Purwihartuti, Erni Tisnawati Sule, Hilmiana and Wa Ode Zusnita, 2016). There is an increased competition between companies in which they are required to manufacture high quality products and improve themselves to survive in their business continuously. One of the measures companies take to gain many customers is by implementing a Quality Management System

(QMS). In a global and competitive market, quality management has become a crucial element for competitiveness, leadership and continuous improvement of organizations (Luís Lourenço, Lara Fonseca and Luís Mendes, 2012). Nowadays, it is quite obvious that more firms understand and accept the importance of quality management and, therefore, seek to certify the quality of their products, services or processes (Prodromos Chatzoglou, Dimitrios Chatzoudes and Nikolaos Kipraios, 2015). There are various quality management systems; ISO 9001 QMS is one of them. With hundreds of thousands of certified companies around the world, ISO 9001 QMS Certification has become the most widely accepted and sought-after quality management system. Adoption and subsequently certification of organizations with ISO 9001 has revealed to be the pro-active strategy to improve organizational performance (Michael Shadrack Mangula, 2013). Different studies indicated that, these certification impacts the companies' organizational performance internally and externally. According to Starke, Eunni, Dias Fouto NMM, de Angelo F. (2012), certification contributes in increasing sales revenues. Fatima M. (2014) stated that ISO certified organizations can enable to increase sale rate and profitability in the companies.

Many companies in the world are claiming that after their ISO 9001 QMS certification they are performing better in their organizational performance, one of them being Ethiopian companies. In the new ten years development plan of Ethiopia which ranges from 2013E.C to 2022E.C, under the economic section of manufacturing industry development, it is indicated that one of the aim is increasing competitiveness by improving the product quality of the manufactured products. Even though, there are different studies made on the subject, there is still a debate that questions if really ISO 9001 QMS certifications lead to an improved organizational performance or not. With this main question, the study has investigated the impact of ISO 9001 QMS Certification on Adama Spinning Factory's organizational performance.

Adama Spinning Factory (ASF), year of establishment: 2008 G.C, one of the factory working in the textile industry of Ethiopia is selected for the study purpose. The factory is certified for ISO 9001 quality management system in the year 2011G.C and has been operating for 13 Years. So, it is convenient to study its performance based on the available data.

1.2. Statement of the Problem

Certification of a quality management system is increasingly seen, not as a distinctive special feature, but as something natural and required by a global management system (Luís *et al.* 2012). ISO certification is said to assure a consistent quality of products, services and processes. According to Borut Rusjan and Milena Alic (2010), gaining an ISO 9001 QMS certificate gives companies an opportunity to signal the quality of their business. Prajogo, (2011) in Changiz Valmohammadi and Mohsen Kalantari (2015) stated that over the last two decades, there has been a steady increase in the number of countries which have adopted ISO 9001 QMS as their national quality standard, as well as a continual increase in the number of companies within these countries which have been certified. As Miguel P.A.C., Leal A.F. and Da Silva I.B. (2011) in Changiz Valmohammadi and Mohsen Kalantari (2015) stated the growth of ISO 9001 QMS certification all over the world confirms the enterprises' interest in international standardization and the impact that the standards have on different industrial systems. The growth in the number of ISO 9001 QMS certified companies suggests that companies are getting advantages from the certification. According to ISO Survey 2019, 1,036,833 ISO 9001 QMS certificates were issued worldwide in a total of 191 countries. From these, 808,583 were in 39 sectors and 228,250 in unidentified sector. Textiles and textile products sector constitutes for 11,488 certificates worldwide. According to this survey, Ethiopia has 48 certified companies.

Birhanu Beshah, Daniel Kitaw and Negalign Alemu (2013), stated that the number of ISO 9001 QMS certifications in developing countries is increasing, particularly, in Africa. There is still a debate whether these certification increases organizational performance or not.

Research into the relationship between ISO 9001 QMS certification and the performance of organizations is scarce, and the results seem to be somewhat contradictory, Paulo Sampaio, Pedro Saraiva and Ana Monteiro (2012). According to Başak Manders (2014), studies on the impact of ISO 9001 QMS Certification report mixed findings; a large body of literature reports positive impact, while some studies reveal negative results.

Therefore, the aim of this study is to investigate the impact of ISO 9001 QMS Certification on the financial indicators of organizational performance, sales growth and profitability in ASF.

1.3. Research Questions

After reviewing different related literatures, the research questions are designed as follows:

- What is the impact of ISO 9001 QMS certification on Sales Growth?
- What is the impact of ISO 9001 QMS certification on Profitability?

1.4. Research Objective

1.4.1. General Objective of the Study

The general objective of the study is to investigate the impact of ISO 9001 QMS certification on organizational performance in ASF.

1.4.2. Specific Objectives of the Study

Specifically, the study addresses the following key research objectives:

- To examine the impact of ISO 9001 QMS certification on Sales Growth;
- To examine the impact of ISO 9001 QMS certification on Profitability;

1.5. Hypothesis of the Study

From the literatures reviewed, the following hypothesis are developed.

H1_a: ISO 9001 QMS certification has a positive and statistically significant effect on sales growth.

H2_a: ISO 9001 QMS certification has a positive and statistically significant effect on profitability.

H3_a: Organizational policy has a moderating role between ISO 9001 QMS Certification and sales growth.

H4_a: Organizational policy has a moderating role between ISO 9001 QMS Certification and profitability.

H5_a: Government policy has a moderating role between ISO 9001 QMS Certification and sales growth.

H6_a: Government policy has a moderating role between ISO 9001 QMS Certification and profitability.

1.6. Significance of the Study

A study of the impact of ISO 9001 QMS certification on organizational performance which can be defined in several ways like with the help of performance measures which include sales growth and profitability of the company is important for several reasons.

- To understand the company's benefit from its ISO 9001 QMS certification with respect to organizational performance measures i.e., sales growth and profitability.
- To surface an understanding on the impact of ISO 9001 QMS certification on Organizational Performance in the company and contributes knowledge and literatures to the area.
- For companies engaged in similar business, it will help them as an experience to decide to certify for ISO 9001 QMS or not.
- Research findings in these area have come up with conflicting results i.e., which found that ISO certification improve organizational performance, ISO 9001 QMS certification reduce organizational performance, and others found no relationship at all. With this regard, the study will add its own importance to the field by investigating the impacts of ISO 9001 QMS certification on the performance of companies.
- Assessment and examination plays a key role to the validation and verification of the ISO standard after ISO 9001 QMS certification and its impact on organizational performance. Therefore, the study finding will benefit the case company, researchers, practitioners, affiliated institutes and organizations.

1.7. Scope and Limitations of the Study

1.7.1. Scope of the Study

The study examines the impact of ISO 9001 QMS certification on organizational performance of Adama Spinning Factory, which is located in Adama, a city in central Oromiya Region, Ethiopia.

1.7.2. Limitations of the Study

The first limitation of the study is, though there are more than thirty one (31) textile manufacturing companies in Ethiopia according to Ethiopian Textile Industry Development Institute (ETIDI) publication of textile profile of Ethiopia in 2017 G.C, the research was limited to only Adama Spinning Factory. The second limitation is time and resource constraint. Data collecting and compiling account much time, and including all of the measures of organizational performance will require much time. The resource constraints limits the study not to include all textile manufacturing companies in Ethiopia. The third limitation is limited number of organizational performance measures were used.

1.8. Organization of the Study

The research paper is organized in five (5) chapters.

The first chapter introduces background of the study, statement of the problem, basic research questions, objectives of the study, significance of the study, scope, and limitation of the study. The second chapter discusses about the literature review on concepts of the study including previous theoretical, empirical and conceptual literature reviews by different researchers. The third chapter discusses about the path on how to go forward to achieve the set objectives and answer research questions set, and therefore it deals with research methodology. Chapter four deals with the data analysis and interpretation result of the study. The final chapter, chapter five, presents the summary of findings, conclusion, recommendations, implications, limitations and future research recommendations based on the findings of the study.

Chapter Two: Literature Review

2.1. Theoretical Review

It is claimed that ISO 9001 QMS Certification will improve companies' organizational performance than they were performing before their ISO 9001 QMS Certification. The extent to which organizational performance can effectively be improved through ISO 9001 QMS Certification remains an important issue (Boiral and Roy, 2007). Different conflicting views and studies on this topic have been controversial. With these we can say that there is no clear investigation as how ISO 9001 QMS certification can have an impact on the organizational performance of companies. There is no unanimity about the effect of the ISO 9001 QMS certification on organizational performance, Luís *et al.* (2012).

There is no commonly reached agreement on the impact of ISO 9001 QMS certification on organizational performance of companies among scholars and research findings. Neyestani B. (2016), in his literature review results reported that there is no consensus among scholars and authors regarding the impact of ISO 9001 QMS on financial performance in the organizations. The financial improvement, as a result of an ISO certification, has raised many doubts and created a debate among academics and practitioners, Prodromos *et al.* (2015). Different research findings show mixed results on financial indicators of organizational performance such as profitability. Some authors claim that ISO 9001 QMS Certification has benefits and increases performance, others claim that it has no benefits or effect on performance (Mehmet Sıtkı Ilkay and Emre Aslan, 2012).

Given the mixed results of studies, further investigation is required to understand the impact of ISO 9001 QMS Certification can improve organizational performance (Daniel Prajogo, Baofeng Huo and Zhaojun Han, 2012). There is a broad consensus that there is a need for further in depth research on this subject, Mehmet *et al.* (2012).

Even though, there are different conflicting views on the subject, the researcher believes that ISO 9001 QMS certification has a positive and statistically significant impact on organizational performance i.e., sales growth and profitability of companies.

2.2. The Concept of Quality

There are different ways of defining quality. Today there is no single universal definition of quality. Quality is perceived differently by different people. Yet, everyone understands what is meant by “quality.” (Cambridge University, 2017). In a manufactured product, the customer as a user recognizes the quality of fit, finish, appearance, function, and performance. The quality of service may be rated based on the degree of satisfaction by the customer receiving the service.

Some people view quality as performance to standards; others view it as meeting the customer’s needs or satisfying the customers’ (Awoku, 2012). In order to ensure quality in manufacturing, the definition of quality needs to be defined from customers’ perspectives.

ISO defines quality as “The degree to which a set of inherent characteristics fulfills requirements”. To fulfill requirements is to meet customers’ needs and regulatory requirements. The difference between one organization and another or between one product and another is generally perceived in relation to the product or service of the company.

In manufacturing, quality is best defined in terms of conformance, performance, reliability, features, durability and serviceability of a product (Awoku, 2012). Conformance is the degree at which a product’s characteristics meet set standards, while performance shows how the product functions efficiently. Reliability is the probability that a device will perform its required functions under stated conditions for a specific period of time. It is also vital that the products produced have features that would enable their efficient usage and to have durability and be easily repaired.

The concept of quality management systems has existed for many decades. In the 1930s, Walter Shewhart at Bell Laboratories inspired the use of statistics to identify ‘best practice’ in the USA. This discovery has evolved over many years into control charts and in the US was adopted by manufacturing industries before 1950. During World War II in the 1940s, quality control charts and statistical techniques were deployed to monitor production process and evaluate quality respectively (Goeff, 2001). In the 1950s and 1960s, W. Edwards Deming and Joseph Juran saw the importance of pursuing perfection by applying quality principles and techniques to processes and management of organizations. With the U.S

dominating world manufacturing, there was no practical interest in quality practices. Deming and Juran were invited to Japan to lecture on statistical quality control (Goeff, 2001). In the 1970s and 1980s, many U.S. companies lost market share to foreign competition. Foreign manufacturing companies were producing lower-priced products and better quality. As the West continued to add luxury to products in order to sell at higher prices and increased profits, the East was busy adding quality to products in order to produce items better and cheaper (Goeff, 2001). In order to increase quality awareness, the ISO family standards and Malcolm Baldrige National Quality Award were established in 1987.

A Quality Management System is a set of tools for driving and controlling an organization, considering all different Quality aspects (ISO-9000 2000) including human resources, know-how and technology, working practices, methodologies and procedures (Franceschini Fiorenzo, Galetto Maurizio and Masan Domenici, 2007). According to Franceschini *et al.*, 2007 a quality system with its resources and processes should accomplish specific planned targets such as production, cost, time, and return of investment, stakeholders' exigencies or expectations.

2.3. Theories of Quality Management

2.3.1. Deming's Approach to Quality Management

Anderson *et al* as cited by Zhang, 2000 pointed out that the theoretical essence of the Deming approach to quality management concerns the creation of an organizational system that fosters cooperation and learning for facilitating the implementation of process management practices, which, in turn, leads to continuous improvement of processes, products, and services as well as to employee fulfillment, both of which are critical to customer satisfaction, and ultimately, to firm survival (Zhang, 2000). Deming as cited by Zhang stressed the responsibilities of top management to take the lead in changing processes and systems. Leadership plays in ensuring the success of quality management, because it is the top management's responsibility to create and communicate a vision to move the firm toward continuous improvement. Top management is responsible for most quality problems; it should give employees clear standards for what is considered acceptable work, and provide the methods to achieve it. These methods

include an appropriate working environment and climate for work-free of fault finding, blame or fear (Zhang, 2000). Deming as cited by Zhang also emphasized the importance of identification and measurement of customer requirements, creation of supplier partnership, use of functional teams to identify and solve quality problems, enhancement of employee skills, participation of employees, and pursuit of continuous improvement (Zhang, 2000).

Deming emphasizes contentious 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 Shewhart cycle or the plan do check act (PDCA) cycle (Suarez, 1992).

The means to improve quality lie in the ability to control and manage systems and processes properly, and in the role of management responsibilities in achieving this. Deming as cited by Suarez advocated methodological practices, including the use of specific tools and statistical methods in the design, management, and improvement of process, which aim to reduce the inevitable variation that occurs from "common causes" and "special causes" in production. Common causes" of variations are systemic and are shared by many operators, machines, or products. They include poor product design, non-conforming incoming materials, and poor working conditions. These are the responsibilities of management. "Special causes" relate to the lack of knowledge or skill, or poor performance. These are the responsibilities of employees (Suarez, 1992).

2.3.2. Juran's Approach to Quality Management

Juran and Gryna as cited by Zhang defined quality management as the system of activities directed at achieving delighted customers, empowered employees, higher revenues, and lower costs (Zhang, 2000).

Juran's cited in Zhang believed that main quality problems are due to management rather than workers.

The attainment of quality requires activities in all functions of a firm. Firm-wide assessment of quality, supplier quality management, using statistical methods, quality information system, and competitive benchmarking are essential to quality improvement (Zhang, 2000). Juran's approach is emphasis on team (QC circles and self-managing teams) and project work, which can promote quality improvement,

improve communication between management and employees coordination, and improve coordination between employees. He also emphasized the importance of top management commitment and empowerment, participation, recognition and rewards (Zhang, 2000).

According to Juran, it is very important to understand customer needs. This requirement applies to all involved in marketing, design, manufacture, and services. Identifying customer needs requires more vigorous analysis and understanding to ensure the product meets customers' needs and is fit for its intended use, not just meeting product specifications. Thus, market research is essential for identifying customers' needs. In order to ensure design quality, he proposed the use of techniques including quality function deployment, experimental design, reliability engineering and concurrent engineering (Zhang, 2000).

Juran considered quality management as three basic processes (Juran Trilogy): Quality control, quality improvement, and quality planning. In his view, the approach to managing for quality consists of: The sporadic problem is detected and acted upon by the process of quality control; the chronic problem requires a different process, namely, quality improvement; such chronic problems are traceable to an inadequate quality planning process (Zhang, 2000).

2.3.3. Crosby's Approach to Quality Management

Crosby as cited in Zhang identified a number of important principles and practices for a successful quality improvement program, which include, for example, management participation, management responsibility for quality, employee recognition, education, reduction of the cost of quality (prevention costs, appraisal costs, and failure costs), emphasis on prevention rather than after-the-event inspection, doing things right the first time, and zero defects. Crosby claimed that mistakes are caused by two reasons: Lack of knowledge and lack of attention. Education and training can eliminate the first cause and a personal commitment to excellence (zero defects) and attention to detail will cure the second (Zhang, 2000).

Crosby's approach focuses on doing things right for the first time and every time. There's no place in his philosophy for differing levels of quality or categories of quality. He stresses out that the way to manage quality is by prevention not detection and testing. And according to him, quality an increase, costs decrease thus quality doesn't cost. To implement his quality improvement process, Crosby delineates a 14 point step approach consisting of activities that are the responsibilities of management, but also involve workers (Suarez, 1992). He also stresses out that key to quality improvement is to change the thinking of top managers to get them not to accept mistakes and defects, as this would in turn reduce work expectations and standards in their jobs. Understanding, commitment, and communication are all essential. Crosby presented the quality management maturity grid, which can be used by firms to evaluate their quality management maturity. The five stages are: Uncertainty, awakening, enlightenment, wisdom and certainty (Zhang, 2000).

2.3.4. Feigenbaum's Approach to Quality Management

Feigenbaum as cited by Zhang defined quality management as: An effective system for integrating the quality development, quality-maintenance, and quality-improvement efforts of the various groups in a firm so as to enable marketing, engineering, production, and service at the most economical levels which allow for full customer satisfaction. He claimed that effective quality management consists of four main stages, described as follows:

- Setting quality standards;
- conformance to these standards;
- Acting when standards are not met;
- Planning for improvement in these standards.

The quality chain, he argued, starts with the identification of all customers' requirements and ends only when the product or service is delivered to the customer, who remains satisfied. Thus, all functional activities, such as marketing, design, purchasing, manufacturing, inspection, shipping, installation and service, etc., are involved in and influence the attainment of quality. Identifying customers' requirements

is a fundamental initial point for achieving quality. He claimed that effective quality management requires a high degree of effective functional integration among people, machines, and information, stressing a system approach to quality. A clearly defined total quality system is a powerful foundation for quality management. Total quality system is defined as follows:

The agreed firm-wide operating work structure, documented in effective, integrated technical and managerial procedures, for guiding the coordinated actions of the people, the machines, and the information of the firm in the best and most practical ways to assure customer quality satisfaction and economical costs of quality (Zhang, 2000).

Feigenbaum cited in Zhang emphasized that efforts should be made toward the prevention of poor quality rather than detecting it after the event. He argued that quality is an integral part of the day-to-day work of the line, staff, and operatives of a firm. There are two factors affecting product quality: The technological—that is, machines, materials, and processes; and the human—that is, operators, foremen, and other firm personnel. Of these two factors, the human is of greater importance by far. Feigenbaum considered top management commitment, employee participation, supplier quality management, information system, evaluation, communication, use of quality costs, and use of statistical technology to be an essential component of quality management. He argued that employees should be rewarded for their quality improvement suggestions, quality is everybody's job. He stated that effective employee training and education should focus on the following three main aspects: Quality attitudes, quality knowledge, and quality skills (Zhang, 2000).

2.4. Quality Excellence Models

Many organizations have adopted business excellence models because they realize that those models promote the adoption of the best practices and tools that allow the achievement of a strategy of quality, benchmarking of best practices, self-assessment and continuous improvement.

Award criteria for successful and established programs continue to improve, reflecting changes in the quality arena. And as national and regional award criteria include updated strategic content, a trend

toward a uniform, international model of organization wide quality performance is evolving, (Robert J Vokurka, Scott W O'Leary-Kelly, 2000).

When these award programs were compared, significant similarities were found in the criteria used for assessing award applicants. In addition, all of the award programs utilize continuous improvement initiatives to retain their positions as benchmarks in quality systems and as principals in the formation of a global quality model. (Vokura *et al*, 2000)

2.4.1. The European Quality Award (EQA)

Recognizing the importance of quality management in the organizations performance, 14 major European companies formed the Foundation for Quality Management (EFQM) in 1988. By 1991, EFQM had developed the European Quality Award (EQA) program to honor outstanding European businesses. The award is now similar to the MBNQA. Bohoris as cited in Elfaituri discussed the purpose of this award as to enhance the position of Western European companies in the world market by accelerating the acceptance of quality as a strategy for global competitive advantage and by stimulating and assisting the development of quality improvement activities (Elfaituri, 2012).

2.4.2. Malcolm Baldrige National Quality Award

In an effort to improve quality management practices and the competitiveness of U.S. firms, President Ronald Reagan signed the Malcolm Baldrige National Quality Improvement Act on August 20, 1987. The Malcolm Baldrige National Quality Award (MBNQA) was created to promote quality awareness, identify the requirements for quality excellence, and share information about successful quality strategies and benefits. The National Institute of Standards and Technology (NIST) currently administer the award, with ASQ assisting with the application review process, preparation of award documents and other administrative duties. Striving to define quality performance, NIST developed a set of core principles for quality management, including customer driven quality, leadership, continuous improvement and learning, employee satisfaction, design quality and prevention, planning for the future, company

responsibility and citizenship, and results. Baldrige administrators believe these core principles form a framework for performance excellence—the basis of the award’s criteria. The criteria, used to assess an applicant’s performance, are divided into seven categories and provide the strategic direction for the entire system. The categories are leadership, strategic planning, customer and market focus, information and analysis, human resource focus, process management and business results (Vokura *et al*, 2000). Evans and Lindsay as cited in Elfaituri described that each category consists of items including the basic requirements that must be the focus of organizations competing for the award (Elfaituri, 2012).

2.4.3. Deming Prize

In 1951, the Deming Prize was established in Japan by the Union of Japanese Scientists and Engineers (JUSE). It was named in honor of the American statistician and father of the worldwide quality movement, W. Edwards Deming. Today, the Deming Prize honors private and public organizations for the successful implementation of quality control activities. Unlike other national or regional quality awards, the Deming Prize does not provide a model framework for organizing and prioritizing criteria. Instead, the evaluation includes 10 equally weighted points that each applicant must address. The 10 points involve the following categories: policies, organization, information, standardization, human resources, quality assurance, maintenance, improvement, effects and future plans. Expert panel members judge performance against these points. While the Deming Prize does not provide a model per se, the categories emphasize values similar to those of the other award models (Vokura *et al*, 2000).

The Deming Prize guide 2011 as cited in Elfaituri concluded the most important benefits and effects of the Deming application Prize as quality stabilization and enhancement, productivity improvement and cost reduction, expansion of sales, increase of profits thorough implementation of management and business plans, enhancement of participation and improvement skills, and raised morale and motivation of employees (Elfaituri, 2012).

2.4.4. ISO 9001 Certification

ISO 9001 was published in 1987 by the International Organization for Standardization (ISO), and is granted to organizations able to demonstrate that they have reached a certain standard of quality control (Elfaituri, 2012).

ISO 9001 provides a set of standardized requirements for a quality management system, regardless of the user organization's industry, size, or whether it operates in the public or private sector. In the family of ISO standards, it is the only one which organizations can be certified – although certification is not a compulsory requirement of the standard. The ISO 9001 standard is suitable for organizations that require an established pathway to follow in order to take a systematic approach to the management of processes, so that they can consistently produce goods and services to satisfy the expectations of their customers (Elfaituri, 2012).

The documents produced by ISO provide standardized descriptions of principles of quality management as they appear in ISO 9000. They additionally provide examples of the benefits derived from implementation and of actions that managers typically take in applying the principles in order to improve the performance of their organizations. These principles are customer focus; leadership; engagement of people; process approach; improvement; evidence-based decision making; relationship management (ISO, 2015).

2.5. ISO 9001 Quality Management System Certification

According to Isuf *et al.* (2016), different countries, industries and governments all had varying quality systems that suppliers had to adopt in order to deliver goods around the world. There are approximately 60 programs and awards that reward firms for improving quality globally (Aba and Bader, 2013). The most well-known ones are the Malcolm Baldrige, Six Sigma, and ISO. A single worldwide standard was needed to simplify international standards. This gave rise to ISO - the International Organization for Standardization. ISO is an independent, non-governmental, international organization that develops standards to ensure the quality, safety, and efficiency of products, services, and systems which is located

in Switzerland. ISO 9000 was published in 1987 by the International Organization for Standardization (ISO).

The objective of ISO is to promote the development of standardization and related world activities with a view to facilitating international exchange of goods and services and to developing cooperation in the sphere of intellectual, scientific, technological and economic activity. The results of ISO technical work are published as international standards.

There are several ISO standards in the ISO 9000 family, one of them is ISO 9001, which is related to quality management systems and designed to help organizations ensure that they meet the needs of customers and other stakeholders. ISO 9001 deals with the requirements that organizations are wishing to meet the standard have to fulfill. Third party certification bodies provide independent confirmation that organizations meet the requirements of ISO 9001. Over a million organizations worldwide are independently certified, making ISO 9001 one of the most widely used management tools in the world today. ISO 9001, Quality Management Standard, is the internationally recognized standard for the quality management of businesses. It applies to the processes that create and control the products and services an organization supplies, prescribes systematic control of activities to ensure that the needs and expectations of customers are met and is designed and intended to apply to virtually any product or service, made by any process anywhere in the world.

ISO 9001 requires organizations to define and follow a quality management system that is both appropriate and effective while also requiring them to identify areas for improvement and take action toward those improvements. Each certification has separate standards and criteria and is classified numerically. ISO 9001 is among ISO's best-known standards, and it defines the criteria for meeting a number of quality management principles. ISO 9001 sets out the criteria for a quality management system and is the only standard in the family that can be certified to (although this is not a requirement). It can be used by any organization, large or small, regardless of its field of activity. ISO 9001 standard is based on different quality management principles. It helps businesses and organizations be more efficient and improve customer satisfaction. The ISO 9000 family of standards is related to quality management

systems and designed to help organizations ensure that they meet the needs of customers and other stakeholders while meeting statutory and regulatory requirements related to the product.

Certification is the provision by an independent body of written assurance (a certificate) that the product, service or system in question meets specific requirements. Certification can be a useful tool to add credibility, by demonstrating that the product or service meets the expectations of the customers. Michael Shadrack Mangula (2013), described that since ISO 9001 is recognized globally, obtaining a certification imply that the company is also moving towards globalization. Jacqueline Ochieng, David Muturi, and Samuel N. Njihia (2015) stated that, ISO 9001 encompasses organizational practices across sectors with its application being relevant to organizations regardless of the business they are in. This has made this particular certification relevant to most organizations thus gaining most popularity compared to other ISO standards. For some industries, certification is a legal or contractual requirement. ISO does not carry out certification and does not issue or approve certificates. ISO develops standards and guides to encourage good practice in accreditation and certification. ISO certification certifies that a management system, manufacturing process, service, or documentation procedure has all the requirements for standardization and quality assurance. ISO 9001 certification means that an independent, external body has audited an organization's management system and verified that it conforms to the requirements specified in the standard (ISO 9001).

The various updates to ISO 9000 are ISO 9000-1987, ISO 9000-1994, ISO 9001-2000, ISO 9001-2008, and ISO 9001-2015. ISO 9001:2015 represents the latest version of the guidelines. In 2015, the fifth edition of the standard was issued (following editions in 1987, 1994, 2000 and 2008). The final number in an ISO certification refers to the version of the standard that's being met and is represented by the calendar year those standards were launched.

A clear measure of ISO 9001 success is its increasing use worldwide (ISO, 2016). According to ISO survey 2019, there are over one million companies and organizations in over 191 countries certified to ISO 9001, making ISO 9001 one of the most widely used management tools in the world today. Table 2.1., Table 2.2., and Table 2.3 presents how the ISO 9001 worldwide acceptance is increasing, which

implies that companies really are benefiting from their ISO 9001 certification. In Table 2.1. China is having the highest ISO 9001 certificates i.e., 383,869 certificates followed by Italy (97,771), Germany (60,480), Japan (45,318), and Spain (35,088). Looking from the list of the world's highest ranking economies from <https://www.worldometers.info/gdp/gdp-by-country/>, these countries are having the highest economies in the world. So, we can say that one of the reason for their highest performance in their economies is having many number of certificates in ISO 9001 which ultimately improved their performance. Table 2.2 presents top 5 sectors in ISO 9001 certificates worldwide. The sectors listed are the biggest sectors in the world which are performing better compared to other sectors. These tells us that certification in ISO 9001 contributes for the improvement. Finally, Table 2.3 presents the distribution of ISO 9001 certificates in East Africa. Ethiopia has 48 certificates in 18 sectors. Ethiopia ranked 132th out of 191 countries in the world and 5th out of 9 countries in East Africa respectively in number of total certificates issued in ISO 9001. These indicate that Ethiopia has less ISO 9001 certificates which may contribute to the low economic development of the country and to the low competitiveness of its products and services in international market.

Table 2.1. Top 5 Countries for ISO 9001 Certificates Worldwide

Rank	Country	Number of Certificates
1	China	383,869
2	Italy	97,771
3	Germany	60,480
4	Japan	45,318
5	Spain	35,088

Source: ISO Survey 2019, Own Computation

Table 2.2. Top 5 Sectors in ISO 9001 Certificates Worldwide

Rank	Sector	Number of Certificates
1	Basic Metal and Fabricated Metal Products	107,564
2	Wholesale and Retail Trade, Repairs of Motor Vehicles, Motorcycles, Personal and Household Goods	80,320
3	Electrical and Optical Equipment	77,329
4	Construction	71,051
5	Machinery and Equipment	64,774

Source: ISO Survey 2019, Own Computation

Table 2.3. Distribution of ISO 9001 Certificate in East African Countries

Rank	Country	Number of Sectors Certified	Number of Certificates
1	Kenya	35	498
2	Uganda	23	114
3	Tanzania	25	90
4	Sudan	15	88
5	Ethiopia	18	48
6	Rwanda	4	7
7	Djibouti	2	4
8	Burundi	2	3
9	Somalia	1	2

Source: ISO Survey 2019, Own Computation

2.6. ISO 9001 vs. Organizational Performance

ISO first published ISO 9001 International Standard in 1987, and since then it has become a major dimension of the Quality movement and a key management framework for all type of organizations worldwide (Fonseca, 2015a).

Today, more than ever, there is a worldwide trend towards increasingly stringent customer expectations regarding quality, and accompanying this trend has been a growing realization that continuous quality improvements are necessary to achieving and sustaining excellent organizational performance (Isuf *et al.* 2016). Quality products and services will provide satisfaction for the customer who will have an impact

on increasing sales, increasing profit and sustainability of company (Koernia Purwihartuti, Erni Tisnawati Sule, Hilmiana and Wa Ode Zusnita, 2016). According to Starke, Eunni, Dias Fouto NMM, de Angelo F. (2012), certification contributes in increasing sales revenues. Fatima M. (2014) stated that ISO certified organizations can enable to increase sale rate and profitability in the companies.

The most debated aspect in literature is the impact of ISO 9001 certification on financial performances. According to Karim A. (2015), ISO 9001 is an area that has not been accounted in detail by current research studies that evaluated the impact of this standard on financial issues within the organizations.

2.7. Empirical Literature Review

Researchers have empirically investigated the relationship between ISO 9001 QMS certification and organizational performance. Evidence of ISO 9001 certification having a direct impact to organization performance has been documented by several authors, Jacqueline *et al.* (2015). Though the findings report that different results in the impact of ISO certification on financial indicators of Organizational Performance, i.e. sales growth and profitability. The financial impact of ISO 9001 on certified firms is unclear and/or mixed (Eli Kofi Aba M. Affan Badar Michael Allen Hayden, 2016).

Various studies have found a positive relationship between ISO 9001 certification and financial indicators of Organizational Performance, i.e., sales growth and profitability. Casadesus, M. and Jimenez, G. (2000) in their empirical research in 288 Spanish companies, 58% of the analyzed cases the standard had allowed, the one was an increase in the upward trend of sales of the company. The study by Heras I, Dick GPM and Casadesus M. (2002) on ISO 9001 certification's impact on sales and profitability confirmed that certified companies perform better. Naveh and Marcus (2005) found that ISO 9001 certification increased annual sales and profit margins. Chris K. Y. Lo, Andy C. L. Yeung, and T. C. Edwin Cheng (2007), performed an event study and found that a better performance for ISO certified companies after they obtained certification. The meta-analysis by Basak Manders and Henk J. de Vrieson 10 October 2012 showed that ISO 9001 certification does indeed enhance financial performance, and that is achieved mainly through increased sales. Evangelos Psomas and Dimitrios Kafetzopoulos (2014), in their survey findings in 140 Greek manufacturing companies, ISO 9001 certified manufacturing companies

significantly outperform the non-certified with regard to financial performance. Basak Manders (2015), in her meta-analysis result indicated that 40% of the companies increased their financial performance with certification. And she added that the long-term effect of certification on financial performance is higher than its short-term effect. Long-term effects represent a company's financial performance two or more years after certification. Prodromos *et al.* (2015), study findings of 168 Greece companies provide strong evidence that ISO 9001 certification, improved overall financial performance and sales revenue. Other studies also have found a negative relationship between ISO 9001 certification and financial indicators of Organizational Performance, i.e., sales growth and profitability. Micaela Martí'nez-Costa, A'ngel R. Martí'nez-Lorente (2007) in their study result indicated that ISO 9001 certification can actually reduce profitability. Starke F., Eunni R.V., Fouto N.M.M.D. and Angelo C.F. (2012) in Jacqueline *et al.* (2015), found that ISO 9001 certification is associated with an increase in sales revenue of the certified organizations. They concluded that companies large or small, irrespective of their capital structure (i.e. debt/equity) and cutting across industries will benefit from the adoption of the ISO 9001 standard.

While ISO 9001 is the most influential set of standards of its kind in the world, there is no compelling evidence that ISO 9001 certification has a positive impact over companies' financial performance, Paulo *et al.* (2012). As Bayati and Taghavi (2007) stated certification is viewed very often as a tool for staying competitive in the domestic and international markets, and not as a means of adding value to the organizational processes and improving performance. Lushi I., Mane A., Kapaj I., and Keco R. (2016), and Islam M.M., Karim M.A., and Habes E.M. (2015), claimed only some of ISO 9001 certified firms do better than non-certified firms regarding financial performance. Nevertheless, only some certified firms do better than non-certified firms regarding financial performance (Isuf *et al.* 2016). Paulo *et al.* (2012) findings argued that it is not unanimous that ISO 9001 certified companies would be less profitable if they had not implemented the ISO 9001 certificate. Jacqueline *et al.* (2015) findings in 20 organizations in Kenya, identified that there were no significant differences between the ISO 9001 certified and non-certified organizations, on profit and revenue. Candido, Coelho, and Peixinho (2016) in their study of 143 Portuguese companies that lost their ISO 9001 certification and companies that maintained the

certificate, findings indicated that there is no significant difference regarding financial performance (as measured by return-on-sales (ROS) and sales growth) between companies that lost their ISO 9001 certification, and certified companies. Mary and Francisco (2008) found that as the majority of firms within an industry adopt ISO 9001 certification, late adopters no longer gain financial benefits from this certification. Results obtained by Milé Terziovski, Danny Samson, Douglas Dow. (1997) showed that the presence or absence of ISO 9001 certification is a poor predictor of organizational performance. A Controversial conclusion was made by Micaela *et al.* (2007), if the success of ISO 9001 is measured by the number of companies that have decided to obtain the certificate, this success would be clear. However, the data suggest that certification is not positive for companies and may even be negative.

As stated in Prodromos *et al.* (2015), various studies have found no relationship between ISO certification and financial performance (Dick, 2000; Heras *et al.*, 2002; Lima *et al.*, 2000; Morris, 2006; Terziovski *et al.*, 1997), while other studies concluded that ISO certification has an impact on some aspects of financial performance (Corbett *et al.*, 2005; McGuire and Dilts, 2008; Sharma, 2005; Sun, 2000).

The researcher agrees that ISO 9001 certification improves Organizational Performance i.e., sales and profitability.

2.8. Ethiopian Standards Agency (ESA)

The Ethiopian Standards Agency (ESA) is the national standards body of Ethiopia. According to their official website <https://www.ethiostandards.org/>, ESA was established following the restructuring of the Quality and Standards Authority of Ethiopia in 2010. It is a non-profit government body of the Ministry of Science and Technology. Its policy-making and governing body is the standards Council whose members are appointed by government from various organizations. In Ethiopia, the need for standardization became evident during early 1950's as it was noticed that export of agricultural commodities was being affected due to lack of the support of standardization, and an urgent need for standardization of building, electrical appliances and water supplies. These were among the problems which led to establishment of national standardization body in 1972.

The mission of ESA is to enable manufacturing and service providing organizations to be competitive in internationally accepted management systems. The development of standards, training and technical support on implementation of standards contributes to the country's economic and social development through technology transfer. Objectives of ESA are To facilitate the country's technology transfer through the use of standards; To develop national standards for local products and services so as to make them competitive in the international market; Reflect the interest of the country in the field of standards by actively participating in relevant ISO Technical committees; Develop, implement and follow-up standardization strategy for the purpose of quality promotion activities which are in line with the country's developmental programs; Develop, through stakeholders involvement, approve and publicize Ethiopian Standards; Recognize any standard published by a national, regional international or any other standardization body as Ethiopian standards, as may be relevant; and Establish national technical committees. ESA's services can be broadly grouped into three areas:- development and sales of Ethiopian standards, provision of training and technical support on standards implementation, and provision of standards information and raising public awareness of standards.

ESA safeguards Ethiopia's interest in international standardization through participation in technical committees, especially in the fields of agriculture and food. ESA is a member of the International Organization for Standardization (ISO), International Organization of Legal Metrology (OIML), and Codex Alimentarius Commission (CAC). It is also a founding member of the African Regional Organization for Standardization (ARSO), and has close relations with the International Electro-technical Commission (IEC).

2.9. Textile Industry of Ethiopia

Ethiopia is located in the horn of Africa with a total area of 1,063,652.00 sq. km (www.britannica.com). The country is on transformation from an agricultural economy to industrial economy, which is visible in its plans. According to the ten years development plan of Ethiopia (2013E.C – 2022E.C), the

agriculture GDP share may shrink in the coming period and the sector will be a priority on access to finance and using improved machines on the way to productivity. The agriculture sector will grow by 5.5%, industry by 11.4% and service sector by 10.4% in the first five years of the ten year plan. From the industry sector the manufacturing and construction sub sectors will grow by 18.4% and 8.5% respectively. In the second five year that will be ended in 2030 the agriculture sector growth has projected to be 6.2%, industry 14.6%, and service 10.7%. The manufacturing and construction sector under industry sector in the second five year will have 22.9% and 9.2% growth respectively. In economy sector development plan, it is indicated that one of the goals of the manufacturing industry is increasing the competitiveness of the manufacturing industry by improving the product quality of the goods manufactured.

One of the methods companies use to achieve competitiveness and improve their overall organizational performance is certification in ISO 9001. Because customers are requiring producers to have a guarantee for their products whether it is produced as per the specifications and the international standards, companies are therefore forced to register for ISO 9001 certification. In Ethiopia, some manufacturers are currently claiming that after their ISO certification they are performing well in domestic and international markets.

According to Ethiopian Textile Industry Development Institute (ETIDI) official website, Ethiopia's long history in textiles began in 1939 when the first garment factory was established. Based on Ethiopian country data, in the last 5 to 6 years, the textile, and apparel industry have grown at an average of 51% and more than 65 international textile investment projects have been licensed for foreign investors, during this period. From review of Ethiopian Investment Commission (EIC) official website, Ethiopia's textile industry is witnessing rapid growth, as a number of domestic and multinational firms are being engaged in the production of textile and apparel for domestic and global markets. In the path to industrialize Ethiopia, the sector is given prominent position in boosting export, creating job opportunities, and as a model to other sectors as well. The sector has become a top priority for Ethiopia. The key objective is to make the sector globally competitive and to bring the necessary structural transformation to the nation's

economy to export industrial outputs, create thousands of jobs, attract much-needed foreign currency and above all, contribute to poverty reduction.

Though there are various efforts put to improve the sector, the sector is facing various challenges. One of these challenges is the low efficiency in factories due to underdeveloped processes and lack of education amongst manpower; another challenge is the long cycle time due to the lack of available raw materials and delivery due to longer production days; and the lack of marketing is also a concern for the textile industry in Ethiopia, many factories with state-of-the-art machinery are currently idle.

2.10. Adama Spinning Factory Profile

Adama Spinning Factory (ASF) is located in Oromiya Regional State, Adama/Nazareth city Dembela sub city, Degaga Kebele (05), about 100km away from the capital- Addis Ababa, Ethiopia. The Factory was established in August, 2008 with an initial capital of Birr 160 million, 70% bank loan and 30% Equity. Expansion project was implemented in 2011/2012 budget year with an investment of Birr 115 million. Currently, the total capital of the Factory has reached Birr 320 million.

The Factory is a modern textile factory in Ethiopia equipped with latest technology of spinning machineries from Reiter and air conditioning unite from Luwa of Switzerland. The company has starting a medical textile project in the 2018/19 budget year and to be completed the project in 2020/21 and start production of surgical gauze and other related products in the fourth quarter of the budget year. The installed spinning technology produces high quality 100% cotton carded and combed yarn of different counts for export and local market.

The Factory has two operating lines, Open-End (OE) spinning and Ring Frame (RF) spinning line. It has a total capacity of 11 ton per day at an average count of Ne 24 and Ne 18 of Ring spun and Open End respectively. Out of the total capacity 5 ton (45%) are ring spun yarn and the remaining 6 ton (54%) are open end spun yarn per day. The yarn for Open end line ranges from Ne 6 to Ne 24 whereas Ring spun comprises, Ne 16 to Ne 40 carded yarn and Ne 20 to Ne 60 combed yarn. Currently, the factory has offered employment opportunity for 424 employees.

2.11. Conceptual Framework

Conceptual framework means that concepts that relate to one another used to explain the research problem. In other words, conceptual framework is defined as the result of when a researcher conceptualizes the relation between variables in the study and shows the relationship graphically and diagrammatically. It is made of the dependent and the independent variables. The dependent variable in this study is organizational performance conceptualized by sales growth and profitability. The independent variables of this study are ISO 9001 QMS certification conceptualized by the seven (7) Quality Management Principles. Since, ISO 9000, ISO 9001 and related ISO quality management standards are based on the seven (7) Quality Management Principles. These constructs and relationships are presented in the following hypothetical framework as conceptualized by the researcher. This is as shown on figure 2.1.

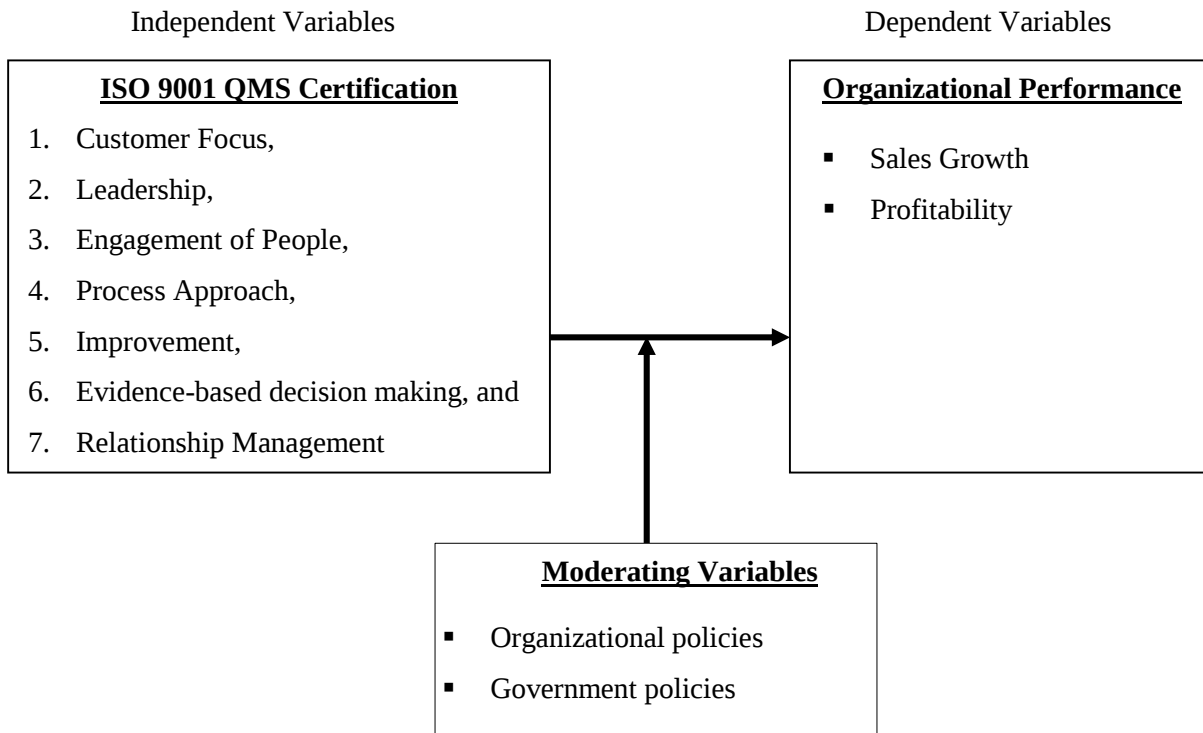


Figure 2.1. Conceptual Framework of the Study

Source: - From the Researcher's Theoretical and Empirical literatures Review.

2.11.1. ISO 9001 Quality Management Principles

A principle is a basic belief, theory or rule that has a major influence on the way in which something is done. Quality management principles (QMP) are a set of fundamental beliefs, norms, rules and values that are accepted as true and can be used as a basis for quality management (ISO, 2015). It can be used as a foundation to guide an organization's performance improvement.

As stated in Witchulada Vetchagool, Marcjanna M. Augustyn and Mike Tayles (2018), ISO 9000 is underpinned by quality management principles that collectively should lead to improving performance (ISO, 2016). In the 2015 editions, ISO has also updated the quality management principles (QMPs) that support ISO 9000 and ISO 9001 quality management standards and now there are seven QMPs (Luís Fonseca and José Pedro Domingues, 2016). Until 2015, there were eight principles namely: customer focus; leadership; involvement of people; process approach; system approach to management; continual improvement; factual approach to decision-making; mutually beneficial supplier relationship (ISO, 2012). The latest (2015) edition of the standard reduced the number of quality management principles to seven (ISO, 2015) because the former principle of system approach to management is now contained within the 'process approach' principle. The names of some principles were also changed in 2015 and the current seven principles of quality management are: customer focus; leadership; engagement of people; process approach; improvement; evidence-based decision making; relationship management (ISO, 2015). Although the structure and terminology of the quality management principles changed in 2015, their strategic intent – 'to guide an organization's performance improvement' (ISO, 2015, p. 1) – remained the same.

ISO, 2015 stated the seven quality management principles with their rationale and key benefits as indicated below.

I. Customer Focus

According to the publication prepared by International Organization for Standardization, ISO Central Secretariat (2015) that introduced seven quality management principles (QMPs), the following literatures including rationale and key benefits are taken as follows:

The primary focus of quality management is to meet customer requirements and to strive to exceed customer expectations.

Rationale: Sustained success is achieved when an organization attracts and retains the confidence of customers and other interested parties. Every aspect of customer interaction provides an opportunity to create more value for the customer. Understanding current and future needs of customers and other interested parties contributes to sustained success of the organization.

Key Benefits: Increased customer value; Increased customer satisfaction; Improved customer loyalty; Enhanced repeat business; Enhanced reputation of the organization; Expanded customer base; Increased revenue and market share.

II. Leadership

According to the publication prepared by International Organization for Standardization, ISO Central Secretariat (2015) that introduced seven quality management principles (QMPs), the following literatures including rationale and key benefits are taken as follows:

Leaders at all levels establish unity of purpose and direction and create conditions in which people are engaged in achieving the organization's quality objectives.

Rationale: Creation of unity of purpose and direction and engagement of people enable an organization to align its strategies, policies, processes and resources to achieve its objectives.

Key Benefits: Increased effectiveness and efficiency in meeting the organization's quality objectives; Better coordination of the organization's processes; improved communication between levels and functions of the organization; Development and improvement of the capability of the organization and its people to deliver desired results.

III. Engagement of people

According to the publication prepared by International Organization for Standardization, ISO Central Secretariat (2015) that introduced seven quality management principles (QMPs), the following literatures including rationale and key benefits are taken as follows:

Competent, empowered and engaged people at all levels throughout the organization are essential to enhance its capability to create and deliver value.

Rationale: To manage an organization effectively and efficiently, it is important to involve all people at all levels and to respect them as individuals. Recognition, empowerment and enhancement of competence facilitate the engagement of people in achieving the organization's quality objectives.

Key Benefits: Improved understanding of the organization's quality objectives by people in the organization and increased motivation to achieve them; Enhanced involvement of people in improvement activities; Enhanced personal development, initiatives and creativity; Enhanced people satisfaction; Enhanced trust and collaboration throughout the organization; Increased attention to shared values and culture throughout the organization.

IV. Process Approach

According to the publication prepared by International Organization for Standardization, ISO Central Secretariat (2015) that introduced seven quality management principles (QMPs), the following literatures including rationale and key benefits are taken as follows:

Consistent and predictable results are achieved more effectively and efficiently when activities are understood and managed as interrelated processes that function as a coherent system.

Rationale: The quality management system consists of interrelated processes. Understanding how results are produced by this system enables an organization to optimize the system and its performance.

Key Benefits: Enhanced ability to focus effort on key processes and opportunities for improvement; Consistent and predictable outcomes through a system of aligned processes; Optimized performance through effective process management, efficient use of resources, and reduced cross-functional barriers; Enabling the organization to provide confidence to interested parties as to its consistency, effectiveness and efficiency.

V. Improvement

According to the publication prepared by International Organization for Standardization, ISO Central Secretariat (2015) that introduced seven quality management principles (QMPs), the following literatures including rationale and key benefits are taken as follows:

Successful organizations have an ongoing focus on improvement.

Rationale: Improvement is essential for an organization to maintain current levels of performance, to react to changes in its internal and external conditions and to create new opportunities.

Key Benefits: Improved process performance, organizational capabilities and customer satisfaction; Enhanced focus on root-cause investigation and determination, followed by prevention and corrective actions; Enhanced ability to anticipate and react to internal and external risks and opportunities; Enhanced consideration of both incremental and breakthrough improvement; Improved use of learning for improvement; Enhanced drive for innovation.

VI. Evidence-based Decision Making

According to the publication prepared by International Organization for Standardization, ISO Central Secretariat (2015) that introduced seven quality management principles (QMPs), the following literatures including rationale and key benefits are taken as follows:

Decisions based on the analysis and evaluation of data and information are more likely to produce desired results.

Rationale: Decision making can be a complex process, and it always involves some uncertainty. It often involves multiple types and sources of inputs, as well as their interpretation, which can be subjective. It is important to understand cause-and-effect relationships and potential unintended consequences. Facts, evidence and data analysis lead to greater objectivity and confidence in decision making.

Key Benefits: Improved decision-making processes; Improved assessment of process performance and ability to achieve objectives; Improved operational effectiveness and efficiency; Increased ability to review, challenge and change opinions and decisions; Increased ability to demonstrate the effectiveness of past decisions.

VII. Relationship Management

According to the publication prepared by International Organization for Standardization, ISO Central Secretariat (2015) that introduced seven quality management principles (QMPs), the following literatures including rationale and key benefits are taken as follows:

For sustained success, an organization manages its relationships with interested parties, such as suppliers.

Rationale: Interested parties influence the performance of an organization. Sustained success is more likely to be achieved when the organization manages relationships with all of its interested parties to optimize their impact on its performance. Relationship management with its supplier and partner networks is of particular importance.

Key Benefits: Enhanced performance of the organization and its interested parties through responding to the opportunities and constraints related to each interested party; Common understanding of goals and values among interested parties; Increased capability to create value for interested parties by sharing resources and competence and managing quality-related risks; A well-managed supply chain that provides a stable flow of goods and services.

2.11.2. Organizational Performance Measures

Organizational performance (OP) lies at the heart of a firm's survival, Satwinder Singh, Tamer K. Darwish and Kristina Potocnik (2016). Bititci *et al.*, 2012, and March and Sutton, 1997 in Satwinder *et al.* (2016), the ultimate aim of research on organizational performance is centered on explaining how it can be enhanced, shaped and sustained so as to help businesses improve their profitability and long-term survival.

Organizational performance is possibly the most widely used dependent variable in organizational research today (R. Satya Raju and Haile Yeshanew Baye, 2016). It remains one of the most vague and loosely defined constructs (Rogers Ew and Wright PM, 1998). A review of past empirical studies on organizational performance also indicates that there are variations in measuring performance in

organizations (Monge CAM, Rao SS, Gonzalez ME and Sohal AS. 2006), and (Zakuan NM, Yusof, S.M, Shamsudin, S, Laosirihongthong, T. 2008). To date, no uniform measures have existed.

Razaei and Baalousha (2011), defined the performance of the organization as the efficiency and effectiveness of the organization as measured by combining financial and non-financial factors. Li-An Ho (2008), measures organizational performance based on financial performance in profitability and sales growth. Kaplan and Norton 1992 defined organizational performance as a set of both financial and non-financial indicators capable of assessing the degree to which organizational goals and objectives have been accomplished. Financial performance measures indicate whether the company's strategy, implementation, and execution are contributing to bottom-line improvement. According to them, these financial measures include sales growth and profitability. Financial performance indicators can be measured with the help of published company statements, Satwinder *et al.* (2016). Jacqueline *et al.* (2015) stated that the importance of profitability as a performance measure includes its characteristic of significantly affecting the organization's achievement of other financial goals. The profitability of an organization also carries with it other determinants like management decisions and factors that reflect the market, business and economic environment in which the organization operates. Yazdanfar (2013) in Jacqueline *et al.* (2015), another factor explaining the importance of organization profitability is its effect on economic growth, employment, innovation and technological change.

Choong (2013) in Jacqueline *et al.* (2015), the necessity for organizational performance measurement cannot be over emphasized as performance measures, metrics and indicators give life to the stated organization vision, and strategy by providing specific measurable expectations that guide each employee in fulfilling their roles that contribute to the success of the company.

The existence of organizations will be firmly based, when it adopts different tactics and strategies which help the company to prosper its organizational performance for the strong and continuous survival of the company. One of the measures of organizational performance is financial indicators. Financial indicators of organizational performance such as company's sales growth and profitability will be used in the study. These indicators are drawn from the studies of Kaplan and Norton (1992). The researcher also selected

sales growth and profitability in measuring organizational performance due to the availability of data in the years under study in the company under study.

2.11.3. Moderating Variables

According to <https://www.psychologyinaction.org/>, a moderator is a variable that affects the strength of the relation between the predictor (independent variable) and criterion (dependent) variable. Moderators specify when a relation will hold. It can be qualitative or quantitative.

2.11.3.1. Organizational Policies

The successful implementation of the ISO certification standards would, to a large extent, depend on whether or not the organizational policies provide an enabling environment for such implementation. The factory must have internal policies that ensure customer satisfaction and provision of quality service to complement the intended standards by the organization.

2.11.3.2. Government Policies

The government through its agencies such as the Ethiopian Standards Agency (ESA) has a responsibility of outlining standards that textile industries have to meet in their operations. These standards bridge the gap between ISO certification and organizational performance and provide an external audit avenue for certification.

Chapter Three: Research Methodology

3.1. Research Design

Research design is a strategy for research on how to carry out the study in a coherent and logical way, thereby, the research problem will be addressed effectively. Research design is a plan for collecting and utilizing data so that desired information can be obtained with sufficient precision (Miles and Huberman, 2004). According to Kothari 2004, research design role is to direct the collection of relevant data with minimal consumption of effort, time and money considering the research objectives. A descriptive and explanatory research design has been employed to identify whether ISO 9001 QMS certification impacts organizational performance of Adama Spinning Factory. The organizational performance was measured by the financial indicators which are sales growth and profitability. The emphasis in explanatory study is on studying a situation or a problem in order to explain the relationships between variables, Mark Saunders, Philip Lewis and Adrian Thornhill (2009). With this respect, the researcher has drawn a conclusion that ISO 9001 QMS certification has a potential influence on the performance of the companies in sales growth and profitability.

The study adopted a case study research design. According to Yin (1994) a case study research method is an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used. Case studies are the preferred research strategy when the focus is on a contemporary phenomenon within real life context, Mark *et al.* (2009). A study by Mugenda (2003) also points out that case research excels at bringing us to an understanding of a complex issue or object and can extend experience or add strength to what is already known through previous research. Case studies emphasize detailed contextual analysis of a limited number of events or conditions and their relationships (Orodho, 2003). The organization i.e., ASF as a whole is treated as a holistic case study as the unit of Analysis.

3.2. Data Types and Source

Literature review on pertaining studies to the research objectives has been done on systematically selected international journal articles, performance reports of ASF and other necessary sources related to the ISO 9001 QMS certification and organizational performance. Quantitative data was collected through questionnaire and used to answer research questions posed on the impact of ISO 9001 QMS certification within the measurable variables of sales growth and profitability with the aim of explaining and predicting the existing phenomena on the performance of ASF. Quantitative data from the questionnaire findings has been used for the descriptive and inferential analysis of the performance measures. The employees and management member of the company were the source of the questionnaire data.

Generally, the research has obtained both primary and secondary data. The primary data was obtained from employees and management member of ASF using semi-structured questionnaire. The secondary data source was obtained from different literatures reviewed.

3.3. Data Collection Instruments, Variables and Materials

In order to undertake the study, responses from semi-structured questionnaires was included for analysis. The independent variables are the seven (7) Quality Management Principles, since ISO 9000, ISO 9001 and related ISO quality management standards are based on these Quality Management Principles. The dependent variable is Organizational Performance where sales growth and profitability are the measuring variables for OP. And the moderating variables are organizational and government policies.

3.4. Population, Sample and Sampling Techniques

3.4.1. Population

The target population of the research are all 424 employees of ASF; staff, department managers and division heads. These 424 employees are of different departments, experience and exposure to quality related issues. 16 out of these 424 employees are managers and middle level managers thus 408 employees are non-managers.

3.4.2. Sample and Sampling Techniques

The sampling frame is all 424 employees of ASF from all departments which have a chance to be included in the sample. This inclusion of all employees supports one of the principles of quality management which is engagement of people. Different sampling techniques employed for each department. In order to make the data more credible one type of non-probability sampling which is expert sampling has been employed to the quality assurance service employees. The advantage of this approach is that since experts tend to be more familiar with the subject matter than non-experts, opinions from a sample of experts are more credible than a sample that includes both experts and non-experts, Anol Bhattacharjee 2012. Because of this advantage, all 9 employees from research and quality assurance service of the company were nominated for the semi-structured questionnaires. For the remaining departments that consist of 415 employees, stratified random sampling was employed. The strata's was divided based on each department of the company.

From review of literatures on sampling techniques 175 employees from a total of 424 employees or 41% sample size is fair enough for large number of population (see Table 3.1). Hence, data from these 175 employees with careful review of the company's documents and performance was placed to understand the phenomena.

Table 3.1. Sample Size

No	Departments	Population Size	Sample Size
I	Respondents for Questionnaire		
1	General Manager Office	5	2
2	Production	270	108
3	Engineering and Technical	52	21
4	Commercial	8	3
5	Human Resource Development and Administration	57	23
6	Finance and Cost Management	23	9
7	Research and Quality Assurance Service	9	9
Total		424	175

3.5. Measurement Instruments

The research has two basic components. The first one is to investigate the impact of ISO 9001 QMS certification on sales growth, while the second one is to investigate the impact of ISO 9001 QMS certification on profitability. Hence, the semi-structured questionnaire had concepts that explained whether every ISO 9001 QMP had effectively implemented or not, and opinions of subjects about the organizational performance improvement in sales growth and profitability after ISO 9001 QMS certification and also their opinion about organizational and governmental policies. The semi-structured questionnaires had two parts. Part one, dealt with the subjects of demographic characteristics like department, position, qualification, experience and gender. The second part had nine subsections, for the seven variables namely customer focus, leadership, engagement of people, process approach, improvement, evidence based decision making, and relationship management. The eighth subsection gathered opinions of subjects about the organizational performance improvement in sales growth and profitability of the company after ISO 9001 QMS certification. And the ninth subsection gathered opinions of subjects about the moderating variables in organizational and governmental policies in improving OP. Detailed questions included for every variable. In addition, related documents were carefully reviewed.

Self-administered semi-structured closed ended questionnaires were used in the study. This is selected because the company under study is out of the city of Addis Ababa but the researcher is in Addis Ababa city. Questionnaire instrument has several advantages when compared with other measurement instruments: (a) questionnaire can address a large number of issues and questions of concern in a relatively efficient way, with the possibility of high response rate, (b) respondents to questionnaires can take their time to respond to the questions without interference or interruption, (c) cost wise, it is possible to provide questionnaires to hundreds, or even thousands, of people at the same time. The researcher collected the required data by utilizing a Likert-type questionnaire, with rate scale questions from 1 to 5. The questionnaire template was filled out with no need for face-to-face meetings with the respondents and return it back to the researcher. Accordingly, questions are formulated to be brief and direct to the

point, with tick answers. Respondents are asked to express their opinions about the given statement by picking the answer from the given five options Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, and Strongly Agree. Each degree of agreement is given a numerical value between 1 and 5 from Strongly Disagree to Strongly Agree and were used to calculate the measurement items with the perceptual questions. There have been a total of 50 variables grouped into 9 latent variables which can measure and reflect the performance of the organization.

The questionnaire is taken from the work of Md. Syduzzaman on ISO 9001 QMS certification for Bangladesh University of textiles and has been modified to fit for the subject area of the study. Md. Syduzzaman is an assistant professor at Bangladesh University of textiles. In order to meet sufficiency, all the seven principles of quality management are included in the questionnaire. The questionnaire is valid and reliable since it tried to cover all the principles and detailed questions for each principle. Additionally, validity and reliability tests were performed.

3.6. Inclusion and Exclusion Criteria

3.6.1. Inclusion Criteria

Employees who had a major role in the design, planning, implementation, evaluation and eventually led to the certification of the company in ISO 9001 QMS has been included in the study, specifically, machine operators, mechanics, experts, division heads and managers.

3.6.2. Exclusion Criteria

ASF's employees, who were newly employed with less than a year, had insufficient information about the company's ISO 9001 QMS certification, so they are excluded from the study.

3.7. Method of Data Analysis and Interpretation

Descriptive, correlation (to quantify the strength of the linear relationship between ISO 9001 QMS certification on organizational performance) and multiple regression (to assess the strength of relationship between ISO 9001 QMS certification (independent variable) and organizational performance (dependent

variable)) statistical tools were used in testing the impact of ISO 9001 QMS certification on organizational performance. The quantitative data collected through questionnaire has been analyzed by making use of inferential statistics, Excel spreadsheets and statistical analysis software package called SPSS version 26, a computerized statistical package, by encoding responses from the questionnaires. To analyze ISO 9001 QMS certification measuring variables (7 QMP) and the impact on the organizational performance dimensions (sales growth and profitability), parametric statistical methods has been used to determine the direction of relationship and degree of association based on the distribution of the sampled data collected. The descriptive statistics has also been presented using graphs and tables to see the descriptive statistical values of the five-point Likert scale data.

3.8. Model Specification

To examine the impact of ISO 9001 QMS certification represented by the 7 QMP i.e. CF, L, EP, PA, I, ED and RM on organizational performance sales growth (OP1) and profitability (OP2) and the role of moderating variables (organizational policies and government policies) as a moderator between ISO 9001 QMS certification and dependent variable (sales growth and profitability) has been used in the model. Variables are carefully selected in review of different literatures.

The model is specified based on the research variables that are described in the conceptual framework in chapter two, to examine the impact of ISO 9001 QMS certification on organizational performance.

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_n X_{ni} + \varepsilon_i$$

Where: Y_i is dependent variable for i^{th} observation;

X_i is independent variable for i^{th} observation;

β_0 is the intercept;

β_s are regression coefficients

ε_i is the error term for i^{th} observation;

This basic regression model is reworked in terms of the variables used in this research to show the association among them considering the research conceptual framework constructed.

$$OP1 = \beta_0 + \beta_1CF + \beta_2L + \beta_3EP + \beta_4PA + \beta_5I + \beta_6ED + \beta_7RM + \varepsilon \dots\dots\dots\text{Model 1}$$

$$OP2 = \beta_0 + \beta_1CF + \beta_2L + \beta_3EP + \beta_4PA + \beta_5I + \beta_6ED + \beta_7RM + \varepsilon \dots\dots\dots\text{Model 2}$$

$$OP1 = \beta_0 + \beta_1CF + \beta_2L + \beta_3EP + \beta_4PA + \beta_5I + \beta_6ED + \beta_7RM + \beta_8MV1 + \beta_9MV2 + \varepsilon\dots\dots\dots\text{Model 3}$$

$$OP2 = \beta_0 + \beta_1CF + \beta_2L + \beta_3EP + \beta_4PA + \beta_5I + \beta_6ED + \beta_7RM + \beta_8MV1 + \beta_9MV2 + \varepsilon\dots\dots\dots\text{Model 4}$$

Where: β_0 = Constant term or Intercept

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8, \beta_9$ = Elasticity Coefficients or the magnitude of the effect of the independent variables on the dependent variable

OP1 = Sales Growth, OP2 = Profitability

CF = Customer Focus, L = Leadership, EP = Engagement of People, PA = Process Approach,

I = Improvement, ED = Evidence Based Decision Making, RM = Relationship Management

MV1 = Moderating Variable 1 i.e., Organizational Policies

MV2 = Moderating Variable 2 i.e., Government Policies

ε = Random Error

3.9. Reliability and Validity

3.9.1. Reliability Test

Reliability is a method used to test whether our measurements' has dependency and consistency or not. This result could be seen from the instrument employed and also from the group of respondents (Cohen, J., Cohen, P., West, S. G., and Aiken, L. S. 2003). Reliability is a measure of the degree to which a research instrument yields consistent results after repeated trials (Mugenda, 1999). Reliability is about the internal consistency of research instruments; it is the ability of research instruments to produce similar results again and again under consistent conditions.

Cronbach's Alpha has been used to test the reliability of the items in the questionnaire and the corresponding scale. This enabled the internal consistency of the measuring variables.

Table 3.2. Reliability Statistics for all study variables

No	Variables	Cronbach's Alpha (α)	N of Items
1	Customer Focus (CF)	0.792	7
2	Leadership (L)	0.858	6
3	Engagement of People (EP)	0.864	10
4	Process Approach (PA)	0.708	5
5	Improvement (I)	0.722	7
6	Evidence Based Decision Making (ED)	0.706	6
7	Relationship Management (RM)	0.710	5
8	Organizational Performance (OP)	0.987	2
9	Moderating Variables (MV)	0.676	2

Source: Own Survey Data Analysis Output, SPSS Version 26, 2021

Reliability test was performed on ISO 9001 quality management principles, performance measures and moderating variables. This study used Cronbach's α for measuring reliability of the instrument, and detecting consistency of the measurement scale developed on the basis of the respondents' responses. According to Patyal and Koilakuntla 2017, the threshold value of Cronbach's α should be at least 0.60 and it is considered highly reliable if it is beyond 0.70. Table 3.2 above presents the reliability statistics for all study variables. Therefore, the above value of the reliability test analysis is encouraging and acceptable for further analysis.

3.9.2. Validity Test

Validity concerns the degree to which a question measures what it is intended to measure. It is the most critical criterion and indicates the degree to which an instrument measures what it is supposed to measure (Kothari, 2004). Validity is concerned with how well the concepts are defined by the measure(s). It also refers to the extent to which an empirical measure adequately reflects the real meaning of the concept under consideration (O'Leary, 2004). To determine how well certain constructs explain the variance of responses to a set of survey items, construct validity is used.

Literature review, and experts' evaluation and judgment has been made to keep the validity of the variables and the information obtained. Experts with adequate experience and expertise in the area of quality management as well as the research advisors judgment were used to measure the content validity in this particular study.

3.10. Ethical Consideration

According to Mark *et al.* (2009), conducting a research, its design, data collection approach, etc. necessitate proper ethical considerations. The researcher, therefore, required to be administered by the ethical research principles. Respondents were informed about the aim of the research clearly, and their voluntary participation. Identity and other personal related information were not written on the questionnaire, instead the researcher has given code to them. The responses for questionnaire are not exposed to third party, the researcher used them only for academic purpose. The research's originality has been maintained and all literatures, facts and previous research findings used for this study were well acknowledged with their respective authors.

Chapter Four: Data Analysis and Interpretation

4.1. Introduction

This chapter deals with the empirical data analysis collected from the case company through standard questionnaires. And financial performance reports mainly profit and loss statements of the company on sales and profitability to observe what the performance trend looks like. The data analysis has been done by using Excel spreadsheets (for financial performance of sales and profit) and SPSS version 26.0 data processing software (for the questionnaires). Thorough discussion has been made after the findings of the data were analyzed to meet the research objectives defined and answer research questions set. 175 respondents from the case company were approached. These respondents were requested for their willingness to complete the designed questionnaires. Out of 175 respondents, 170 respondents agreed and responded, resulting in a response rate of 97.14%.

4.2. Analysis of Questionnaire Results

4.2.1. Analysis of Demographic Factor of the Respondents

After the construct validity test for the standard questionnaire, it has been distributed to the 175 respondents to complete the questionnaire and out of these, 170 questionnaires were returned back. Therefore, the data which was collected from 170 respondents were used for analysis.

Table 4.1. Demographic Characteristics of the Respondents

Demographic Characteristics	Number of Respondents	Percent (%)
<i>Gender</i>		
Female	107	62.9
Male	63	37.1
Total	170	100.0
<i>Educational Qualification</i>		
10 th Grade	55	32.4
Certificate	28	16.5
Diploma	32	18.8
BA/BSC	54	31.8
Masters & Above	1	0.6
Total	170	100.0
<i>Work Department</i>		
GM Office	2	1.2
Production	108	63.5
Engineering and Technical	21	12.4
Commercial	2	1.2
Human Resource Development and Administration	21	12.4
RQAS	9	5.3
Finance and Cost Management	7	4.1
Total	170	100.0
<i>Work Experience (Year)</i>		
1-5 years	37	21.8
6-10 years	56	32.9
11-15 years	77	45.3
Total	170	100.0

Source: Own Survey Data Analysis Output, SPSS Version 26, 2021

Table 4.1 above presents the demographic characteristics of respondents. These include respondents' gender, educational qualification, work department, and work experience. This is indicated in the number of respondents and percent of response.

107 respondents (62.9%) were female respondents and 63 respondents (37.1%) were male respondents.

More female respondents implies that the highest number of females contribution to the study.

From the respondents, 55 (32.4%), 28 (16.5%), 32 (18.8%), 54 (31.8%) and 1 (0.6%) were 10th grade completed, certificate holders, diploma holders, BA/BSC professionals, masters and above in their educational background respectively. This implies that the respondents have the essential educational background to understand the objective of the study.

The respondents were comprised from different departments/services of the company. From GM Office 2 (1.2%), Production 108 (63.5%), Engineering and Technical 21 (12.4%), Commercial 2 (1.2%), Human Resource Development and Administration 21 (12.4%), RQAS 9 (5.3%), and Finance and Cost Management 7 (4.1%). This implies that most of the respondents are from the production department which is the main business unit of the company, so the study has mostly included the backbone of the company.

The majority of the respondents (45.3%) has a work experience of 11 years to 15 years. This implies that Employees who had a major role in the design, planning, implementation, evaluation and eventually led to the certification of the company in ISO 9001 QMS has been included in the study

4.2.2. Correlation Analysis

A correlation is a statistical technique used to determine the existence of relationships between two different variables. The purpose of the correlation procedure is for measuring Pearson's correlation coefficient with its significance levels. Pearson's correlation coefficient is a measure for a linear relationship.

To identify the strength and direction of relationship between the variables and among the constructs, pair-wise correlation analysis has been performed. As our assumption is a normally distributed data and in consistent with parametric assumptions, Pearson correlation coefficient was considered as parametric correlation estimation test for the variables in this research.

Table 4.2. Correlations between Constructs

		CF	L	EP	PA	I	ED	RM	OP
CF	Pearson Correlation	1							
	Sig. (2-tailed)								
	N	170							
L	Pearson Correlation	.403**	1						
	Sig. (2-tailed)	.000							
	N	170	170						
EP	Pearson Correlation	.233**	.531**	1					
	Sig. (2-tailed)	.002	.000						
	N	170	170	170					
PA	Pearson Correlation	.217**	.517**	.715**	1				
	Sig. (2-tailed)	.005	.000	.000					
	N	170	170	170	170				
I	Pearson Correlation	.439**	.548**	.356**	.404**	1			
	Sig. (2-tailed)	.000	.000	.000	.000				
	N	170	170	170	170	170			
ED	Pearson Correlation	.440**	.603**	.429**	.450**	.648**	1		
	Sig. (2-tailed)	.000	.000	.000	.000	.000			
	N	170	170	170	170	170	170		
RM	Pearson Correlation	.219**	.268**	.184*	.389**	.306**	.279**	1	
	Sig. (2-tailed)	.004	.000	.017	.000	.000	.000		
	N	170	170	170	170	170	170	170	
OP	Pearson Correlation	.407**	.716**	.626**	.694**	.708**	.663**	.229**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.003	
	N	170	170	170	170	170	170	170	170
**. Correlation is significant at the 0.01 level (2-tailed).									
*. Correlation is significant at the 0.05 level (2-tailed).									

Source: Own Survey Data Analysis Output, SPSS Version 26, 2021

Key: Customer Focus (CF), Leadership (L), Engagement of People (EP), Process Approach (PA), Improvement (I), Evidence Based Decision Making (ED), Relationship Management (RM), Organizational Performance (OP)

Patel (2009) specified correlation range to see the relationship of variables as follows. Stronger relationship (if a correlation close to -1 or 1); weak positive relationship (a correlation of 0.01 to 0.3); weak negative relationship (a correlation of -0.01 to -0.3); moderate positive relationship (correlation of 0.31 to 0.69); moderate negative relationship (a correlation of -0.31 to -0.69); strong positive relationship (a correlation above 0.7); and strong negative relationship (a correlation below -0.7)

Table 4.2 above shows the Pearson correlation analysis between dependent, and independent variables. As it can be seen in the Table 4.2 above, the correlation matrix findings reveal that there exists a statistically significant strong and positive association between the Organizational Performance (OP) i.e., the dependent variable and Leadership (L) and Improvement (I) i.e., the independent variables at 1% significance level with correlation coefficient $r=0.716$ and $r=0.708$ respectively.

On other hand, the result also indicated that there exist a statistically significant moderate and positive correlation between Organizational Performance (OP) i.e., the dependent variable and Customer Focus (CF), Engagement of People (EP), Process Approach (PA), and Evidence Based Decision Making (ED) i.e., the independent variables at 1% significance level with correlation coefficient $r=0.407$, $r=0.626$, $r=0.694$ and $r=0.663$ respectively. In addition, the correlation analysis result confirmed that a statistically significant weak and positive correlation between Organizational Performance (OP) i.e., the dependent variable and Relationship Management (RM) i.e., the independent variable at 1% significance level with correlation coefficient of $r=0.229$.

4.2.3. Diagnostics of Assumptions in Regression

Before conducting a regression analysis, the test for the five basic assumptions about the original data must be conducted. This is a required precondition in explaining the relationships between dependent and independent (explanatory) variables. Therefore, the diagnosis tests were performed in order to avoid invalid regression results.

4.2.3.1. Linearity

According to Darlington (1968), to conduct linear regression analysis, the relationship between the dependent variables and independent (explanatory) variables need to be linear function. In this study among the various methods of testing linearity normal P-P plot diagram with line of fit was applied to see whether the relationship is linear.

The result of normal P-P plot diagram with line of fit confirmed that a linear relationship existed between the dependent variable and those independent variables (Figure 4.1).

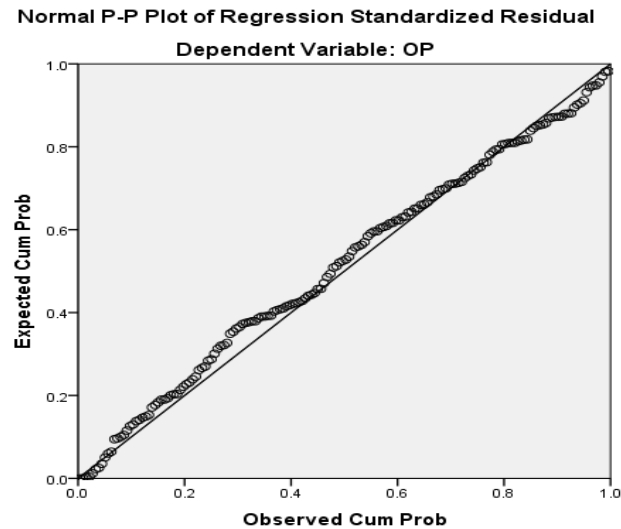


Figure 4.1. Test of Linearity

Source: Own Survey Data Analysis Output, SPSS Version 26, 2021

4.2.3.2. Normality

One of the basic assumptions of multiple regression is that variables have to be normally distributed before doing the regression analysis, (Darlington, 1968), which implies that errors are normally distributed, and a plot of the values of the residuals will approximate a normal curve (Keith, 2006). Among the various methods of testing for normality of data is histogram of the standardized residuals. The result of the normality test is confirming the data is obtained from normally distributed population (Figure 4.2).

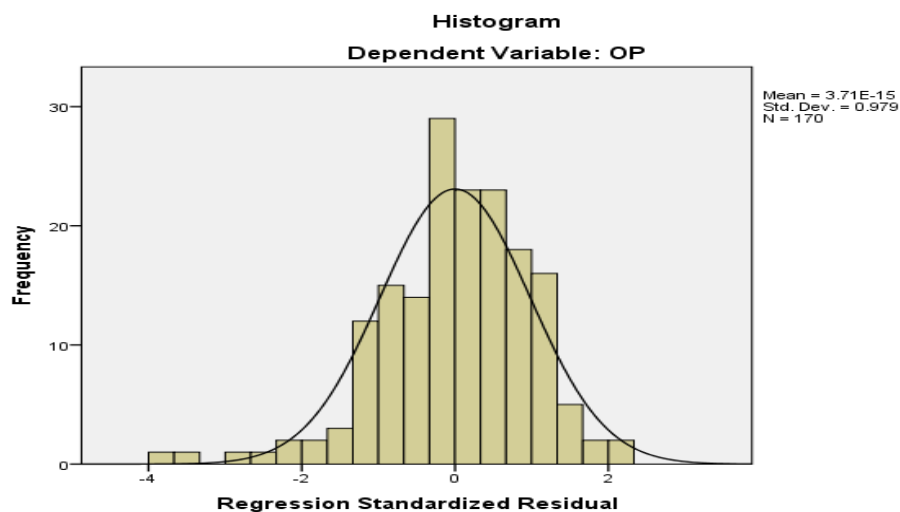


Figure 4.2. Test of Normality

Source: Own Survey Data Analysis Output, SPSS Version 26, 2021

4.2.3.3. Multicollinearity

Multicollinearity is defined as the degree to which the independent variables used in multiple regression analysis are correlated (Ramadan, B. M., Dahiyat, S. E., Bontis, N., and Al-dalahmeh, M.A, 2017).

Multicollinearity occurs when the predictor variables in the regression model are highly correlated with each other while measuring the same thing.

To evaluate multicollinearity, both indicators of variance inflation factor (VIF) and tolerance were considered. Tolerance indicates how much of the variability of the specified independent variable is not explained by the other independent variables in the model. The formula to calculate tolerance is $(1 - R^2)$ for each variable. Myers, (1990) recommended that VIF value which is greater than 10 is a cause of concern. Variance inflation factor (VIF) is another important consideration when testing multicollinearity.

As suggested by Sekaran and Bougie, (2013), to determine if the study suffers from multicollinearity problem or not, the researcher relied on a common cut off value i.e. Above 0.10 for tolerance, and a value of less than 10 for VIF.

Statistical Package for Social Sciences (SPSS), as part of multiple regression technique can assess the multicollinearity assumption. In the collinearity statistics section, Tolerance and VIF values are provided.

Table 4.3. Test of Multicollinearity

Model		Collinearity Statistics	
		Tolerance	VIF
1	CF	.737	1.357
	L	.478	2.090
	EP	.431	2.322
	PA	.360	2.780
	I	.423	2.363
	ED	.465	2.151
	RM	.775	1.290
	MV1	.641	1.559
	MV2	.404	2.475
a. Dependent Variable: OP			

Source: Own Survey Data Analysis Output, SPSS Version 26, 2021

Key: Customer Focus (CF), Leadership (L), Engagement of People (EP), Process Approach (PA), Improvement (I), Evidence Based Decision Making (ED), Relationship Management (RM), Organizational Policies (MV1), Governmental Policies (MV2), Organizational Performance (OP)

The results of the above Table 4.3 showed that the threat of multicollinearity does not exist among the predictor variables given that all the VIF values are below 10 and all the tolerance values are above 0.10.

4.2.3.4. Homoscedasticity

"Homogeneity of variance" assumption or homoscedasticity. Osborn and Waters (2002), states that the homoscedasticity assumption is the variances of the same variable, selected from independent samples, will be equal. In regression analysis, this assumption states that the variances of the Ys, for each X, will be equal. Plotting the predicted Y values against the residual values is the standard suggestion for examining the assumption of homoscedasticity in regression analysis. Heteroscedasticity is indicated when these values spread or far out from left to right or right to left. As it can be seen in the Figure 4.3 below the standardized residuals are evenly distributed attesting that the data has no heteroscedasticity problem.

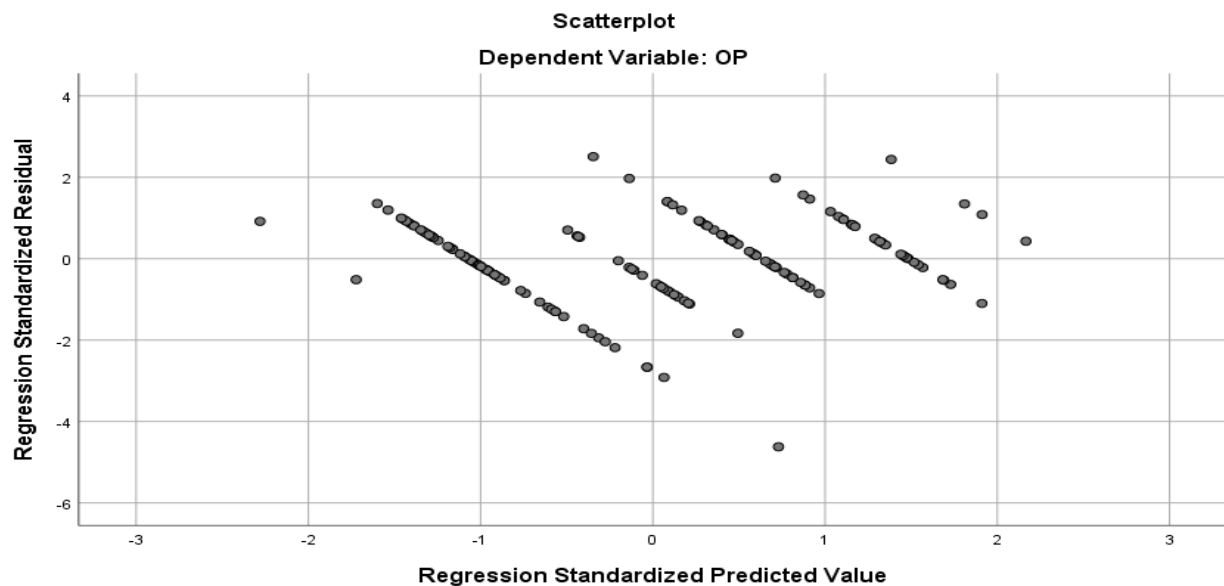


Figure 4.3. Test of Heteroscedasticity

Source: Own Survey Data Analysis Output, SPSS Version 26, 2021

4.2.3.5. Autocorrelation

According to Stevens (2009), autocorrelation or independence of errors refers to the assumption that errors are independent of one another, implying that subjects are responding independently. Durbin-Watson statistic can be used to test the assumption that our residuals are independent (or uncorrelated). This statistic can vary from 0 to 4. For this assumption to be met, the DW value needs to be close to 2. Values below 1 and above 3 are problematic and causes for concern. Table 4.4 below reveals that errors are responding independently, and autocorrelation is not a concern with DW of 1.976.

Table 4.4: Durbin Watson Statistics

Model Summary ^c					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.818 ^a	.669	.655	.36876	
2	.912 ^b	.831	.822	.26497	1.976
a. Predictors: (Constant), RM, EP, CF, I, L, ED, PA					
b. Predictors: (Constant), RM, EP, CF, I, L, ED, PA, MV1, MV2					
c. Dependent Variable: OP					

Source: Own Survey Data Analysis Output, SPSS Version 26, 2021

Key: Customer Focus (CF), Leadership (L), Engagement of People (EP), Process Approach (PA), Improvement (I), Evidence Based Decision Making (ED), Relationship Management (RM), Organizational Policies (MV1), Governmental Policies (MV2), Organizational Performance (OP)

4.2.4. Testing the Research Hypothesis

After testing all the relevant assumptions of classical linear regression assumptions for the data used, the researcher run regression analysis to explore the relationship between the independent and dependent variables. The coefficients of determination (adjusted R² value), the regression coefficients (Beta coefficient) and the p-values for each of the significant relationships were reported. Each of the proposed hypotheses were empirically tested and discussed.

4.2.4.1. Regression Model Specification

Model 1

H1_a: ISO 9001 QMS certification has a positive and statistically significant effect on sales growth.

$$OP1 = \beta_0 + \beta_1CF + \beta_2L + \beta_3EP + \beta_4PA + \beta_5I + \beta_6ED + \beta_7RM + \varepsilon \dots \dots \dots \text{Model 1}$$

Where: β_0 = Constant term or Intercept of Sales Growth; $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7$ = Elasticity Coefficients or the magnitude of the effect of the independent variables on the dependent variable; OP1 = Sales Growth; CF = Customer Focus; L = Leadership; EP = Engagement of People; PA = Process Approach; I = Improvement; ED = Evidence Based Decision Making; RM = Relationship Management; ε = Random Error

Model 2

H2_a: ISO 9001 QMS certification has a positive and statistically significant effect on profitability.

$$OP2 = \beta_0 + \beta_1CF + \beta_2L + \beta_3EP + \beta_4PA + \beta_5I + \beta_6ED + \beta_7RM + \varepsilon \dots \dots \dots \text{Model 2}$$

Where: β_0 = Constant term or Intercept of Sales Growth; $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7$ = Elasticity Coefficients or the magnitude of the effect of the independent variables on the dependent variable; OP2 = Profitability; CF = Customer Focus; L = Leadership; EP = Engagement of People; PA = Process Approach; I = Improvement; ED = Evidence Based Decision Making; RM = Relationship Management; ε = Random Error

Model 3

H3_a: Organizational and Government policy has a moderating role between ISO 9001 QMS Certification and sales growth.

$$OP1 = \beta_0 + \beta_1CF + \beta_2L + \beta_3EP + \beta_4PA + \beta_5I + \beta_6ED + \beta_7RM + \beta_8MV1 + \beta_9MV2 + \varepsilon \dots \dots \dots \text{Model 3}$$

Where: β_0 = Constant term or Intercept of Sales Growth; $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8, \beta_9$ = Elasticity Coefficients or the magnitude of the effect of the independent variables on the dependent variable; OP1 = Sales Growth; CF = Customer Focus; L = Leadership; EP = Engagement of People; PA = Process Approach; I = Improvement; ED = Evidence Based Decision Making; RM = Relationship Management; MV1 = Moderating Variable 1 i.e., Organizational Policies; MV2 = Moderating Variable 2 i.e., Government Policies; ε = Random Error

Model 4

H4_a: Organizational and Government policy has a moderating role between ISO 9001 QMS Certification and profitability.

$$OP2 = \beta_0 + \beta_1CF + \beta_2L + \beta_3EP + \beta_4PA + \beta_5I + \beta_6ED + \beta_7RM + \beta_8MV1 + \beta_9MV2 + \varepsilon \dots \dots \dots \text{Model 4}$$

Where: β_0 = Constant term or Intercept of Sales Growth; $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8, \beta_9$ = Elasticity Coefficients or the magnitude of the effect of the independent variables on the dependent variable; OP2 = Profitability; CF = Customer Focus; L = Leadership; EP = Engagement of People; PA = Process Approach; I = Improvement; ED =

Evidence Based Decision Making; RM = Relationship Management; MV1 = Moderating Variable 1 i.e., Organizational Policies; MV2 = Moderating Variable 2 i.e., Government Policies; ε = Random Error

4.2.4.2. Regression Analysis

Linear regression has been used to model the value of the dependent scale variables that is sales and profit, based on their linear relationship to the predictors (independent variables). The standard approach for describing the relationships in this problem is linear regression.

In the regression model, seven variables Customer Focus (CF), Leadership (L), Engagement of People (EP), Process Approach (PA), Improvement (I), Evidence Based Decision Making (ED), and Relationship Management (RM) were considered as independent variables while Organizational Performance measuring variables i.e. sales growth (OP1) and profitability (OP2) were included as a dependent variables. In addition, for moderating role analysis organizational policies (MV1) and government policies (MV2) were included in the model.

4.2.4.2.1. Model Summary

How well a regression model fits the data is measured by R^2 . It represents how much of the variance in the response is explained by the predictors, that is, customer focus, leadership, engagement of people, process approach, improvement, evidence based decision making, and relationship management. And organizational and government policies as a moderators. The closer R^2 is to 1, the better the model fits.

Table 4.5. Model Summary

Description		R	R ²	Adjusted R ²	SE
Model 1	a. Predictors: (Constant), ISO 9001 QMS Certification b. Dependent Variable: Sales Growth	.857 ^a	.734	.723	.33905
Model 2	a. Predictors: (Constant), ISO 9001 QMS Certification b. Dependent Variable: Profitability	.840 ^a	.705	.692	.36842
Model 3	a. Predictors: (Constant), ISO 9001 QMS Certification, Organizational policy (MV1), Government policy (MV2) b. Dependent Variable: Sales Growth	.901 ^a	.812	.801	.28697
Model 4	a. Predictors: (Constant), ISO 9001 QMS Certification, Organizational policy (MV1), Government policy (MV2) b. Dependent Variable: Profitability	.889 ^a	.790	.778	.31271

a. Predictors; b. Dependent Variables; SE. Standard Error of the Estimate

Source: Own Survey Data Analysis Output, SPSS Version 26, 2021

As clearly described in table 4.5 above, adjusted R-square value for the regression model 1 is 0.723. This indicate that ISO 9001 QMS Certification in this study explain about 72.3% of the variation in the level of sales growth. The result also indicates that, the remaining 27.7% of the variation in the dependent variable was due to other unobserved variables.

Adjusted R-square value for the regression model 2 is 0.692 and about 69.2% level of profitability explained by ISO 9001 QMS Certification. The result also indicates that, the remaining 30.8% of the variation in the dependent variable was due to other unobserved variables.

When ISO 9001 QMS Certification moderated by organizational and government policies, the adjusted R-square value is 0.801 as per model 3 and it indicate that the variation in sales growth will be explained by 80.1%. The result also indicates that, the remaining 19.9% of the variation in the dependent variable was due to other unobserved variables.

When ISO 9001 QMS Certification moderated by organizational and government policies, the adjusted R-square value is 0.778 as per model 4 and it indicate that the variation in profitability will be explained by 77.8%. The result also indicates that, the remaining 22.2% of the variation in the dependent variable was due to other unobserved variables.

4.2.4.2.2. Analysis of Variance (ANOVA)

As indicated in the table 4.6 below, for all models, the p-value is less than 0.05 significance level. This indicates that the sample data provides sufficient evidence to conclude that the regression model is well fit for those models. In other words, the p-value is highly significant and can be concluded that ISO 9001 QMS Certification (CF, L, EP, PA, I, ED, RM) with organizational and government policies can predict sales growth and profitability of an organization.

Table 4.6. Analysis of Variance (ANOVA^a)

Description		F	Sig
Model 1	a. Dependent Variable: Sales Growth		
	b. Predictors: (Constant), ISO 9001 QMS Certification	63.956	.000 ^b
Model 2	a. Dependent Variable: Profitability		
	b. Predictors: (Constant), ISO 9001 QMS Certification	55.312	.000 ^b
Model 3	a. Dependent Variable: Sales Growth		
	b. Predictors: (Constant), ISO 9001 QMS Certification, Organizational policy (MV1), Government policy (MV2)	76.784	.000 ^b
Model 4	a. Dependent Variable: Profitability		
	b. Predictors: (Constant), ISO 9001 QMS Certification, Organizational policy (MV1), Government policy (MV2)	66.921	.000 ^b

a. Dependent Variables; b. Predictors; SE. Standard Error of the Estimate

Source: Own Survey Data Analysis Output, SPSS Version 26, 2021

4.2.4.2.3. Coefficient of Variables

In order to know the magnitude and the level of significance of the effect of each independent variable on the dependent variable, analyzing the elasticity coefficient or value of Beta coefficient was required. The regression coefficient explains the average amount of change in the dependent variable that occurred due to a unit of change in an independent variable and its direction. Therefore, the larger value of Beta coefficient indicates the larger effect of an independent variable on the dependent variable while the smaller P-Value indicates the higher level of the significance of the effect of an independent variable on the dependent variable.

Table 4.7 below presents the elasticity coefficients of the explanatory variables in the model adopted of an independent variable on the dependent variable.

The relative importance of the independent variables or the magnitude and the level of significance of the effect of each independent variable on dependent variable was explained by the unstandardized Beta coefficients and its P-values.

Table 4.7. Coefficients of Variables

Description		Unstandardized Coefficients		Standardized Coefficients	t	Sig
		B	Std. Error	Beta		
Model 1	(Constant) a	1.219	0.271		4.501	0.000
	CF	0.175	0.059	0.135	1.626	0.016
	L	0.363	0.057	0.322	6.346	0.000
	EP	0.167	0.064	0.142	2.616	0.010
	PA	0.426	0.065	0.386	6.554	0.000
	I	0.126	0.051	0.122	2.493	0.014
	ED	0.152	0.070	0.122	2.165	0.032
	RM	0.077	0.071	0.058	1.080	0.049
Model 2	(Constant) b	1.127	0.294		3.829	0.000
	CF	0.172	0.064	0.058	1.124	0.036
	L	0.485	0.062	0.418	7.806	0.000
	EP	0.106	0.069	0.005	0.089	0.045
	PA	0.431	0.071	0.378	6.091	0.000
	I	0.105	0.055	0.098	1.909	0.050
	ED	0.201	0.076	0.156	2.627	0.009
	RM	0.041	0.077	0.030	0.532	0.044
Model 3	(Constant) c	1.408	0.240		5.854	0.000
	CF	0.100	0.050	0.083	1.989	0.048
	L	0.200	0.053	0.178	3.805	0.000
	EP	0.148	0.054	0.126	2.740	0.007
	PA	0.248	0.059	0.224	4.171	0.000
	I	0.049	0.044	0.047	1.104	0.047
	ED	0.104	0.060	0.083	1.743	0.033
	RM	0.055	0.060	0.041	0.903	0.036
	MV1	0.348	0.049	0.123	3.017	0.003
	MV2	0.380	0.054	0.359	7.054	0.000
Model 4	(Constant) d	1.286	0.262		4.906	0.000
	CF	0.074	0.055	0.060	1.356	0.025
	L	0.313	0.057	0.269	5.461	0.000
	EP	0.028	0.059	0.023	-0.479	0.050
	PA	0.236	0.065	0.207	3.652	0.000
	I	0.024	0.048	0.022	0.495	0.021
	ED	0.149	0.065	0.116	2.291	0.023
	RM	0.016	0.066	0.012	-0.241	0.045
	MV1	0.330	0.053	0.105	2.435	0.016
	MV2	0.426	0.059	0.390	7.259	0.000

Source: Own Survey Data Analysis Output, SPSS Version 26, 2021

a, c. Dependent Variable = Sales Growth;

b, d. Dependent variable = Profitability

Where: CF = Customer Focus; L = Leadership; EP = Engagement of People; PA = Process Approach; I = Improvement; ED = Evidence Based Decision Making; RM = Relationship Management; MV1 = Moderating Variable 1 i.e., Organizational Policies; MV2 = Moderating Variable 2 i.e., Government Policies

From the regression coefficients result Table 4.7 above, ISO 9001 QMS Certification (CF, L, EP, PA, I, ED, RM) have a positive and statistically significant effect on sales growth and profitability of the organization at both one and five percent level of significance. Similarly, ISO 9001 QMS Certification when moderated by organizational and government policies has a positive and statistically significant effect on sales growth and profitability.

The regression coefficient result of Model 1 showed that, customer focus ($\beta = 0.175$, $p = .016$), leadership ($\beta = 0.363$, $p = .000$), engagement of people ($\beta = 0.167$, $p = .010$), process approach ($\beta = 0.426$, $p = .000$), improvement ($\beta = 0.126$, $p = .014$), evidence based decision making ($\beta = 0.152$, $p = .032$), and relationship management ($\beta = 0.077$, $p = .049$) has positive and significant effect on sales growth. The positive effect of ISO 9001 QMS Certification on sales growth implies that ISO 9001 QMS Certification has a customer acceptance for observing the quality of the product they buy which lead the company to have a better sales growth. In other words, the regression coefficient for customer focus indicates a unit change in customer focus will lead to approximately 17.5% increase in sales growth, the regression coefficient for leadership indicates a unit change in leadership will lead to approximately 36.3% increase in sales growth, the regression coefficient for engagement of people indicates a unit change in engagement of people will lead to approximately 16.7% increase in sales growth, the regression coefficient for process approach indicates a unit change in process approach will lead to approximately 42.6% increase in sales growth, the regression coefficient for improvement indicates a unit change in improvement will lead to approximately 12.6% increase in sales growth, the regression coefficient for evidence based decision making indicates a unit change in evidence based decision making will lead to approximately 15.2% increase in sales growth, and the regression coefficient for relationship management indicates a unit change in relationship management will lead to approximately 7.7% increase in sales growth.

Also, the regression coefficient result of Model 2 showed that, customer focus ($\beta = 0.172$, $p = .036$), leadership ($\beta = 0.485$, $p = .000$), engagement of people ($\beta = 0.106$, $p = .045$), process approach ($\beta = 0.431$, $p = .000$), improvement ($\beta = 0.105$, $p = .050$), evidence based decision making ($\beta = 0.201$, $p = .009$), and relationship management ($\beta = 0.041$, $p = .044$) has positive and significant effect on profitability. The

positive effect of ISO 9001 QMS Certification on profitability implies that ISO 9001 QMS Certification has a customer acceptance for observing the quality of the product they buy which lead the company to have a better sales growth and ultimately leading to profitability. In other words, the regression coefficient for customer focus indicates a unit change in customer focus will lead to approximately 17.2% increase in profitability, the regression coefficient for leadership indicates a unit change in leadership will lead to approximately 48.5% increase in profitability, the regression coefficient for engagement of people indicates a unit change in engagement of people will lead to approximately 10.6% increase in profitability, the regression coefficient for process approach indicates a unit change in process approach will lead to approximately 43.1% increase in profitability, the regression coefficient for improvement indicates a unit change in improvement will lead to approximately 10.5% increase in profitability, the regression coefficient for evidence based decision making indicates a unit change in evidence based decision making will lead to approximately 20.1% increase in profitability, and the regression coefficient for relationship management indicates a unit change in relationship management will lead to approximately 4.1% increase in profitability.

The regression coefficient result of model 3 showed that, ISO 9001 QMS Certification (CF, L, EP, PA, I, ED, RM) moderated by organizational policies ($\beta = 0.348$, $p = .003$) and government policies ($\beta = 0.380$, $p = .000$) has a positive and significant effect on sales growth. The positive impact of organizational and government policies on sales growth implies that successful implementation of the ISO 9001 certification standards depend on organizational and government policies enabling environment for such implementation and necessary monitoring and evaluation policies from the government leading to a better sales performance significantly. In other words, a unit change in ISO 9001 QMS Certification as moderated by organizational policies will lead to approximately 34.8% increase in sales growth, and a unit change in ISO 9001 QMS Certification as moderated by government policies will lead to approximately 38.0% increase in sales growth.

The regression coefficient result of model 4 showed that, ISO 9001 QMS Certification (CF, L, EP, PA, I, ED, RM) moderated by organizational policies ($\beta = 0.330$, $p = .016$) and government policies ($\beta =$

0.426, $p = .000$) has a positive and significant effect on profitability. The positive impact of organizational and government policies on profitability implies that successful implementation of the ISO 9001 certification standards depend on organizational and government policies enabling environment for such implementation and necessary monitoring and evaluation policies from the government leading to a better sales performance and profitability significantly. In other words, a unit change in ISO 9001 QMS Certification as moderated by organizational policies will lead to approximately 33.0% increase in profitability, and a unit change in ISO 9001 QMS Certification as moderated by government policies will lead to approximately 42.6% increase in profitability. Based on the results of the analysis of the beta coefficients, thorough recommendations are made in the next chapter, chapter five.

Model 1: $OP1 = 1.219 + 0.175CF + 0.363L + 0.167EP + 0.426PA + 0.126I + 0.152ED + 0.077RM + \varepsilon$

Where: OP1 = Sales Growth, CF = Customer Focus; L = Leadership; EP = Engagement of People; PA = Process Approach; I = Improvement; ED = Evidence Based Decision Making; RM = Relationship Management; ε = Random Error

Model 2: $OP2 = 1.127 + 0.172CF + 0.485L + 0.106EP + 0.431PA + 0.105I + 0.201ED + 0.041RM + \varepsilon$

Where: OP2 = Profitability, CF = Customer Focus; L = Leadership; EP = Engagement of People; PA = Process Approach; I = Improvement; ED = Evidence Based Decision Making; RM = Relationship Management; ε = Random Error

Model 3: $OP1 = 1.408 + 0.100CF + 0.200L + 0.148EP + 0.248PA + 0.049I + 0.104ED + 0.055RM + 0.348MV1 + 0.380MV2 + \varepsilon$

Where: OP1 = Sales Growth, CF = Customer Focus; L = Leadership; EP = Engagement of People; PA = Process Approach; I = Improvement; ED = Evidence Based Decision Making; RM = Relationship Management; MV1 = Organizational Policies; MV2 = Government Policies; ε = Random Error

Model 4: $OP2 = 1.286 + 0.074CF + 0.313L + 0.028EP + 0.236PA + 0.024I + 0.149ED + 0.016RM + 0.330MV1 + 0.426MV2 + \varepsilon$

Where: OP2 = Profitability, CF = Customer Focus; L = Leadership; EP = Engagement of People; PA = Process Approach; I = Improvement; ED = Evidence Based Decision Making; RM = Relationship Management; MV1 = Organizational Policies; MV2 = Government Policies; ε = Random Error

Generally, from the above regression analysis findings, we can conclude that the impact of ISO 9001 QMS Certification on sales growth and profitability is positive and significant, which enable us to accept all of our research hypothesis.

H1_a: ISO 9001 QMS certification has a positive and statistically significant effect on sales growth.

H2_a: ISO 9001 QMS certification has a positive and statistically significant effect on profitability.

H3_a: Organizational policy has a moderating role between ISO 9001 QMS Certification and sales growth.

H4_a: Organizational policy has a moderating role between ISO 9001 QMS Certification and profitability.

H5_a: Government policy has a moderating role between ISO 9001 QMS Certification and sales growth.

H6_a: Government policy has a moderating role between ISO 9001 QMS Certification and profitability.

4.2.4.3. Discussion

The study result indicated that the impact of ISO 9001 QMS Certification on sales growth is positive and statistically significant. Hypotheses 1 stated that there is a positive and statistically significant relationship between ISO 9001 QMS Certification (CF, L, EP, PA, I, ED, RM), and sales growth. Thus, the finding of the study supports hypothesis 1 (H1_a). It is, therefore, consistent with the findings of Quazi and Padibjo, 1998; Prodromos Chatzoglou and Dimitrios Chatzoudes, 2015.

However, the finding is not consistent with the conclusion of Heras *et al.* (2002) who studied ISO 9000 registration's impact on sales and profitability and have found no evidence that certification has any significant influence on profitability or sales growth. The possible reason for the inconsistency with my study finding is Heras *et al.* (2002), believes that superior performance of certified firms is due to firms with superior performance having a greater propensity to pursue ISO 9001 certification. As the systems required by ISO certification are costly to implement and maintain, highly profitable firms are more likely to be ISO certified. Thus, highly profitable firms are more likely to be ISO certified than less profitable firms.

The study result indicated that the impact of ISO 9001 QMS Certification (CF, L, EP, PA, I, ED, RM) on profitability is positive and statistically significant. Hypothesis 2 stated that there is a positive and statistically significant relationship between ISO 9001 certification and profitability. Thus, the finding of

the study supports hypotheses 2 (H2_a). It is, therefore, consistent with the findings of Sharma, 2005; Adalia Martin, 2017; Mihalj Bakator and Dragan Čočkaló, 2018.

However, the finding is not consistent with the conclusion of Micaela *et al.* (2007), who focused on a triple analysis of ISO 9000 effects on company performance, and concluded that not only is ISO 9000 positive for companies but also it can actually reduce profitability. The possible reason for the inconsistency with my study finding is the methodology of Micaela *et al.* (2007), which focused on comparison of certified and non-certified companies while mine compared one company's before and after certification profitability. Therefore, since our methodology is different, it may result in different findings.

The finding is also in contrast with the conclusion of Jacqueline *et al.* (2015), who studied the impact of ISO 9001 implementation on organizational performance in Kenya, and have found no significant differences between ISO 9001 certified and non-certified organizations, in terms of ISO 9001 certification influencing profitability of the organizations thereby influencing their organizational performance. The possible reason for the inconsistency with my study finding is the methodology of Jacqueline *et al.* (2015), which focused on comparison of certified and non-certified companies with survey, made use of web content analysis while mine compared one company's before and after certification with direct collection of the data from the company using primary and secondary data sources. Therefore, since our methodology is different, it may result in different findings.

The finding also is not consistent with the conclusion of Md. Mazharul Islam, M.A Karim and Essam Mohammed Habes (2015), who focused on relationship between quality certification and financial and non-financial performance of organizations, and conclude that there was no significant direct relationship between ISO 9001 certification and organizational financial performance. The possible reason for the inconsistency with my study finding is that Md. Mazharul *et al.* (2015) study included the mediating effects of non-financial performance measures on financial performance and their relationship with ISO 9001 certification while mine is based on organizational and government policies as a moderating

variable between the predictor (ISO 9001 certification) and criterion variable (organizational performance).

The finding is not consistent with the conclusion of Isuf *et al.* (2016), who focused on a literature review of ISO 9001 Standards, and conclude that the the relationship between these standards and financial performance is not so clear. The possible reason for the inconsistency with my study finding is that Isuf *et al.* (2016) methodology for the study was literature review while mine is an empirical study.

Again, the finding is not consistent with the conclusion of Behnam Neyestani and Joseph Berlin P. Juanzon (2017), who focused on a literature review of ISO 9001 Standard and Organization's Performance, and conclude that the effectiveness of ISO 9001 on financial performance were unclear and contradictory. The possible reason for the inconsistency with my study finding is that Behnam *et al.* (2017) methodology for the study was literature review while mine is an empirical study.

The study result indicated that the impact of ISO 9001 QMS Certification on sales growth when moderated by organizational and government policies is positive and statistically significant. Hypothesis 3 and 5 stated the relationship between ISO 9001 QMS Certification and sales growth will be statistically significant with organizational and government policies put as a moderator. Thus, the finding of the study supports hypothesis 3 and 5 (H3_a and H5_a). The result is neither supported nor rejected by any empirical evidences since, to the best of researcher's knowledge, there is no any research done on the ISO 9001 certification on sales growth when moderated by organizational and government policies.

The study result indicated that the impact of ISO 9001 QMS Certification on profitability when moderated by organizational and government policies is positive and statistically significant. Hypothesis 4 and 6 stated the relationship between ISO 9001 QMS Certification and profitability will be statistically significant with organizational and government policies put as a moderator. Thus, the finding of the study supports hypothesis 4 and 6 (H4_a and H6_a). The result is neither supported nor rejected by any empirical evidences since, to the best of researcher's knowledge, there is no any research done on the ISO 9001 certification on profitability when moderated by organizational and government policies.

Therefore, as per the general objective of the study was to investigate the impact of ISO 9001 QMS Certification on organizational performance in ASF, the study result indicated that the impact of ISO 9001 QMS Certification on organizational performance is positive and significant. It is, therefore, consistent with the findings of Corbett, C. J., M. J. Montes, D. A. Kirsch, and M. J. Alvarez-Gil, 2002; Terziovski, M., D. Power, and A. S. Sohal, 2003; Naveh et al. 2005; Corbett, Montes-Sancho, and Kirsch, 2005; Irfan Saleem, Irfan Siddique, Awais Akmal, Muhammad Saad Masud Khan, Muhammad Usman Khan and Shuaib Sultan, 2011; W.M. To, Peter K.C. Lee and Billy T.W. Yu, 2011; Boiral, 2012; Luís Lourenço, Lara Fonseca and Luís Mendes, 2012; Psomas et al. 2013; Kammoun and Aouni, 2013; Mahnaz, 2014; Lassaad Lakhal, 2014; Changiz Valmohammadi and Mohsen Kalantari, 2015; Leonardo Stertz Sfreddo, Guilherme Bergmann Borges Vieira, Gabriel Vidor and Carlos Honorato Schuch Santos, 2018.

However, the finding is not consistent with the conclusion of Mehmet *et al.* (2012), who studied the effect of the ISO 9001 quality management system on the performance of SMEs, and concluded that no statistically significant difference between certified and non-certified companies in terms of organizational performance. The possible reasons for the inconsistency with my study finding are Mehmet *et al.* (2012) study focused on small to medium-sized enterprises (SMEs), used various OP measuring variables, and compared certified and non-certified companies while mine compared one large sized factory's OP before and after certification with sales growth and profitability as OP measuring variables.

The finding also is not consistent with the conclusion of Fuzi Meftah Abusa and Peter Gibson (2013), who focused on Experiences of TQM elements on organizational performance and future opportunities for a developing country, and conclude that there were no significant differences between ISO 9000-certified companies and their non-ISO 9000-certified counterparts in organizational performance, except in exports growth. The possible reason for the inconsistency with my study finding is Fuzi *et al.* (2013) study investigates the impact of TQM implementation on OP, both in the presence or absence, of ISO

9000, TQM element as an independent variable and OP as dependent variable. Whereas in my study the independent variable is ISO 9001 QMS certification without no consideration of TQM.

4.2.4.4. Summary of Hypothesis

The summary of the hypotheses tested with results are presented in Table 4.8 below.

Table 4.8. Tested Hypothesis and Result

Description		Result
H1_a	ISO 9001 QMS Certification has a positive and statistically significant effect on Sales Growth.	Accepted
H2_a	ISO 9001 QMS Certification has a positive and statistically significant effect on Profitability.	Accepted
H3_a	Organizational policy has a moderating role between ISO 9001 QMS Certification and Sales Growth.	Accepted
H4_a	Organizational policy has a moderating role between ISO 9001 QMS Certification and Profitability.	Accepted
H5_a	Government policy has a moderating role between ISO 9001 QMS Certification and Sales Growth.	Accepted
H6_a	Government policy has a moderating role between ISO 9001 QMS Certification and Profitability.	Accepted

Source: Own Survey Data Analysis Output, 2021

Chapter Five: Summary of Findings, Conclusion, Recommendations, Implications, Limitations and Future Research Recommendations

5.1. Summary of Findings

The objective of this research has been to investigate the impact of ISO 9001 QMS certification on organizational performance. Scientific procedure has been followed for the achievement of the research objective. The first procedure has been done to understand the theoretical aspect and empirical findings of ISO 9001 QMS certification. Related literature review has been carried out. The literature review focused on the concept, empirical application, conceptual and empirical relationships among the ISO 9001 quality management system certification principles and organizational performance dimensions including sales and profit.

The seven ISO 9001 quality management principles and two organizational performance constructs has been identified and examined for this study to analyze the impact of ISO 9001 quality management system certification on organizational performance. In addition, the study also examined the impact of ISO 9001 QMS certification on organizational performance with inclusion of moderating variable in the models. The moderators included were organizational policies and governmental policies. Analysis has been made based on the results of the questionnaire.

A questionnaire containing 50 items has been prepared for the quality management system principles, organizational performance dimensions construct and moderating variables. From 175 distributed questionnaires, 170 questionnaires have been responded which results in 97.14% response rate. Cronbach α coefficient has been used for the reliability test and the measuring scale of the items and all the groups Cronbach α value of greater than the reliable value of 0.676 of which is acceptable to make further analysis.

Moreover, the Pearson correlation analysis has shown that,

- At $p < 0.01$, the pair-wise interrelationship of organizational performance has a statistically significant strong and positive association with the variables of Leadership (L) and Improvement (I).
- The correlation between organizational performance (dependent variable) and the independent variables of Customer Focus (CF), Engagement of People (EP), Process Approach (PA), and Evidence Based Decision Making (ED) was statistically significant moderate and positive correlation at 1% significance level.
- In addition, the correlation analysis result confirmed that a statistically significant weak and positive correlation between Organizational Performance (OP) i.e., the dependent variable and Relationship Management (RM) i.e., the independent variable at 1% significance level.

The regression analysis has shown that

- Regressing organizational performance (sales growth and profitability) on the 4 models on the seven predictors and the moderating variables resulted in a minimum adjusted R^2 of 0.692 and maximum R^2 of 0.801 in the models.

Generally, the results of the questionnaire analysis showed that ISO 9001 QMS certification has a positive and statistically significant impact on the organizational performance of the company.

5.2. Conclusion

The objective of the research was to examine the impact of ISO 9001 QMS certification on organizational performance of Adama Spinning Factory. In literature, there are mixed findings on the impact of ISO 9001 QMS certification on organizational performance by studies made by several researchers. But, the researcher began its study with the hypothesis of ISO 9001 QMS certification will lead to improved organizational performance. To achieve general objective of the study, analysis was done on questionnaire results. The finding of the questionnaire analysis result showed that ISO 9001 QMS certification have a positive and statistically significant impact on organizational performance. The

organizational performance measurement dimensions, namely sales and profit, at $p < 0.1$, significantly affected by all the seven quality management principles investigated, and also organizational and government policies, the moderating variables.

Therefore, ISO 9001 QMS Certification plays a vital role in boosting the performance of any organization if implemented properly. The industry sector is the main focus of the Ethiopian economy as per the ten years development plan, so the certification of ISO 9001 QMS could give some tremendous results by enhancing the performance of the organizations contributing to the economy of the country.

The major point that differentiates this study from similar studies is the fact that the organizational and government policies are involved in the moderating process.

5.3. Recommendations

From the conclusions of the research findings, the following recommendations are forwarded:

- **Top Management Leadership and Commitment with respect to QMS:** The top management needs to demonstrate leadership and commitment with respect to the QMS, such as being accountable for the effectiveness of the QMS, ensuring resources are available, promoting continual improvement, and ensuring the Quality Policy and objectives are in place and consistent with the goals of the organization and the QMS. Some of the things how the top management do this is by measuring QMS effectiveness and involving the management in assessing this; ensuring the quality policy and objectives are in place as per management direction, communicated in the organization, and tracked for progress; resource needs are reviewed and addressed by the management; continual improvement is promoted and supported by management; there is a way to ensure customer, statutory, and regulatory requirements are understood and met, and people understand why this is important; there is a management focus on customer satisfaction; organizational roles, responsibilities, and authorities are assigned, understood by the person who is assigned, and known to those employees who need to assess a person in a certain role. In addition, the organizational leader need to take the time perhaps once per quarter, over and above formal QMS (Quality Management System) customer feedback solicitations, to contact the organization's main customers

and ask them how the good or service delivery could be improved. These not only will provide a real opportunity for improvement, but also how valued the customers will feel and how your relationships could benefit. Finally, management review is very important because it is a feedback to the top management on the maintenance of the Quality Management System. These will lead to improvement in sales and profitability of the company.

- **Customer Feedback to Improve the System:** ISO 9001 help companies to build a closer relationship with its customers. Soliciting regular customer feedback prove especially helpful, because using the feedback drive improvement and improve customer satisfaction, and secondly, it help encourage the habit of constant communication and close relationships with customers. These will lead to improvement in sales and profitability of the company.
- **Communicate to Customers through a Code of Conduct and a Formal Procedure for Handling Complaints:** Maintaining a high level of customer satisfaction is the key goal of most companies, and managing customer satisfaction represents a major challenge. One approach for meeting this challenge is communicating to customers through a code of conduct and a formal procedure for handling complaints.

Code of conduct for customer satisfaction - Defining a code of conduct represents a preventive measure in ensuring customer satisfaction, and is an essential element of the framework for effective managing of customer satisfaction. A customer satisfaction code of conduct represents a set of promises made to the customers concerning the behavior of the company and the parameters of products/service provision, all aimed at strengthening the satisfaction of the customers. The code of conduct should be customer-focused, but strong management commitment is essential. The code should be aligned with the existing company policies and procedures, and designed based on the available resources so it can be easily implemented and maintained.

Procedure for handling customers' complaints - Another relevant aspect of managing customer satisfaction is the complaints handling procedure. The main purpose of this procedure is to create a customer-focused environment that will allow for enhanced customer satisfaction. This procedure

should be perceived as an ultimate opportunity to convert unsatisfied customers into satisfied customers. Additionally, customers should be encouraged to give any kind of feedback.

Implementing these points will lead to the improvement in sales and profitability of the company.

- **Encourage a Culture of Continual Improvement:** Continual improvement underpins the whole of ISO 9001 as part of a “knowledge management” initiative, developing customer relationships, improving existing processes, or developing new ones, continual improvement will improve sales performance and profitability.
- **Use Quality Objectives to Drive Improvements:** The quality objectives are one of the best ways to focus the improvement activities within the company. These objectives are the company’s way of identifying what aspects of quality management and customer satisfaction the company have chosen as main improvement aims, with reasonable and timely targets, so that the company can make plans to make these improvements and move the company strategy forward. These will lead to improvement in sales and profitability of the company.
- **Align Quality Objectives of the QMS with the Strategic Direction of the Company.** Identify the strategic direction of the company and align the QMS to work toward meeting the goals that the company need to achieve to move the company forward. These will lead to improvement in sales and profitability of the company.
- **Find Opportunities for Improvement through Internal Audit:** The idea of the company internal audits is to have an objective and impartial person look at the outputs of the processes to ensure that this processes are meeting the planned arrangements that were set out for the process. The audits also provide information on the effective implementation and maintenance of the QMS. By taking the opportunity to take an impartial look at a process, the company internal auditors can not only identify problems that could go unnoticed during day-to-day activities, but also identify issues with the linkages between processes that can cause inefficiency and identify opportunities to improve the overall effectiveness of the QMS. Identifying improvement opportunities makes the company better and can lead to cost savings and better profitability.

- **Make Plans to Address Risks and Opportunities:** Understand and take action to address the risks and opportunities for the QMS. This can be done using a SWOT analysis as a way to identify business strengths and weaknesses. By identifying the risks and opportunities that are applicable to the company, the company will be able to find ways to limit the negative impacts of potential problems and also capitalize on the opportunities that can lead the company into new sales markets or product lines. Properly acting on risks and opportunities can realize great profit for the company.
- **Improved Product Quality and Process Improvements.** ISO 9001, ensure that there is less waste in the system. This further ensures cost reduction. The reduced cost helps the organization to pass on better value to its customers. As the company provide value to the customer within the same cost, the customer is “delighted” and the company gain more business. Each delighted customer provides the company with new references and then company competitiveness improves. This lead to improved sales volume which increases the company’s profitability.
- **Operational Control:** Operational planning and control always is key to satisfying customers – all the way from the planning of the processes, product and change management, through design and development controls and all the way to control of external product and how it is tracked and managed. The more effective the company is in this process, the more the company will satisfy customers with a consistently excellent product. It is imperative that companies can gain customers confidence by showing an effective operational control and planning process when the customer choose to audit the company. This can be a vital component in gaining the trust of the customer and strengthening the relationship accordingly. Generally, don’t wait for customers to ask if they can audit the company; be proactive – invite them. Be confident and open in displaying the process control and confidence you have due to your adherence to ISO 9001 principles. Display that the company is using ISO 9001 for the benefit of the company, and the customer’s, and then the relationship will benefit. These will lead to improvement in sales and profitability of the company.
- **Develop Strong Review and Measurement Processes:** Accurate measurement and review is a key element of the ISO 9001 standard. Using key performance indicators established by the relevant

stakeholders – and with the all-important top management input – can allow the company's performance to be measured accurately and provide a factual foundation for improvement initiatives. These will lead to improvement in sales and profitability of the company.

- **Performance Evaluation:** Evaluating, taking action, and improving the QMS is going to improve the delivery of the goods or services. Effectively dealing with a quality problem and displaying the ability to fix it and prevent reoccurrence can often bring customers closer to the company. Likewise, ensure solicit customer feedback on a regular basis and in a precise format. When customer provides feedback, show evidence of action and closure to provide assurance that the feedback is read, valued, and most importantly, acted upon. Generally, engage customers through formal feedback, demonstrate that the company value that feedback by taking tangible action against it, drive corrective action to address any concerns customers may have, and provide consistent product and improved services through excellent operational planning and control of suppliers. These will lead to improvement in sales and profitability of the company.
- **Develop Robust Corrective Action Processes:** In the event a mistake is made, ISO 9001 helps companies equip with the correct processes to investigate root causes, eliminate them, and ensure there is no reoccurrence. In the event of dealing with a lost sale, or a dissatisfied customer, effective corrective action can be critical to sales performance and the business overall. One of the most overlooked areas of the QMS for increasing profitability is the corrective action process. Some business leaders see this process as unnecessarily complicated and time consuming, but this is often because it is excessively used on small problems that do not need a full root cause analysis and complex correction procedure. It is worth a second look at how the company can make the company's corrective action system work to help the company find improvements. If the company could take its biggest problems, wisely have resources identify the root cause of those problems, and then find a way to make sure the problem does not happen again – the company could realize cost savings. By making sure that the company corrective action process is focused on finding real solutions to the problems that cost the company money, and effectively addressing those problems

so that they do not happen again, the company can find the cost savings and profitability it want from its QMS.

- **Control of External Providers:** Controlling the performance of the external suppliers is another key aspect because the better service or good the company receives, the better positioned the company is to pass improved goods and services on to customers. These will lead to improvement in sales and profitability of the company.

5.4. Implications of the Study

- Many companies have acquired ISO 9001 QMS certification as a result of external pressures, but it will be more useful and beneficial if they also use and incorporate it with their internal operational activities, since internal effectiveness and efficiency leads companies toward building competitive capabilities which eventually appears in their performance reducing unnecessary cost and increase in organizational performance in sales and profitability.
- The finding will help future researchers and managers to investigate possible reasons why a company is not profitable after its ISO 9001 QMS certification.
- Managers in organizations must realize that simply adopting and maintaining the ISO 9001 QMS certification is not enough. More resources and commitment are needed to achieve better organizational performance.
- Companies should be aware that implementing ISO 9001 just for compliance does not constitute a competitive advantage.
- Although many studies have concentrated on analyzing the impact of the implementation of ISO 9001 QMS certification, there is still a clear need for research in specific sectors. Practicing managers and researchers will be able to examine findings in order to evaluate benefits and weaknesses from certification, thereby identifying and acting before and after certification.
- When we talk of the studies conducted overall across the globe on similar topics this study is like an addition of a drop of water to the ocean but if we talk only of the works done in Ethiopian textile sector, it is one of very few works done to assess the impact of ISO 9001 QMS certification on the

organizational performance using two variables that are sales growth and profitability, and with moderating variables of organizational and government policies.

- This study could also be used to shed light on the importance of acquiring the certification and developing an enabling environment with the right policies and procedures internally and externally, so that the overall organizational performance can be improved which has an overall impact on developing the economy of the country.
- This study is few of the pioneer studies that tests the moderating role of organizational and government policies between ISO 9001 QMS certification and organizational performance.
- The findings of the study provide justification for adoption of ISO 9001 QMS standard in organizations in all key sectors of the Ethiopian economy for sustained quality management practices. The ISO 9001 certified companies will enhance their quality management practices to achieve the successes documented in this paper while those yet to embrace the standards will draw lessons from such successes which may offer them compelling arguments to adopt them.
- This finding would be a new insight in the growing body of research addressing the impact of ISO 9001 QMS certification on organizational performance in the context of the textile manufacturing sector in Ethiopia.

5.5. Limitations and Future Research Recommendations

- In this study, the researcher has investigated the impact of ISO 9001 QMS certification on organizational performance in Adama Spinning Factory, with only one textile factory in Ethiopia. In future research, more textile factories of Ethiopia should be included.
- Other limitation of the study is the limited number of organizational performance measuring variables used. The researcher used only sales growth and profitability as a measuring variable for organizational performance.
- It is worth examining whether there are significant differences between certified and non-certified companies on a longitudinal basis, in textile and other sectors.

- The findings of this research can be useful for both academics and managers, for future research, and to evaluate possible opportunities to combine different managerial approaches to enhance the potential benefits that ISO 9001 can provide, respectively.
- Future studies can be conducted in Ethiopian various manufacturing sectors to assess the impact of ISO 9001 QMS certification on organizational performance using different performance measures.
- Future research in longitudinal studies which examine pre and post certification organizational performance, along with other moderating variables needs to be focused on.
- Owing to the fact that the study was limited to one textile factory in Ethiopia, cautious should be taken regarding the generalizability of the results of this study to other sectors. Therefore, it is suggested in the future research a study to be conducted at the national level in a larger scale to give the ground to the executives and policy-makers of the country's industries for investigation, comparison, and generalization.
- With respect to the ever increasing important role of service organizations in the economic growth of countries and the existing difference regarding organizational performance measures of service organizations it is suggested that a similar research to be conducted in the section of service organizations.

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Appendix A
Addis Ababa University
College of Business and Economics
Department of Management
Survey Questionnaire

Dear Respondents,

This questionnaire is designed to carry out a research on the impact of ISO 9001 Certification on Organizational Performance for the completion of Master of Science Degree from Addis Ababa University. Your voluntary collaboration & accurate information is vital to complete this research. The collected data will be used for academic purpose only and will be kept confidential.

I kindly request you to duly fill and return back the questionnaire by providing your honest opinion to the questions provided below.

I appreciate in advance for your kind cooperation.

If you have any question regarding the questionnaire, please contact me with the following address:

Name: Merertu Tezera

Tel: 0913012121

Email: merytezera@yahoo.com

Part 1: Demographic Characteristics

1. Department and Service:

- ☐ GM Office ☐ Production ☐ Engineering & Technical ☐ Commercial
- ☐ Human Resource Development and Administration ☐ Research & Quality Assurance
- ☐ Finance and Cost Management

2. Current Position:

- ☐ General Manager ☐ Department/Service Manager ☐ Division Head ☐ Expert ☐ Other

3. Highest Qualification:

☐10th Grade ☐Certificate ☐Diploma ☐BA/BSC ☐Masters & above

4. Years of Experience in the Organization:

☐ <1yr ☐ 1-5yrs ☐ 6-10yrs ☐ 11-15yrs ☐ >16yrs

5. Gender:

☐Male ☐Female

Part 2: ISO 9001 QMS Principles and Practices Related Questions.

The following sections deal with your opinion about your organization's performance as measured from the contribution of ISO 9001 QMS principles. The following statements are presented for your evaluation. It is based on your degree of agreement as rated from 1 to 5 from strong disagreement to strong agreement. Accordingly, please rate on the scale 1 to 5, with 1= strongly disagree; 2= disagree; 3= neither agree nor disagree; 4= agree; 5= strongly agree, and please tick "✓" sign in the corresponding cell provided.

Code	Items	Measurement Scale				
		1	2	3	4	5
I	Customer Focus					
CF1	Your organization emphasizes on assessing current customers' needs and expectations.	☐	☐	☐	☐	☐
CF2	Your organization have good trend of assessing future customer needs and expectations.	☐	☐	☐	☐	☐
CF3	Customer complaints are frequently resolved by employees of the organization.	☐	☐	☐	☐	☐
CF4	The organization adopts formal ways to collect customer complaints.	☐	☐	☐	☐	☐
CF5	The customer's complaints coming to the organization after implementation of ISO are minimized.	☐	☐	☐	☐	☐
CF6	Customers' complaints are studied to identify patterns and prevent the same problems from recurring.	☐	☐	☐	☐	☐
CF7	The company incorporates data on customer expectations and/or satisfaction when designing new products.	☐	☐	☐	☐	☐
II	Leadership					
L1	The senior executives of the organization provide highly visible leadership in maintaining an environment that supports quality improvement.	☐	☐	☐	☐	☐
L2	Top management is a primary driving force behind quality improvement efforts.	☐	☐	☐	☐	☐
L3	The senior executives consistently participate in activities to improve the quality.	☐	☐	☐	☐	☐
L4	The senior executives have demonstrated an ability to manage the changes (e.g., organizational, technological) needed to improve the quality.	☐	☐	☐	☐	☐
L5	The senior executives appreciate efforts that improve quality throughout the organization	☐	☐	☐	☐	☐

L6	Senior executives involve on activities that enhance customer satisfaction by obtaining information on needs and suggestions for quality improvement directly from customers.	☐	☐	☐	☐	☐
III	Engagement of People					
EP1	Every employee's thought has been used as an input to make any quality decision.	☐	☐	☐	☐	☐
EP2	Regular employee awareness and feedback on status are provided and a reward/recognition process established helped employees to improve quality	☐	☐	☐	☐	☐
EP3	Employees' positioning of themselves as key ingredients in the organization's success reduces the turnover and therefore reduces the cost of hiring and training new employees.	☐	☐	☐	☐	☐
EP4	Employees' involvement and empowerment encourages them to exert the best of their abilities to improve quality	☐	☐	☐	☐	☐
EP5	Employees at work are interested in and positive, even excited about their jobs and are prepared to go the extra mile to improve quality	☐	☐	☐	☐	☐
EP6	Organizational structure that allows employees to exercise corrective actions based on their authority is appreciated by employees and helped to improve quality.	☐	☐	☐	☐	☐
EP7	Training involves the application of formal processes to enhance knowledge and help employees to acquire the skills necessary for them to perform their jobs satisfactorily and improve quality	☐	☐	☐	☐	☐
EP8	The organization's employees are given education and training in statistical and other quantitative methods that support quality improvement	☐	☐	☐	☐	☐
EP9	The organization's employees are appreciated when they take necessary risks to improve quality	☐	☐	☐	☐	☐
EP10	The organization has an effective system for employees to make suggestions to management on how to improve quality.	☐	☐	☐	☐	☐
IV	Process Approach					
PA1	The organization identifies the key business processes by prioritizing on the basis of the value chain, customer needs and strategic significance, and using process models and definitions.	☐	☐	☐	☐	☐
PA2	The organization Manages processes systematically by giving process ownership to the most appropriate individual or group and resolving process interface issues through meetings or ownership models.	☐	☐	☐	☐	☐
PA3	The organization reviews processes and sets improvement targets by empowering process-owners to set targets and collect data from internal and external customers.	☐	☐	☐	☐	☐
PA4	The organization uses innovation and creativity to improve processes by adopting self-managed teams, business process improvement and idea schemes.	☐	☐	☐	☐	☐
PA5	The organization change processes and evaluate the benefits through process improvement or re-engineering teams, project management and involving customers, and suppliers.	☐	☐	☐	☐	☐
V	Improvement					
I1	Everyone in the organization is aware of the need to improve continuously and show their efforts for improvement	☐	☐	☐	☐	☐

I2	The organization supported employees even in their personal career developments like sponsoring for education and providing scholarships	☐	☐	☐	☐	☐
I3	The causes of all the possible faults are identified, informed and employees are well trained on common types of faults and how to manage problematic situations when happened	☐	☐	☐	☐	☐
I4	The organization promote improvements in a way that enhance competitive environment among members of the organization by recognizing best performing individuals and units	☐	☐	☐	☐	☐
I5	Continuous improvement tools (brainstorming, check sheet and other statistical process control) are applied on regular basis.	☐	☐	☐	☐	☐
I6	The organization is continuously improving itself by trying to apply the latest knowledge and technologies in the industry	☐	☐	☐	☐	☐
I7	The organization uses benchmarking by comparing its results to those of competitors and best practices	☐	☐	☐	☐	☐
VI	Evidence Based Decision Making					
ED1	The organization encourages statistical measurements and analysis throughout the organization.	☐	☐	☐	☐	☐
ED2	Every activity in the organization is recorded by employees and checked by supervisors for accuracy on a daily basis.	☐	☐	☐	☐	☐
ED3	Top management seeks summarized reports of the facts recorded on a daily basis to make quality related decisions	☐	☐	☐	☐	☐
ED4	The organization application of systems for the measurement of tracking progress, identifying opportunities, and comparing performance internally and externally helped to improve quality	☐	☐	☐	☐	☐
ED5	The organization provides planned targets for every employees and subsequent decisions are made based on deviations of actual and targeted outcomes	☐	☐	☐	☐	☐
ED6	The organization applies objective tools to evaluate contributions of its internal and external stake holders in cases of rewarding and recognizing its employees, suppliers and customers	☐	☐	☐	☐	☐
VII	Relationship Management					
R1	The organization plans and manages the external partnerships which is in line with its overall policies and strategies, being designed and developed to support the effective operation of its processes	☐	☐	☐	☐	☐
R2	The organization maintains successful partnerships with its suppliers through good communications and exchange of information.	☐	☐	☐	☐	☐
R3	There is a strong belief throughout the organization that developing a stronger working relationship with suppliers is key to delivering better products and services to the end customer	☐	☐	☐	☐	☐
R4	The organization recruit suppliers and have a way to retain them that supported the organization to improve quality	☐	☐	☐	☐	☐
R5	The organization have closer relationship with its suppliers which helped the organization to get technical support from its suppliers when needed rather than merely exchange of goods	☐	☐	☐	☐	☐
VIII	Organizational Performance					
OP1	There is an increase in sales of the organization after ISO 9001 certification	☐	☐	☐	☐	☐
OP2	There is an increase in profit of the organization after ISO 9001 certification	☐	☐	☐	☐	☐

IX	Moderating Variables					
MV1	Essential internal policies, rules and regulations are available for the smooth running of ISO 9001 Quality Management System in the company.	☐	☐	☐	☐	☐
MV2	There are government policies, rules and regulations that supports for the smooth running of ISO 9001 Quality Management System and monitoring and evaluation of the progress of the Quality Management System in the country.	☐	☐	☐	☐	☐

Appendix B

Adama Spinning Factory Profit & Loss Statement For the Year Ended from 2008/09 G.C to 2017/18 G.C

Description	Fiscal Years (G.C)									
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Net Sales	43,916,995	87,593,106	146,397,828	85,338,986	164,830,924	201,334,704	148,138,230	112,919,166	152,300,990	181,681,799
Less: Cost of Goods Sold	31,350,471	54,614,613	103,952,856	71,225,624	132,922,994	147,300,014	115,336,432	95,390,109	128,847,208	139,129,689
Gross Profit	12,566,524	32,978,493	42,444,972	14,113,362	31,907,930	54,034,690	32,801,798	17,529,057	23,453,782	42,552,110
Cost of Sales to Net Sales (%)	71%	62%	71%	83%	81%	73%	78%	84%	85%	77%
Less: Expenses	2,894,488	6,459,027	11,112,156	12,071,539	16,091,706	19,959,845	15,547,383	15,070,434	16,371,937	18,248,493.67
Operating Income	9,672,036	26,519,466	31,332,816	2,041,823	15,816,224	34,074,845	17,254,415	2,458,623	7,081,845	24,303,616
Add: Other Income	363,485	331,361	987,203	728,224	972,138	1,764,198	2,669,618	1,017,315	3,252,634	1,761,579
Less: Other Expenses	5,453,940	-	-	-	-	-	-	-	-	-
Operating Income Before Interest and Tax	4,581,581	26,850,827	32,320,019	2,770,047	16,788,362	35,839,043	19,924,033	3,475,938	10,334,479	26,065,195
Financial Cost	6,554,912	8,012,670	12,593,748	14,248,123	20,037,114	20,928,288	20,009,030	22,900,886	17,439,972	17,542,912

Income Before Tax	(1,973,331)	18,838,157	19,726,271	(11,478,076)	(939,207)	14,910,755	(84,997)	(19,424,948)	(7,105,493)	8,522,283
Provision for Taxation	-	-	-	-	-	-	-	-	-	-
Net Income /Loss/ After Tax	(1,973,331)	18,838,157	19,726,271	(11,478,076)	(939,207)	14,910,755	(84,997)	(19,424,948)	(7,105,493)	8,522,283

Source: Adama Spinning Factory, Financial Statement.

Year of Certification: 2011/12 G.C

1. Net Sales before ISO 9001 certification (2008/09 G.C - 2010/11 G.C) were Birr 43,916,995, Birr 87,593,106 and Birr 146,397,828 respectively and after ISO 9001 certification (2012/13 G.C – 2017/18 G.C) were Birr 164,830,924, Birr 201,334,704, Birr 148,138,230, Birr 112,919,166, Birr 152,300,990 and Birr 181,681,799 respectively.
2. Gross operating profit before ISO certification (2008/09 G.C - 2010/11 G.C) were Birr 12,566,524, Birr 32,978,493 and 42,444,972 respectively and after ISO 9001 certification (2012/13 G.C – 2017/18 G.C) were Birr 31,907,930, Birr 54,034,690, Birr 32,801,798, Birr 17,529,057, Birr 23,453,782 and Birr 42,552,110 respectively.
3. Cost of sales to net sales is showing a fluctuating trend during the years under consideration.