

The Effect of Quality Management System on Organizational Effectiveness of Kaliti Metal Products Factory

A Thesis Submitted to the School of Graduate Studies of Jimma University in Partial Fulfillment of the Requirements for the Award of the Degree of Master of Business Administration (MBA)

By:
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JIMMA UNIVERSITY
COLLEGE OF BUSINESS & ECONOMICS
MBA PROGRAM

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JIMMA, ETHIOPIA

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DECLARATION

I hereby declare that this thesis “ **The Effect of Quality Management system on organizational effectiveness of kaliti metal products factory**” has been carried out by me under the guidance and supervision Dr.Kenenisa Lemi and Mr. Umer Hajji.

The thesis is original and has not been submitted for the award of any degree or diploma to any university or institutions.

Researcher's Name

Date

Signature

CERTIFICATE

This is to certify that the thesis entitles “**The Effect of Quality Management system on organizational effectiveness of kaliti metal products factory**”, submitted to Jimma University for the award of the Degree of Master of Business Administration (MBA) and is a record of confide research work carried out by Mr. Afework Achalu, under our guidance and supervision.

Therefore, we hereby declare that no part of this thesis has been submitted to any other university or institutions for the award of any degree or diploma.

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Abstract

This research has been conducted to determine how the quality Management system implementation affects an overall effectiveness of Kaliti metal products factory (KMPF). This is due to the reason that companies frequently assume QMS implementation and ISO certification can improve organization effectiveness. The study type is descriptive and explanatory and in line with this both quantitative and qualitative methods were employed. The data were taken from company managers, division heads, section head, experts and staffs. Purposive sampling used to select the respondents for the questionnaire and interviewees. Data was analyzed using descriptive statistics and results were presented using tables. The results indicate that concerning the dimensions of ISO 9001:2015 QMS implementation practices an overall dimension of QMS endeavored categorized under moderate level. Among the elements of QMS; customer focus and relationship management practiced at a high level. As the descriptive findings indicate that all QMS implementation have statically significant and moderate positive association with product quality, profitability, and Operational efficiency. As the regression finding depicted, except customer focus other six namely Leadership, Engagement of people, Process Approach, Improvement, Evidence based decision making, and Relationship management are found to be significant effect with Product quality, and except Relationship management all the variables have a significant effect with operational efficiency. On the other hand, except Leadership, and Relationship management, all variables were significant effect about company's profitability. Therefore, organizational effectiveness has been affected positively by ISO QMS 9001:2015 principles implementation. The result indicated that ISO 9001:2015 QMS implementation contributes towards the adoption of Quality Management, Even though the company is moderate in practice of QMS activities. The identified gaps such as Lack of top management commitment and support, Lack of internal communication, launch new technology in the production system, rewarding mechanisms and on job trainings, and it should be do more to practices of QMS implemented at their full extent level for effectiveness.

Keywords: *quality management system, Organizational Effectiveness, Kaliti metal.*

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Table of Content

<i>Abstract</i>	i
<i>Acknowledgements</i>	ii
List of tables	v
List of Figures	v
Acronyms and Abbreviations.....	vi
CHAPTER ONE	1
INTRODUCTION	1
1.1. Back ground of the study.....	1
1.1.1 Back Ground of the Organization	4
1.1.2 Quality Practices of the Company.....	4
1.2 Statement of the problem & Research Questions	5
1.3 Objectives	7
1.3.1 General objective.....	7
1.3.2 Specific Objectives.....	7
1.4 Significance of the Study.....	8
1.5 Scope of the study	8
1.6 Structure of the Thesis.....	9
CHAPTER TWO	10
REVIEW OF RELATED LITERATURE	10
2.1 Theoretical Review	10
2.1.1 Introduction.....	10
2.1.2 Quality management system in the manufacturing industry.....	10
2.2 Empirical Review.....	16
2.2.1 Quality management system Principles	16
2.2.2 Organizational Effectiveness measure.....	22
2.2.3 QMS and Organizational Effectiveness.....	26
2.2.4 Review of Related Research Works	29
2.2.5 Summary of Reviewed Literatures and Research Gaps.....	34
2.2.6 Conceptual framework.....	35
CHAPTER THREE	36
RESEARCH DESIGN AND METHODOLOGY	36
3.1 Research Design and Approach	36
3.2 Source & Type of Data.....	36

3.3	Sampling Design.....	37
3.4	Data Analysis Techniques	39
3.5	Validity and Reliability	40
3.6	Model Specification and Description of Study Variables	41
CHAPTER FOUR.....		42
RESULTS & DISCUSSIONS		42
4.1	Introduction	42
4.2	Profile of respondents.....	42
4.3	Descriptive Analysis of the Finding.....	46
4.3.1	Implementation practice of QMS Principles Endeavored.....	46
4.3.2	Correlation test of QMS implementation, and organizational effectiveness.....	55
4.3.3	Regression Analysis	59
4.3.4	Discussion.....	67
CHAPTER FIVE		71
SUMMARY, CONCLUSION AND RECOMMENDATIONS		71
5.1	Summary	71
5.2	Conclusion.....	75
5.3	Recommendations	77
5.4	Future Research Direction	77
Reference.....		78
Appendices:		82

List of tables

Table 1: (QMPs) in the 2015 version that back the ISO 9000 and ISO 9001 standards.....	13
Table 2. The comparison between the clauses of ISO 9001:2008 and ISO 9001:2015.....	14
Table 3. Sample Size.....	39
Table 4. Reliability Analysis	41
Table 5: sex of respondents	43
Table 6: Age of respondents	43
Table 7: Education Level of Respondents.....	44
Table 8: occupational position of Respondents	44
Table 9: Monthly salary of Respondents.....	45
Table 10: service years in the company of Respondents	45
Table 11: Customer focus, Kaliti Metal Products Factory.....	47
Table 12: Leadership, Kaliti Metal Products Factory	48
Table 13: Engagement of People, Kaliti Metal Products Factory	49
Table 14: Process Approach, Kaliti Metal Products Factory	50
Table 15: Improvement, Kaliti Metal Products Factory	51
Table 16: Evidence Based Decision - Making, Kaliti Metal Products Factory.....	52
Table 17: Relation Ship Management, Kaliti Metal Products Factory	53
Table 18: Quality Management System Summary, Kaliti Metal Products Factory	54
Table 19: Pearson Correlation test between QMS implementation and Product Quality	56
Table 20: Pearson Correlation test between QMS implementation and operational efficiency ...	57
Table 21: Pearson Correlation test between QMS implementation and company Profitability....	58
Table 22: Model Summary of product quality	61
Table 23: Model Summary of operational efficiency	61
Table 24 : Model Summary of profitability	62
Table 25 ANOVA a Product quality	62
Table 26: ANOVA a Operational efficiency	63
Table 27: ANOVA a Profitability.....	63
Table 28 : Regression Coefficients of Product quality	64
Table 29 : Regression Coefficients operational efficiency.....	65
Table 30 : Regression Coefficients profitability.....	66

List of Figures

Figure 1: international standard In PDCA cycle of QMS for ISO 9001:2015	15
Figure 2: Conceptual framework of the study	35

Acronyms and Abbreviations

BPR:	Business Process Reengineering
FMEA:	Failure Mode and Effect Analysis
ISO:	International Organization for Standardization
KMPF:	Kaliti metal products factory
PDCA:	Plan, Do, Check, Act
QM:	Quality Management
QMP:	Quality management principles
QMS:	Quality Management System
ROA:	Return on asset
ROE:	Return on equity
ROIC:	Return on invested capital
SPSS:	Statistical Package for the Social Sciences

CHAPTER ONE

INTRODUCTION

1.1. Back ground of the study

Quality management system is the key component and success factor to any organization to increase organizational effectiveness, productivity, and overall efficiency of the organization, when it implemented at a full extent.

In today's business world, the major challenge for organizations is to meet the demands of the customer (Patyal & Koilakuntla, 2017). According to Patyal & Koilakuntla customers are powerful and organizations are working in stiff competition. The customers need them to produce their products in an environmental friendly way. It imposes additional pressure to produce with efficiency and effectiveness. The products should also be supplied with minimum cost, high quality, in speedy situations with variety in number and type of products to meet the varied requirements of customers, to have increased market share and to remain competitive. Organizations are, therefore, continuously enhancing their performance by improving quality of their products and services through various quality management (QM) practices (Patyal & Koilakuntla, 2015b).

In the past few decades, companies in the world have been trying to survive these challenges and a rapidly changing business environment in which management have to be more and more intelligent in finding ways to sustain or gain competitive advantage. Among the measure that have been taken to withstand these challenges, most manufacturing organizations have chosen to implement and use new improvement philosophies such as quality management systems, concurrent Engineering, Lean Production, Just-In Time (JIT) strategies, Business Process Re-engineering (BPR) and others, to become more effective in the way they conduct business (Ngambi & Nkemkifu, 2015) . The optimization of the organization's effectiveness is the main driver behind these philosophies both internally and externally within its respective market targets strategies.

According to the International Organization for Standardization (ISO), quality management system (QMS) is defined as coordinated activities to direct and control an organization with regard to quality. It is a standard developed by the International Organizations for Standardization and act as a framework for organizational quality management systems (Bell & Omachonu, 2011). The framework is popularly understood by organizations and governments around the world and consequently used as standard for management systems. The ISO standard 9001 is a set of requirements that define the implementation and maintenance of a quality management system for a company. Above all, ISO 9001 is a management tool for improving customer satisfaction and for assisting organizations to be more efficient (Fahmi, 2020).

Several researches have shown quality management systems (QMS) have been widely applied successfully by many manufacturing companies specifically consisting of decreasing feasible mistakes all stages of tasks by right manipulate, locating faults/mistakes quickly, measuring to keep away from repeated errors, and figuring out and beginning corrective movement/preventive measures (Aized, 2012). Among the most applied quality improvement programs, ISO 9001 is the popular one. A large number of current literatures have, in common, the general assumption on the adoption of ISO 9001 to result in firm's performance improvement (Marin & Ruiz-Olalla, 2011).

The major reasons why organizations need to implement ISO quality management systems include the motive to improve company image, improve the efficiency of the quality system, comply with customer requirements, meet government demands, improve marketing internationally, improve product/service quality, improve productivity and reduce costs (Al-Rawahi & Bashir, 2011).

The empirical findings by Kafetzopoulos et al. (2014) indicated the Indian manufacturing firms that implement ISO 9001 QMS, through achieving the prescribed objectives of the standard, benefited from the resulting improvements in terms of product quality and operational efficiency. They also proved that their finding is consistent with the findings by Koc (2007) who argue that product quality is improved in certified firms due to the systematization process provided by ISO 9001.

Moreover, empirical findings by Al-Rawahi & Bashir (2011) asserted that there was perceived benefits of ISO 9001 QMS implementation leading to highest improvement in quality awareness, customer satisfaction, the clarity of work procedures, and documentation systems among others . Achieving a high improvement in documentation systems is the most common finding reported in the literature (Al-Rawahi& Bashir, 2011). The effective implementation of ISO 9001 has direct impact on operational efficiency, product quality, performance improvement and causally linked positive effect on business performance improvement (Kafetzopoulos et al. 2014).

The empirical finding suggested that QMS would help the organization in critical areas such as the reduction of defective products, the improvement of internal communication, the increase of customer's satisfaction, the increase of share market, the opportunities for infiltration in new markets and global deployment. In addition they observed that the implementation of the QMS gives additional benefits to companies such as a decrease in cost of quality and mistakes; higher quality of the products, reduction in waste, reduction in late delivery time, productivity improvement, down in returns and advertising potential (Aggelogiannopoulos et al. 2007).

In an effort to successfully employ the manufacturing companies' compliance these days, many researchers argue that it requires a properly compiled QMS as a way to ensure the effectiveness of the QMS (Soetanto & Ganjian, 2010).

Therefore, This QMS standard is currently being adopted by Kaliti metal products factory (KMPF) and is officially recommended by the Ethiopian Standard Agency (ESA) as a methodology to resolving quality problems in the service and manufacturing industry for meeting customer's needs and expectation. In this research the investigation of the effect of ISO 9001:2015 QMS implementation practices on organizational effectiveness investigated considering a case company to observe the existing implementation practice is in line with the empirical findings observed in literature.

1.1.1 Back Ground of the Organization

Kaliti Metal Products Factory (KMPF) was established in 1968 with the objective of producing structural and furniture hollow sections, door and window frame profiles, EGA and ribbed sheets for roofing and wall cladding, galvanized corrugated iron sheet, pressed and plain sheet metal products, trailer and Cargo truck bodies and other job order products. KMPF is one of the metal industries in the country that manufactures range of products.

The factory was acquired by Tsehay Industry Share Company from Privatization and Public Enterprises Supervising Agency (PPESA) since July 12, 2012. It is now working with a total capital of more than Birr 700 million and with a work force of 395 workers, which is comprised of 337 male and 58 female. The fact that the factory have been in the business for more than 50 years, it has contributed significantly to the emerging industries and construction sectors through the supply of metal products. Currently the factory manufacturing the following products, Angle Irons, Flat Irons, Round Bars, U-Channels, Galvanized and Black, SECCO and LTZ door and window profiles, Trailers and Cargo truck bodies Furniture and structural hollow sections, Galvanized corrugated iron sheet, plain and press formed metal products, Garbage tankers, Dixon and Heavy duty shelves, Construction form works, Hollow sections.

For the production of these, the factory uses imported steel sheets in coils as its major input to produce standardized and job order metal products. The factory distributes its high quality and dependable products to the local market from the factory premises and through its branch sales centers located in Teklehaimanot area (Addis Ababa), Adama, Hawassa, Jimma and Debre Birhan.

1.1.2 Quality Practices of the Company

Kaliti metal products factory has made efforts to improve itself and its outreach by carrying out various system improvement works such as:-

- Quality Management System (ISO 9001:2008), Kaliti metal products factory is ISO 9001:2008 QMS certified Company. There has been every three years

successive certification program. It was first registered & certified on August 7, 2008, for the second time re-issued on August 19, 2011 and for the third time re-issued on March 15, 2015 and it expired on March 15, 2018. The Company's certificate Number is ISO 7025-QMS. And also the Company conducts QMS Internal Audit and Management Review every year since its first implementation.

- Kaizen, BPR, MIS ,Having made all those stated efforts the factory won the national first level award of excellence for demonstrating organizational excellence, outstanding practices and high commitment in managing and achieving results (Dametew, 2017).
- By improving the system of company and fulfilled the criteria needed to award ISO 2015QMS, Kaliti metal products company had transited from ISO 9001:2008 to ISO 9001:2015QMS. For the first time initial registration date on January 21, 2019 and it expired on January 21, 2022. The Company's certificate Number is ISO 7025-Q15-001. (Source: Alcumus ISOQAR Documentation of the company). That is why the researcher has interested to assess the implementation practices effect on the quality management system and effectiveness in the case Company.

1.2 Statement of the problem & Research Questions

Given the growing prospects for Ethiopia's economic development, as well as the integration of the social and cultural improvement rate and the conservation of the environment, the manufacturing industry in Ethiopia still suffers from a lack of competitiveness (Daniel, 2010).

The lack of competitiveness of domestic contractors when competing for contracts with foreign companies, both at national and international levels, is mainly attributed to their poor performance and inability to adapt to change, high execution costs, project delays, low levels of efficiency, low productivity, and conflict among involved parties (Asrat, 2011). These challenges and limitations have led to a large number of Ethiopian manufacturing industries that can't capitalize on contract improvement and opportunities because they can't achieve higher levels of performance. At the same time, there has in

recent years been a huge growth in the variety of foreign organizations competing for contractual opportunities in Ethiopia (Daniel, 2010).

Quality Management Systems has grown to be more and more essential to customers, who have superior a growing aspiration to have interaction certified and expert of manufacturing organizations, capable to assembly their specification necessities and capable of giving higher customer pleasure. The quality management in the production company is different from that which occurs during construction or in different service industries, since in the manufacturing company it covers not only the quality of the products, but also the general management technique to satisfy a reason described from customers (Rumane, 2017).

The quality management systems (QMSs) currently being implemented by Kaliti metal products factory (KMPF) are based on the ISO 9001 standard. Though the ISO 9001 standard is sometimes criticized in terms of its ability to assist manufacturing companies in operating quality procedures and producing quality products, ISO 9001-based QMSs have been widely adopted in the global manufacturing arena. However, the mere existence of quality documentation, such as quality plans, procedures and work instructions, in company top management system, does not necessarily reflect the presence of deep-rooted operational practices and procedures needed for ensuring the ultimate delivery of a well-operated QMS, capable of giving customer satisfaction in line with the espoused values of ISO 9001 (Al-Rawahi & Bashir, 2011). In addition, there still appears to be question on KMPF, in regards to the entire knowledge of QMS implementation practices.

To address these problems, the KMPF has been conducting seminars and training of human resources focused on issues of quality awareness, to implement ISO 9001 effectively and launched the guidelines for the Implementation of Quality Management (ISO 9001:2015) for KMPF and consulting services in the implementation of QMS with related to quality documentation. However, despite these efforts, there has been slight positive evidence of better implementation practices. But, According to Yirga (2019), Research done on plastics manufacturing industry organizational culture it shows that, the evidence of QMS indicates companies focus only

their certification and the implementation of ISO 9001 certification in manufacturing industry does not replicate the presence of deep-rooted operational practices and strategies wanted for ensuring the final delivery of a properly operated QMS. Consequently, it's had information barrier and increases bureaucracy.

In view of foregoing different perceptive ideas about QMS and the company claims that, the ISO QMS implementation could improve the companies' effectiveness, and benefited from implementation and certification of the ISO QMS or not. Therefore, this motivates the researcher to investigate the effect of ISO 9001:2015 QMS implementation on organizational effectiveness of kaliti metal products factory (KMPF).

After completion of this research, the following research questions will be answered.

- What is the extent of implementation QMS practice in kaliti metal products factory (KMPF)?
- What is the relationship of QMS implementation with organizational effectiveness?
- What are the effects of QMS implementation on organizational effectiveness in the (KMPF) manufacturing industry?

1.3 Objectives

1.3.1 General objective

The general objective of the study is to determine the Effect of ISO9001 QMS implementation on organizational effectiveness of Kaliti Metal products factory.

1.3.2 Specific Objectives

- To assess the level of QMS implemented practices by the (KMPF) manufacturing industry
- To examine the relationship of QMS implementation, and organizational effectiveness
- To determine the effect of QMS implementation on organizational effectiveness in the (KMPF) manufacturing industry

1.4 Significance of the Study

Based on the research findings the output of this research expect to surface the effect of Quality Management System (QMS) implementation on the organizational effectiveness, in Manufacturing Industry based on ISO 9001:2015 especially in kaliti metal products factory are looking for confidence that can be providing by a business with an effective quality management.

The Internal benefits the company get from this research finding is that, Enhance control confidence, improve cognizance of corporation objective, improve communication, responsibility and authority are effectively defined. The External benefits the company get from this research output is that, improve client pleasure, improve company image, consumer self-assurance. In general from this research the case company, researchers, practitioners, affiliated institutes and organizations benefited from research finding.

1.5 Scope of the study

This study focused on the effect of ISO 9001:2015 QMS implementations on organizational effectiveness with particular reference to kaliti metal products factory. The company implemented ISO 9001:2015QMS since 2018. among the means for continual improvement of organizational effectiveness through the implementation of quality management. It also involves the identification of firm effectiveness variables which analyzed in the context of ISO 9001:2015 QMS implementations.

The study has intended to focus on the evaluation of the effect of ISO 9001:2015 QMS implementation on the company effectiveness, on constructs such as (product quality , operational efficiency, and profitability) used as effectiveness dimensions for the effect of QMS implementation on the case company.

The research was conducted in Addis Ababa; head office. A sample of experts, Divisional heads, service head, section head and Managers who serves for the last two years and above those have significant role in designing, planning, implementation, controlling and evaluation of ISO 9001:2015 QMS system has been selected but those employees, who has assign as unskilled workers, and new employees less than two years'

service has inadequate information for the ISO 9001:2015 implementation and branch workers had exclude in the study.

1.6 Structure of the Thesis

The study has been organized into five chapters. Chapter one addresses the introduction part of the study. This chapter discusses in detail about the background of the study, statement of the problem and research questions, objectives, significance of the study, scope of the study, and Structure of the Thesis. The second chapter deals with review of related literature. This has a theoretical framework on which the study is based. It also reviews different literature in the areas of QMS. Chapter three defined the path how to go forward to achieve the set objective and answer research questions posed and it was all about research design & methodology. Results & discussions of research findings were included in chapter 4 of the paper. Finally, the last chapter covers about summary of findings, conclusion and recommendations of the study.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Theoretical Review

2.1.1 Introduction

This chapter aimed at giving insight to the researcher regarding the study. It included literature works from the books, articles, journals and previous studies which are relevant to quality management system implementation practices and organizational effectiveness. The literature review is divided into two major parts; theoretical review and empirical review. This chapter also provided a conceptual framework to show the link between the dependent and independent variables.

2.1.2 Quality management system in the manufacturing industry

These sections below present the overall idea of quality and QMS, in the situation of the manufacture point of effectiveness; similarly presented the crucial ideas of the famous QMSs, the ISO 9001 standard. The two concepts are studied to framework the range and importance of these study issues.

2.1.1.1 Quality defined in the manufacturing industry

Interpreting the analysis of quality topic in the manufacturing industry, generally there are three main phrases that require a definition of purpose and dialogue.

This is what is really successful use of the “quality”, the "quality management system" and what constitutes a philosophy of "total quality management".

There is no precise or single definition of “quality”, and although many of the pioneers of the quality movement and gurus, such as Deming, Juran, Crosby, Feigenbaum, Taguchi and others, had their own individual definitions of “quality”, ISO DIS 9000:2000 generally defines “quality” as “the degree to which a set of inherent characteristics fulfill requirements” (Tricker, 2008,). This means that in the construction industry, quality appears to be achieved whenever the needs of all those entities and individuals involved in projects or production or provision of services, such as consultants, project customers, and other related stakeholders, are fulfilled. Indeed, understanding the main concepts of

quality is essential for a manufacturing company in implementing a “quality management system” as a strategic management tool to gain benefits from the successful implementation of a quality system.

Hoyle (1997) suggests that the manufacturing of appropriate quality merchandise does not occur through chance. However, it needs to depend on the usage of a quality system as the management suite to satisfy all the mounted quality desires. Quality has a number of additives, and a focus on best one thing may also bring about a lack of customers. The utility of a QMS in an effort to remember the critical factors of the quality, is one of the key excellent concepts reviewed through the writers on quality, those satisfactory requirements such as the following:

- (1) A control dedication to reflect that quality issues need to begin from the pinnacle;
- (2) Management structures to make sure consistency of operations;
- (3) The usage of information as the device to run and examine strategies as correctly and viable;
- (4) Crew work; and
- (5) Training to offer teams with the specified understanding of management systems, data and development methodologies.

In an effort to successfully employ the manufacturing companies' compliance these days, many researchers argue that it requires a properly compiled QMS as a way to ensure the effectiveness of the QMS (Soetanto & Ganjian, 2010). (Thorpe & Summer, 2004) have proposed some of the essential principles for an effective QMS that consist of the following:

- A system that allows a business enterprise to discover with, and absolutely meet, client’s desires;
- A system that genuinely defines the duties for wearing out described capabilities and activities;
- A device this is consultant of the simplest and efficient organization for sporting out enterprise methods and diverse discrete activities;
- A system that acknowledges the sound recommendation provided by way of requirements inclusive of ISO 9001;

- A system that is successful because of humans' knowledge dedication, due a feel of possession; and continuously reviewed in a quest for ongoing improvement.

This is the guiding concept of the production support groups expressed in the definition and application of their quality management systems, and their systems use exhaustive and systematic critical descriptions to improve access control, as established in the philosophy of Total Quality Management (TQM) by (Deming, 1986) and others.

In several academic articles written by Shibani, Soetanto & Ganjian (2010) it was generally concluded that the QMS and TQM standards are roughly at the same level. Some production groups followed a TQM technique as an initiative to help increase quality and productivity, while others, who claimed to be using TQM, actually used the fundamentals of a TQM management system quality based on ISO 9001 standard.

The main reason for questioning and evaluating these two satisfactory principles is that, among manufacturing companies, the ideas of QMS and TQM are not fully understood. Based on initial interviews, whilst some nearby manufacturing recognizes what a QMS is, they do not have smooth information of the philosophy of TQM. However, for global level manufacturing who effectively implement QMS, the end purpose of TQM in their quest for standard exceptional fulfillment in their companies.

2.1.1.2 ISO 9001:2015 Standards

The International Organization for Standardization (ISO) became founded in 1946 in Geneva, Switzerland, where it is primarily based. Its mandate is to sell the improvement of global standards to facilitate the alternate of products and services global. Several nations have adopted the ISO 9000 collection as their countrywide requirements and thousands of companies throughout the world have quality systems registered to the standard (Besterfield et al. 2003).

ISO is well suited with proprietary strategies to quality control such as those encouraged by means of Deming, Juran, Crosby, and non-proprietary methods together with total quality management (TQM), Lean Six Sigma, Failure Mode and Effect Analysis (FMEA), cost of quality (COQ), and other non-stop development strategies.

Successful implementation of QMS is to take it as a strategic choice for the business enterprise. The motive of quality management system may be specifically consisting of decreasing feasible mistakes all stages of tasks by right manipulate, locating faults/mistakes quickly, measuring to keep away from repeated errors, and figuring out and beginning corrective movement/preventive measures (Aized, 2012).

ISO 9001 became first posted in 1987 through the international organization for Standardization (ISO), an international agency composed of the countrywide requirements bodies of more than 160 nations. ISO standards update every seven years. The present day the 5th version of ISO 9001 become released in September 2015. It's had seven principle and ten clauses.

In growing and keeping ISO 9001, the collective experience and information of worldwide specialists referring to ISO-TC 176 has been used for the improvement of the seven foremost quality management ideas embedded inside the ISO 9001 standard, that may be utilized by management as a basis for enhancing an agency's overall performance (Rajka et al. 2016).

Table 1: There are now seven (7) quality management principles (QMPs) in the 2015 version that back the ISO 9000 and ISO 9001 standards. The updated QMPs that represent the values of the ISO 9001 standard are:

No	QMP	Statement
1	Customer focus	The primary focus of quality management is to meet customer's requirements and to strive to exceed customer's expectations.
2	Leadership	Functional managers should create a work environment that is conducive for participation of people towards achieving organization's goals with a common purpose.
3	Engagement of people	Involvement and empowerment of people in the QMS.
4	Process approach	Understand and manage organization's activities as interrelated processes where the output from the Previous process becomes an

		input to the subsequent process.
5	Improvement	Fruitful organizations continually concentrate on Improvement.
6	Evidence-based decision-making	Make informed decisions based on the investigation and assessment of information and data to achieve the desired outcomes.
7	Relationship management	An organization needs to handle its relationships with interested parties, such as vendors, for continued success. The goal is to achieve a mutually-beneficial relationship with interested parties.

Sources: ISO 9000:2015: Quality Management System-Fundamentals and Vocabulary (2015) and Fonseca & Domingues (2016)

The ISO 9001:2008 and 2015 have approximately the same requirements. Table 2 below stipulates the clauses of the two different versions of the standard. The first three clause (Clause 1, 2 and 3) just provide some vital information related to the requirements of QMS implementation thus, not considered as requirements of the standard (Neyestani, 2016).

Table 2. The comparison between the clauses of ISO 9001:2008 and ISO 9001:2015

Clause	ISO 9001:2008	ISO 9001:2015
1	Scope	Scope
2	Normative references	Normative references
3	Terms and definitions	Terms and definitions
4	Quality Management System	Context of the Organization
5	Management Responsibility	Leadership
6	Resource Management	Planning
7	Product Realization	Support
8	Measurement, Analysis and Improvement	Operation
9		Evaluation
10		Improvement

The arrangement of ISO 9001:2015 International Standard in PDCA cycle is illustrated below (ISO 9001:2015:Quality Management Systems-Requirements, 2015):

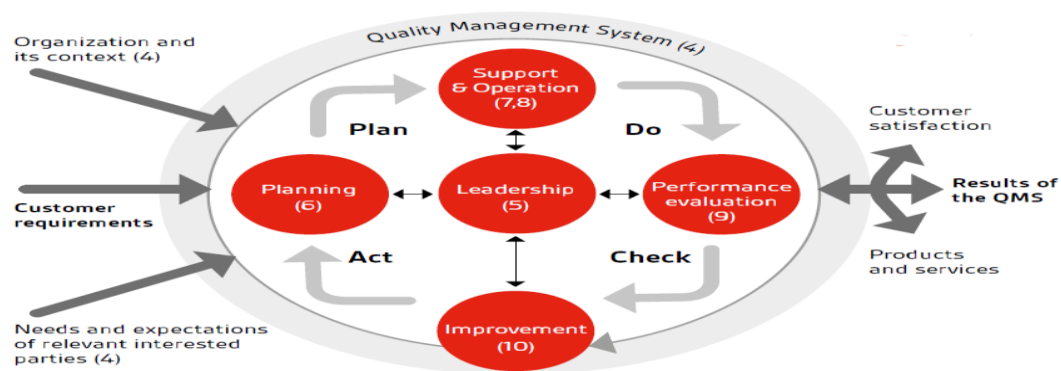


Figure 1: Representation of the structure on international standard In PDCA cycle of QMS for ISO 9001:2015

In summary, as an international standard for QMS (in comparison with other quality standards and awards - Six Sigma, Malcolm Baldrige National Quality Award Criteria, The European Foundation for Quality Management Excellence Model EFQM EM), ISO 9001 is nowadays broadly recognized in numerous business, fabrication and services activities, since it identifies what an establishment must perform to attain well quality management and development. It is acknowledged by McCornac (2006) that the normal attentions on the way a corporation drive around its effort, and not clearly on the results of this job.

This QMS standard is currently being adopted by (KMPF) and is officially recommended by the Ethiopian Standard Agency (ESA) as a methodology to resolving quality problems in the service and manufacturing industry for meeting customer's needs.

2.1.1.3 The Effectiveness of Implementing a Quality Management System

Successful implementation of a QMS as espoused inner the relevant ISO 9001 standard calls for effective planning operation and evaluate as well as continuous enchantment of the system at all stages of business enterprise. Effectiveness has been described by using the British standards institute BSI 2016 because the quantity to which deliberate things to do are realized and deliberate effects are done.

The term effectiveness is especially pertinent to quality management system implementation as companies that undertake a QMS want to fulfill their specific quality necessities and prescribed satisfactory dreams without any shortfalls so that can be considered to have efficaciously applied their QMS. But according to Al-nakeeb et al. (1998) the definition of effectiveness from BSI appears to deceive human beings into questioning that its capacity that the effectiveness comes from solely meeting the detailed necessities and the prescribed quality goals.

According to Ruman (2017) and company needs to illustrate its potential to continually provide products that meet or exceed client expectations and pleasure while moreover adopting appropriate strategies for the endured improvement of the QMS and associated assurances of conformity to consumer and relevant regulatory necessities. Clearly the context of an effective QMS implementation is to make certain that work is carried out in step with specifications all through the layout and improvement stages processing and production and servicing and additionally makes certain that clients are comfortable with the resulting offerings and products (Beaumont, 2016).

An example cited in the research of (Zhang, et.al 2016) is that most of the people of Malaysian manufacturing have been in a position to enhance their business enterprise competitiveness by skill of 80%, after having licensed to ISO 9001. This in reality suggests that QMSs need to be advanced and applied efficiently, for any manufacturing employer wishing to emerge as a sector leader.

2.2 Empirical Review

2.2.1 Quality management system Principles

An extensive literature survey has been carried out to select TQM/QMS frameworks for this study. Research into quality management and TQM has identified many critical success factors that affect an organization's position. Most of the recent articles on QMS CSFs utilized some of factors from Saraph et al. (1989), Flynn et al. (1994), Powell (1995), Ahire et al. (1996), etc., Or a set of factors from quality literature and very few authors empirically validated the QM CSFs. Based on the writings of Crosby, Deming, Feigenbaum, Juran, Ishikawa, and several QM implementation studies, and quality awards existing in different countries.

However, most of quality awards in the world are basically derived from three basic: the Malcolm Baldrige National Quality Award (MBNQA), the European Quality Award (EFQM) and the Deming Prize. ISO 9001 is based on seven quality management principles. These principles are fundamental beliefs, norms, rules and values that create a foundation that guides organizations in performance improvement (ISO.org, 2015).

In this regard, after intensive literature reviews the researcher has selected the following seven assess the effect of QMS endeavor on effectiveness of Manufacturing industry. The next section provides a brief description for each construct of QMS implementation practices.

Customer focus

Several studies have reported a strong link between the delivery of high quality goods and services and profitability through customer satisfaction (Sila & Ebrahimpour, 2005).

Anderson defined Customer satisfaction as the degree to which a firm's customers continually perceives that their needs are being met by the firm's products and services (Anderson et al., 1994). An organization must identify Customer relationship to Measure customer needs and expectations; involve customers in quality improvement; determine customer satisfaction (Prajogo & Sohal, 2003; Sila & Ebrahimpour, 2005; Flynn et al., 1994, 1995; Powell, 1995; Ahire et al., 1996; Black & Porter, 1996).

Knowing what the customer wants, needs and requires are necessary to meet customer expectations. These wants, needs and requirements should be communicated throughout the organization and incuse the processes. Customer satisfaction should continuously be measured and monitored so that corrective actions can be performed. It's important for the organization to identify who their customers are, and actively manage the customer relationship so that the customers becomes loyal. Benefits with an increased customer focus are increased customer satisfaction, increased revenue and market share (ISO.org, 2015).

Leadership

The critical factor 'top management support' is cited by most researchers. Strong commitment from the top management is vital in quality management and leading to higher quality performance. Most of the researchers consented to this notion (Saraph et al., 1989; Flynn et al., 1994; 1995; Ahire et al., 1996; Juran, 1988; Anderson et al., 1995).

There is very strong evidence that the leadership factor is relevant in a quality management such as Top management accepts quality responsibility; evaluated on quality; participate in quality improvement efforts; makes strategies and goals for quality; alignment of IS strategy with business strategy; considering market demands and consumer needs; and organizational performance and profitability (Saraph et al., 1989; Flynn et al., 1994, 1995; Ahire et al., 1996; Anderson et al., 1995; Black & Porter, 1996; Crosby, 1979; Deming, 1986; Juran & Gryna, 1993; Kaynak, 2003; Powell, 1995; Prajogo & Sohal, 2003; Rao et al., 1999; Sila & Ebrahimpour, 2005; Wilson & Collier, 2000).

quality management principle that involves all leaders within the organization to establish consensus of the purpose, and make a decision of which direction to move towards. The leaders should create conditions for group members so they become engaged in the work to achieving the organization's objectives. The leaders should communicate the mission, vision, strategy, policies and processes of the organization, and act as a positive example to all other people working in the organization. Leaders should create and sustain the organization's shared values, have fairness and act ethical to people in all levels in the organization, and create a culture of trust and integrity. The leaders should also ensure that the whole organization have quality commitment, and encourage and recognize the group members' contribution. A good leader improves coordination and communication between the levels and function in the organization, and increased effectiveness and efficiency. The organization's capabilities will be improved, and better results can be achieved (ISO.org, 2015).

Leadership is important in influencing groups of people and mobilizing resources. Effective leadership promotes the strategic direction of the company to achieve customer satisfaction and business results.

Engagement of people

An important factor to achieve goals in firms is Workforce management, Workforce management is emphasized on recognize employee performance on quality; encourage team working; provide training; involve employees in quality decisions (Saraph et al., 1989; Kaynak, 2003; Prajogo & Sohal, 2003; Anderson et al., 1995; Flynn et al., 1994, 1995; Powell, 1995; Ahire et al., 1996; Black & Porter, 1996; Wilson & Collier, 2000; Sila & Ebrahimpour, 2005).

Empowering and involving all employees in making continuous improvement is essential; under such conditions (Flynn et al., 1995; Deming, 1986; Kaynak, 2003; Ho et al., 1999; Ishikawa, 1985; Ahire et al., 1996). The organization must ensure that an organization-wide training program is available in order to provide employees with the proper skills (Kaynak, 2003; Anderson et al., 1995; Flynn et al., 1995; Rao, Solis, & Raghu-Nathan, 1999).

to achieve the organization's quality objectives, all levels in the organization must meet this principle. People throughout the organization need to be involved and respected as individuals to enhance the capability of the organization to create value. When people gets involved, the chance to improve the understanding of the quality objectives increases, and also overall objectives of the organization. This increase to an individual development, by enhanced involvement of people in the improvement activities. More initiatives will be taken without fear and the satisfaction of the employees will be enhanced. To create a work environment with engaged people the organization needs to communicate the importance of individual contribution and importance of trust and collaboration, throughout the organization. There should also be recognition of the individuals' contribution, performance and learning. Surveys, communication of the result and self-evaluation of performance should also be conducted (ISO.org, 2015).

Process approach

The effectiveness of process management implementation has been cited as one of the major dimensions of integrated quality efforts (Anderson et al., 1995). Process refers to combinations of machines, methods, materials, tools, and people employed in production.

TQM works on the belief that the overall quality of products can be enhanced by improving the quality of the processes directly or indirectly related to their creation (Ahire et al., 1996).

The objective of process management is to reduce process variation by building quality into the production process (Flynn et al., 1995; Anderson et al., 1994). That led to increase the quality of outputs as well as decreasing the costs such as rework costs and waste costs (Anderson et al., 1994; Forza & Flippini, 1998). The maintenance of process capability to meet production requirements is the important matter in process control and improvement (Feigenbaum, 1991; Juran & Gryna, 1993). Deming confirmed that improving product quality should not be dependent on mass inspection. Quality comes not from inspection, but from improvement of the production process (Deming, 1986).

The process approach, one of the seven management principles supporting the ISO 9001 standard, is an alternative method of managing business activities or processes (Biazzo & Bernardi, 2003; Gryna, Chua, & DeFeo, 2007). Process approach means managing an organization's activities as interrelated processes where the output from the previous process becomes an input to the subsequent process. Authority, responsibility and accountability need to be established so processes can be managed. Necessary information should be available to operate, monitor, analyze and improve the processes so an evaluation of the overall system performance can be done. Risks that could affect the process's outputs and overall outcomes should be managed (ISO.org, 2015).

Improvement

The vital emphasis areas of TQM are based on quality enactment in different activities of the organization. The Strategy begins with a decision, a decision that can only be made by top management, and that decision simply put, is a decision to compete as a world class organization (Curak, et al., 2011). According to (Curak, 2011) TQM becomes part of the organization's strategy when "methods and goals are so widely deployed throughout the company that all its processes are pointed in the same direction". The concept of strategy is a plan that integrates an organization's major goals, policies, and action sequence into a cohesive whole.

Successful organizations have continuous focus on improving themselves. It is essential for an organization to maintain the level of performance, and to be prepared for internal and external changes. To enhance improvement of the organization, it needs to promote improvement objectives at any level of the organization, and educate and train the people how to apply tools and methodologies. Improved process performance and organizational capabilities will lead to greater customer satisfaction, and to be able to do this focus must also be on investigation of root-causes and preventive and corrective actions. The organization should recognize and acknowledge improvement and track, review and audit the planning of implementations of improvement projects, which should be developed and deployed throughout the organization (ISO.org, 2015).

Evidence-based decision making

The effectiveness of communication is measured by the degree to which that message is understood by others. However, by itself, communication is not necessarily effective communication. Effective communication means the message is received, understood, and acted on in a desired manner (Davis & Goetsch, 1994). This indicates that in a TQM environment may require persuasion, motivation, monitoring, and leadership on the part of managers for the existence of effective communication (Amal Y., 2012).

Decisions that are based on data and information have been analyzed and evaluated. Due to uncertainty, decision-making can be a hard and complex process. Several types and sources of inputs of subjectivity can be interpreted different, which complicates decision-making. It is important to understand cause-and-effect relationships, and potential consequences a decision can generate. Decisions based on facts, evidence and analyses of data makes them more objective, which also make decision makers more confident. The organization must determine measure and monitor key indicators of the organization's processes to demonstrate its performance. Therefore, data for this must be available to relevant people within the organization. So decisions can be made and actions can be taken based on evidence and experience (ISO.org, 2015).

Relationship management

The supplier quality is an important element of quality management in the organization because materials and purchased parts are a major source of quality problems (Kaynak, 2003; Flynn et al., 1994). Supplier relationship focus on: Rely on a small number of suppliers; involve suppliers in product development; evaluate suppliers based on quality; provide training and technical assistance to suppliers (Saraph et al., 1989; Kaynak, 2003; Sila & Ebrahimpour, 2005; Anderson et al., 1995; Powell, 1995; Ahire et al., 1996; Flynn et al., 1994, 1995; Black & Porter, 1996).

Scholars suggested the organizations selected their suppliers on the basis of quality, rather than only on price (Feigenbaum, 1991; Ishikawa, 1985). According to Deming (1986) the price has no meaning without a measure of the quality being purchased.

it is critical for organizations to manage relationships with interested parties, such as suppliers to sustaining success. Interested parties influence performance of the organization, and manage relationship will optimize the performance. It's important for management to have good relationships with suppliers and partner networks. The organization must determine their interested parties, prioritize them and consider their short-term or long-term possibilities. Interested parties can be suppliers, partners, customers, investors, employees or society. Interested parties that organization focus on should be shared information, expertise and resources with collaborative and improvement activities. Good relationship can enhance organization and its interested party's performance; therefore it's important to understand common goals and values. This will also increase the relationship and create a well-managed supply chain, which will provide a stable flow of goods and services (ISO.org, 2015).

2.2.2 Organizational Effectiveness measure

Researchers in organizational sciences acknowledge that the central theme of organizational theory pertained to organizational effectiveness (Goodman & Pennings, 1977; Biswas, 2010) and the underlying goal of most research on organizations is to improve their effectiveness (Noruzi & Rahimi, 2010). Organizational effectiveness is a broader term encompassing multiple constituents for measuring organizational

performance. Therefore, organizational effectiveness has been connoted as one aspect of organizational performance (Lee & Choi, 2003).

Organizational effectiveness is “a company’s long term ability to achieve consistently its strategic and operational goals” (Fallon and Brinkerhoff, 1996). Though, it has been hard to describe what exactly constitutes organizational effectiveness (Cameron and Whetton, 1981; and Rahimi and Noruzi, 2011), it has been widely accepted that organizational effectiveness is “the extent to which an organization achieves its goals” (Steers, 1977). Due to its multidimensional and paradoxical character (Cameron, 1986), an organization can be simultaneously judged effective by one criterion and ineffective by another.

Mott (1972) defined organizational effectiveness as “the ability of an organization to mobilize its centers of power, for action, production and adaptation”. In fact, effective organizations tend to produce better quality products and are resilient in the face of adversities. Further, organizational theory has also produced a variety of models (rational goal, system resource, internal process, and participant satisfaction) pertaining to organizational effectiveness, the measures of organizational effectiveness as (a) productivity; (b) adaptability; and (c) efficiency developed by (Mott,1972) have been found to be the most frequently and most widely used in various models of perceived organizational effectiveness (Steers,1977; Sharma and Samantara, 1995; Luthans et al., 1988).

Organizational effectiveness has been defined as the extent to which organizations achieve their mission through their core strategies (McCann, 2004). More specifically, organizational effectiveness has been defined as the amount of physical output produced for each of the units of productive input (Miller, 2004). Organizational effectiveness has also been defined as successful achievement of financial performances such as increased sales, profitability and market share (Agu and Anichebe, 2015).

Different researchers employ several and varied types of effectiveness measures to assess the organizational performance of an organization implementing quality management system. The research on quality management implementation assessment by Kafetzopoulos, Dimitrios P.; Psomas, Evangelos L.; Gotzamani, Katerina D. Considered operational efficiency, business performance and product quality as major

performance measures categorization (Kafetzopoulos et al., 2014). In their study, effectiveness measures such as reliability, durability, perceived quality, performance and conformance to specifications are considered as performance measures under operational performance dimension. Indicators of business performance such as company sales growth, company market growth, profitability, net profit margin, financial results and cash flow are used for their study. Similarly, Company's productivity, efficiency, process effectiveness competitive advantage, and company's ability to have access to new domestic and foreign markets are considered as the company's performance measures under operational performance dimension.

To measures the organizational effectiveness selected in the study for the case manufacturing company were; product quality, operational efficiency and profitability of the organization to answer the effect of quality management system.

Company Product Quality

While conducting survey study on quality performance measurement practices in the Turkish top 500 manufacturing companies, Ali Uyar, used 11 organizational performance measures under the category of financial and non-financial measures. The financial measures include itemized quality cost reporting; analysis of quality cost components; quality cost budgeting and variance analysis; comparison of quality costs to industrial standards; and. Multi-period trend analysis of quality costs. The non-financial measures include percentage of product reworks; rate of material spoilage; rate of defects in production output; percentage of returned goods to total sales; on-time delivery of goods or services to customers; and. total number of customer complaints(Kafetzopoulos,2014).

Operational efficiency

According to McWilliams and Smart (1993), firms that operate efficiently can exploit their competitive advantage and produce sustainable profits for a longer period, thereby establishing a sustainable competitive advantage. Previous authors (Abarbanell & Bushee, 1997; Baik, Chae, Choi, & Farber, 2010; Fairfield & Yohn, 2001; Lev & Thiagarajan, 1993; Nissim & Penman, 2001; Ou & Penman, 1989; Penman & Zhang, 2002) studied the impact of OE ratios on future firm effectiveness.

Measured by changes in market value of company shares was taken from Sharma and Singh (2006). Change in market value of company share measurement was used as the dependent variable to measure future firm performance because return on equity and return on assets measurements are affected by non-efficiency issues such as product pricing challenges because of the changes in market competition, shortage of raw material, etc.

Ahmad and Noor (2010) using 78 Islamic banks in 25 countries for the period 1992–2009, found a positive relationship between operating efficiency and profitability. Dietrich (2010) examined the impact of efficiency on profitability using a panel of 11,728 UK manufacturing firms for the period 1993–2007, and found that operating efficiency above the threshold positively impacts profitability in the short-run.

The operating efficiency of an organization in terms of the efficient utilization of the resources is reflected in net profit margin. It has been observed that although a high profit margin is a test of better performance a low margin does not necessarily imply a lower rate of return on investments/assets turnover. Therefore, the overall operating efficiency of an organization can be accessed on the basis of a combination of the two (Dhillon, 2012).

Profitability

Profitability is a measure of the effectiveness of business as it indicates what profit the business has made from its sales or money invested in the firm (Harvey, 2007). Profit maximization, return on investment and shareholders' wealth are regarded as the primary objectives of businesses, while secondary objectives include productivity, business growth, sales maximization, safety and security and socioeconomic goals (Bosch, Tait & Venter, 2006). The achievement of these objectives is therefore a measure of organizational effectiveness.

The increase or decrease of the market share a firm controls is another important indicator of a firm's financial performance and therefore its organizational effectiveness (Shaw and Merrick, 2005). Market share is a measure of how dominant a firm is in its industry, and Porter (1990) argues that this gives a firm a competitive edge in the industry to know when a schedule should be created.

Pandey (2005) defined profitability as the ability of a business, whereas it interprets the term profit in relation to other elements. Profitability is the ability to make profit from all the business activities of an organization, company, firm, or an enterprise (Hijazi and Tariq, 2006). It shows how efficiently the management can make profit by using all the resources available in the market.

Dong and Jhy-tay, (2010) also viewed profitability as the „the ability of a given investment to earn a return from its use“. Profitability is an index of efficiency; and is regarded as a measure of efficiency and management guide to greater efficiency. Though, profitability is an important yardstick for measuring the efficiency, the extent of profitability cannot be taken as a final proof of efficiency (Hifza, 2011).

Earning power is the overall profitability of an organization, is computed by multiplying net profit margin and assets turnover. The combined profitability is referred to as earning power/return on assets (ROA) ratio. The earning power of an organization may be defined as the overall profitability of an organization. This ratio has two elements profitability on (i) sales as reflected in the net profit margin, and (ii) Profitability of assets which is revealed by the assets/investment turnover (Dhillon, 2012)

2.2.3 QMS and Organizational Effectiveness

Achieving, enhancing, and sustaining competitiveness in today's competitive environment is dependent on providing high quality and low cost products and services in the least possible time (Al - Rawahi & Bashir, 2011). Owing to this, organizations implement a number of management tools and philosophies including quality management systems. These systems play an important role in raising the levels of quality, safety, efficiency, reliability, productivity, and work satisfaction, as well as reducing cost.

The effect of implementing ISO quality management system on organizational effectiveness has been studied by different researchers including (Feng, et al., 2008), (Lin & Jang, 2008), (Su, et al., 2008), (Lakhal et al., 2006). They used different types of effectiveness measures to assess the impact of the quality management system on various organizations.

According to previous studies in the quality arena have showed quality system elements that impact on organizational performance. Empirical evidence also indicates that several organizations are forced to register and implement ISO due to external pressures such as customer needs and market related factors, and needs for improvement in process or systems, desire for global deployment and lack of focus inside the organization (Aggelogiannopoulos, et al., 2007; Yahya & Goh, 2001). On the contrary, there is also evidence that shows internal factors such as improving overall company's performance are major ones for seeking ISO registration and implementation of the ISO management systems.

Lassâad Lakhali, Federico Pasin and Mohamed Limam observed there is a positive relationship between quality management practices and organizational performance (Lakhali, et al., 2006). Moreover, their results illustrate a direct effect of infrastructure practices on operational efficiency and of core practices on product quality. According to Mei Feng,; Milé Terziovski; and Danny Samson asserted that there is a positive and significant relationship between certification practices (implementation, organizational commitment and planning) with operational efficiency (Feng, et al., 2008). However, the relationship between these practices with business performance was found to be positive but not significant of the variables they studied. In their study, organizational commitment to certification was found to be most strongly related to operational and business performance as well.

The empirical research results by Ching-I Lin and Woan Yuh Jang indicated that there is a positive relation between ISO 9000 and business performance (Lin & Jang, 2008). They have also identified four key constructs to success in implementation of ISO quality management systems. These were top management support, quality planning, employee involvement and continuous improvement and were found to be a series of chain, rather than parallel components. Michael Bell and Vincent Omachonu emphasized the implementation of a documentation system is linked to business effectiveness as measured by the return on assets financial measure (Bell & Omachonu, 2011). An empirical research conducted by Martõ Casadesu and Gerusa Gime nez on 288 Spanish Company revealed that 65 percent of the companies which are ISO quality

management system standards certified have obtained very high levels of internal and external benefits (CasadesuÂs & GimeÂnez, 2000).

The applications of QMS principles on customers' satisfaction as well as organizational effectiveness (Product quality, efficiency and profitability) there are a statistically significant impact. Quality management systems are one of the most effective tools for companies to increase competitiveness. This issue has been studied for a long time since Dr. Edward Deming and Dr. Joseph Juran have started their studies and practical implementation of quality management and quality thinking(J Priede , 2012). Customer focus, Leadership, Engagement of people, Process approach, Improvement, Evidence-based decision- making and Relationship management are crucial, according to ISO 9000:2015: Quality Management System-Fundamentals and Vocabulary (2015) and Fonseca & Domingues (2016)

Many studies and literature have been identified and determined the benefits of QMS that can affect positively on the organizational performance and market in different industries. For example, a survey was performed by (Thilakarathne and Chithrangani ,2014) for identifying the benefits of implementing QMS in the ISO 9001-certified firms in Sri Lanka, the results of their research indicated that the customer satisfaction, reduces production time, increases quality awareness, improves product/service quality, improves employee productivity, and improves employee relations, were respectively, as most important perceived benefits of the QMS implementation within different companies in Sri Lanka. Based on the findings of several empirical studies, the most aim of QMS standards is to promote the customer's satisfaction.

There is growing evidence that QM implementation has improved organizations' effectiveness and significantly impacted on most organizations (Dewhurst, Martinez-Lorente, & Sanchez-Rodriguez, 2003). Several studies showed that QMPs had the strongest effect on the quality performance measures such as Flynn et al. (1994) and others founded positively correlated with organizational effectiveness such as (Powell, 1995; Ahire et al., 1996; Samson & Terziovski, 1999; Agus, 2003; Rao et al., 1999; Kaynak, 2003; Prajogo & Sohal, 2003; 2006; Sila & Ebrahimpour, 2005; Zu, 2009).

2.2.4 Review of Related Research Works

In this study, it has been tried to review some papers globally, in Africa, and in Ethiopia to know what is going on in this field of study. This review helps to find connections between the existing researches and identify problems or gaps that exist in the published studies.

Globally, a number of researches from that Franklin W. et al. (2019) Implementation of the Quality Management System (ISO 9001: 2015) in the Bodywork Industry, it aims directing and controlling the productive processes to ensure compliance with the operation parameters and to achieve the expected effects. Results In the application allows comparing with the initial situation made to the manufactured product, and it is found that the percentage of defects decreased from 72.0% to 36.0%.

Amarjit et al. (2014) the Impact of Operational Efficiency on the Future Performance of Indian Manufacturing Firms. This study investigated the relationship between changes in operational efficiency and changes in future performance of Indian manufacturing firms applying a correlational research design. A sample of 244 firms was selected from the top 500 companies listed on the Bombay Stock Exchange (BSE) for a period of five years (from 2008–2012). This finding indicates that the Indian manufacturing industry has high profit margin which lead to low asset turnover.

Awoku, Y (2012) Quality management practices implementation in relation to organization performance particularly in Southern Minnesota manufacturing firms. The major objective of this study is to develop and propose the conceptual framework and research model of quality management practices implementation in relation to organization performance , and also to identify the most important factors considered in suppliers' selection in the companies. In this study focus was the relationship between quality management practices and organization performance. The result of the survey conducted on the companies found that implementation of the quality practices affects organizations' performance positively.

Shahid et al. (2014) Relationship between TQM Dimensions and Organizational Performance, it focuses on four TQM dimensions; customer focus, continuous improvement, employee involvement, top management support to identify the most critical quality dimensions as predictor of organizational performance. The results are

based on the empirical data collected from a self-administrative survey from 90 organizations (270 managers) of textile sector in Pakistan. Multiple linear regression results reveal that continuous improvement and employee involvement are the most critical dimensions for predicting organizational performance. Whereas, customer focus and top management support has no statistical significance for predicting the performance.

Salaheldin (2008) revealed that the implementation of TQM has a positive effect on both the operational and the organizational performance. The results show that customer focus, continuous improvement, top management commitment, employee involvement and product innovation are significantly and positively related to product quality.

In Africa, Monirei (2016) Quality Management and Organizational Performance of Manufacturing Firms in Nairobi County. The objectives of the study were; to establish quality management practices among manufacturing firms ; to determine the relationship between quality management and performance. The research design used was descriptive survey method. A sample of 70 manufacturing firms in Nairobi County was selected which is 12.75% of the target population. Both descriptive and inferential statistics was used to analyze the data. From the findings all activities show that customer focus practices have been adopted in the respective organizations at large extent, and activities show that ISO 9000 practices have been adopted in the respective organizations at large extent with the mean ranging from 3.61 to 3.92.

Fatma (2015) the impacts of ISO 9001 quality management system Implementation on employees' performance of pension funds In Tanzania: a case of national social security fund (NSSF). The study aimed at examining the impacts of ISO 9001 quality management system implementation on employee performance .The explanatory research designs with the case study strategy were adopted in the study. The findings of the study revealed that management commitment has a positive impact on the employees' performance in the pension fund at NSSF. On the other hand internal communication, workplace physical environment and capacity enhancement found to have a positive impact on employees' performance.

Otieno et al. (2015) examined the effects of QMS implementation on students' enrolment, and establish the effect of QMS implementation on employee performance and to establish the level of infrastructural growth of Maseno University. The target population was 1283 non-teaching staff of Maseno University. A sample of 296 employees was obtained from the population using stratified random sampling. Data collected was analyzed using correlation, regression analyses. The study findings established that the QMS implementation had a strong positive impact on student enrolment with R^2 of 0.615 and, infrastructural growth R^2 of 0.398. The acquisition of a QMS appeared to have ignited an important role in service rendering capacity of the institution.

Muiruri (2016) Quality Management Systems and Organizational Performance: A Theoretical Review in Kenya's Public Sector. The study focuses on customer satisfaction, employee engagement, productivity and management control. The study adopted a conceptual research design approach using secondary data. Findings shows Quality Management Systems implementation has positive effects on overall organizational performance and implementing does pay off since the benefits accrued include; improved quality, employee satisfaction, productivity, employee participation, teamwork, communication, profitability and greater market share.

Kibe and Wanjau (2014) explored quality management systems and their influence performance of food processing firms in Kenya, where, food processing companies still find it challenging to effectively implement quality managements systems that contribute towards realization of increased organization performance. Over 75% of food processing companies in Kenya are still struggling to embrace effective quality management systems as a strategy to gain a competitive edge in the target market through development of superior product quality, market growth and higher customer satisfaction.

Fening et al. (2013) examined the linkages between total quality management and organizational survival in manufacturing companies in Ghana. The quantitative approach and the survey method of collecting data were used. A sample of 250 manufacturing firms within the metropolis of Kumasi, the second largest city in Ghana was selected and interviewed. The missing data and data anomalies were eliminated resulting in a final valid sample of 101. A structural equation model (SEM) was proposed to examine the

relationships between the seven organizational linkages and five practices of TQM impact on the Ghanaian companies. The findings showed significant positive effect of the seven Total Quality Management (TQM) elements on organizational performance.

In Ethiopia, Yirga (2019) Quality Management System (QMS) Implementation Based on Manufacturing Culture .The goal of this research is to integrate the Quality Management System (QMS) implementation based on Manufacturing Culture to improve the QMS efficiency in APF. The study is based on a mixed methodology of quantitative and qualitative approaches were used. The questionnaire surveys were distributed to the selected APF staff, in order to collect responses designed to examine the effectiveness of the implementation of their QMS. Finding of shows the implementation of ISO 9001 certification in APF does not replicate the presence of deep-rooted operational practices and strategies wanted for ensuring the final delivery of a proper operated QMS. Consequently, it's had information barrier and increases bureaucracy.

Gedif, S (2019) Assessment of Quality Management Practices and Organizational Performance: The case of Modern Building Industries P.L.C (MBI). The main purpose of conducting this study was to investigate quality management practices and organizational performance in MBI, a member of MIDROC Technology Group. Three key dimensions of quality management practices such as customer focus, top management commitment and continuous improvements were used to measure the organizational performance. a sample of 106 employees, 75 were correctly filled and returned, an overall response rate of (71 %). Data was analyzed using descriptive statistics. The findings indicate that continuous improvement had positive and significant effect on performance of MBI. Customer focus was found to be significant in explaining the variation of performance and top management commitment was found to have a significant effect on performance of MBI.

Melese, B (2019) the Effect of Total Quality Management on Organizational Effectiveness: The Case of Nile Insurance Company S.C. its aim is to determine how the Total Quality Management practices affect an overall effectiveness of Nile insurance company. The study type is descriptive and explanatory and both qualitative and quantitative methods were employed. The data has been taken from a sample of 100 employees from selected branches including the head office in Addis Ababa.

The data is analyzed by using a structural equation modeling methodology. The results indicate that the level of awareness regarding TQM practices and the role found at moderate level. Concerning the dimensions of TQM practices, strategic planning effectiveness and customer orientation found to be in low category whereas dimension to communication, leadership and employee's involvement were in moderate category. Consequently, an overall dimension of TQM practices endeavored categorized under moderate category. As the descriptive findings indicate that all TQM Practices (Strategic Planning, Communication, Employees Involvement, Customer Orientation and Leadership) are found to have significant and positive association with both employee's satisfaction and profitability. As the regression finding depicted, except communication other four namely strategic planning, employee's involvement, customer orientation and leadership are found to be significant in employee's satisfaction. On the other hand, except employee's involvement, all variables were significant concerning about company's profitability. Therefore, organizational effectiveness has been positively impacted by TQM practices.

Mekonnen, G (2017) The Impact of Implementing Quality Management System on Organizational Performance: The Case of National Tobacco Enterprise (Eth.) S.C This research has been conducted to examine the impact of QMS implementation on organizational performance. An explanatory research design and mixed approach has been employed to investigate the impact of QMS on the National Tobacco Enterprise (Eth.) S.C organizational performance. Purposive sampling used to select the interviewees and respondents for the questionnaire. The collected data was analyzed using both descriptive and inferential statistics. The results showed that Implementation of quality management systems has positive impact on the performance of the company. Organization performance dimensions such as business performance, product quality and operational performance are positively impacted by the quality management system practices.

Getenet, D (2013) The Impact of ISO 9000 Certification on TQM Implementation Process: In The Case of Bedele Brewery, The main purpose of this study is to assess the adoption of TQM elements in 180 9000 certified company in case of Bedele Brewery.

Out of 345 employees' 181 were selected using stratified random sampling and five department heads were included. A total of 143 usable questionnaires were received and the overall response rate was 79 percent. The result of the study shows that the company practiced TQM at a moderate level. Among the elements of TQM; process management, customer focus and supplier relationship implement at a high level. Leadership, employees' participation, education and training, and reward and recognition are implemented at moderate level. However, continuous improvement is practiced at low level. The result indicated that ISO 9000 implementation contributes towards the adoption of Total Quality Management.

Daniel and Fasika (2003) Quality management efforts and problems in Ethiopian manufacturing industries, it deals with the analysis and the current quality management practices in Ethiopian manufacturing industries. The research is based on a survey conducted on 55 representative industries all over the country. Based on the survey to 55 manufacturing companies in Ethiopia. It addresses the current situation of quality management in Ethiopia. The survey is not a random sampling from manufacturing companies in Ethiopia. The companies we surveyed are located in the central cities and cities of high industry level. The implementation of Quality Management programs can achieves significant benefits such as increased efficiency, reduced costs and greater satisfaction, all leading to better performance for the organization.

2.2.5 Summary of Reviewed Literatures and Research Gaps

2.2.5.1 Literature Review Summary

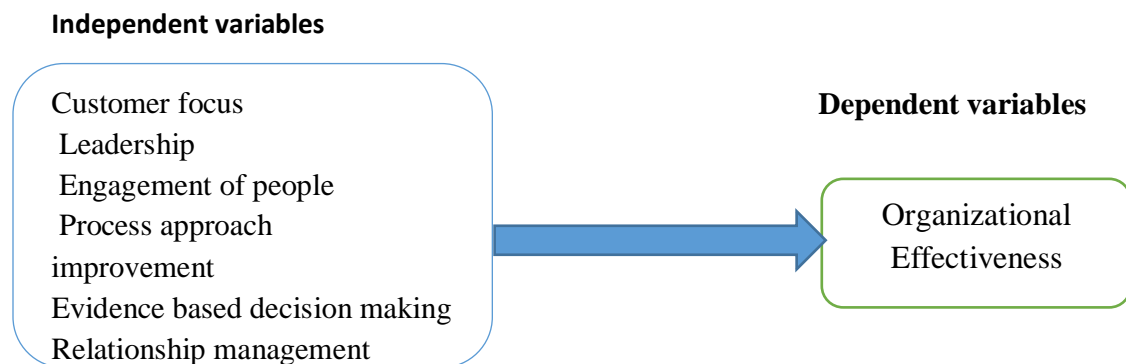
This document reported some significant results of the implementation of studies examined the connection between the imposition of impressive series of practices and effectiveness of the quality management system. Implementation of the Quality Management System practices on Manufacturing Industry effectiveness. The proper implementation of QMS, it enhances organizational effectiveness and efficiency of the business company. Analysis showed that Implementation of quality management systems has effect on the performance of the company. Organization effectiveness dimensions such as Product Quality, operational efficiency, and profitability are impacted by the quality management system practices as the research aim.

2.2.5.2 Identified Research Gaps

- Most of the previous work was done only on the importance of the quality management system for improving productivity. This clearly shows that research in the field of quality management system Implementation in the manufacturing industry to organizational effectiveness is limited and requires further study. For this reason, the effect of QMS implementation practices on organizational effectiveness dimensions was examined and evaluated in this research. Finally, the implementation of quality management system in the manufacturing industry is developed to achieve the goal of rate of product defect reduction, input material utilization rate improvement and earned more than total annual expense as the models of effectiveness as the metal products manufacturing factories.
- There is only very little research in the area of metal manufacturing industry on the effect of ISO Quality Management System Implementation in Manufacturing Industry effectiveness models. This is also the motivation for this investigation.
- Limited research was carried out Implementation of a quality management system on organizational effectiveness in the manufacturing industry in some developing countries. Therefore, this issue also has a great opportunity to apply in our country, Ethiopia.

2.2.6 Conceptual framework

Figure 2: Conceptual framework of the study developed based on previous literatures



The conceptual framework has developed based on ISO, 9001:2015QMS standard principles by the researcher based on theories and previous works in the area of the study. In this regard, theoretical and empirical studies have addressed very well about their relationship. Accordingly, the mentioned major QMS implementation thought to have impacts on organizational effectiveness.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Research Design and Approach

Research design shows the different phases of a research with the corresponding activities. This research was designed to investigate and explain the effect of ISO 9001QMS implementation on organizational effectiveness in the metal manufacturing industry.

The researcher used research design for descriptive and explanatory study variables. In line with this, both qualitative and quantitative methods were employed. The quantitative data collected through questionnaire was manipulated to answer questions posed on the impact of ISO 9001:2015 QMS within the measurable variables and with an intention to explain and predict the existing phenomena. The qualitative data which has also been collected through Semi-structured interview from target individuals was analyzed qualitatively to explain the effect of the QMS standard implementation on organizational effectiveness in Kaliti metal products factory.

A study design was conducted at Kaliti metal products factory head quarter in Addis Ababa. It is a onetime data collection method among the selected sample of the study. This research design incorporates design research instrument- questionnaire and check list- and pilot testing; data collection; data presentation, analysis and discussion; conclusion; and recommendations.

3.2 Source & Type of Data

Source of Data: The researcher has considered two sources for data collection namely primary and secondary sources of data. Secondary sources by referring to prior researches, books, journals articles, performance reports of Kaliti metal products factory for different years, and other necessary sources pertaining to the implementation of ISO 9001:2015. Regarding to primary sources, the researcher used the structured and self-administered questionnaire technique to collect data required for the research and the interview as well. In line with this, the main instrument in data collection was through questionnaires targeting employees to provide information by knowledge or experience

of kaliti metal products factory, and the qualitative data gathered through interview from selected middle level management members, and senior experts.

Data collection Method: The researcher used questionnaires as the primary data collection tool which was self-administered by the respondents. A questionnaire is a research tool that used to gather data over a large sample (Kombo, 2006). With the questionnaire, the information gathered from individual respondents remained confidential. It has the advantages for saving time and money. Thus, it enables researchers to cover large sample with short period of time. Prior to the actual data collection, the researcher liaised with the relevant authorities to allow the study to be carried out and conducted a pilot study to familiarize with the respondents.

Furthermore, so as to get detail information on some vital issues key informant interviews were conducted among selected interviewees with selected middle level management members, and senior experts of the company and how ISO 9001:2015 implementation affect the organizational effectiveness.

Pilot Survey: In order to obtain the required information from informants, the identification of the informants has been done. The aim of pilot survey was to point out weakness in the questionnaire which was then reviewed and rectified. A pilot survey was done prior to the actual study. Questionnaires were administered to ten selected employees. Thus, based on the feedbacks from the pilot study, the final instruments have been revised and used for the final stage of data collection.

3.3 Sampling Design

Target population: The study populations were employees of Kaliti metal products factory in Addis Ababa head office the samples were selected. The selected sample of respondents who provide information by knowledge or experience. In this regard, respondents were experts, Divisional heads, section head , service head and Managers who have significant role in designing, planning, implementation, controlling and evaluation of ISO 9001:2015 QMS was selected but those employees, who has assign as unskilled workers (nonprofessional employees such as guards, drivers, cleaners, welding, etc.) and newly employee less than two years serve the company has inadequate

information for the ISO 9001:2015 implementation and branch workers had been exclude.

Sampling technique and sample size: In this study the researcher used purposive sampling technique method used to select the interviewee's and respondents of the questionnaire. Purposive sampling technique, also called judgment sampling, is simply put, the researcher decides what needs to be known and sets out to find people who can and are willing to provide information by knowledge or experience.

Accordingly, from the total of 395 permanent employees as a Purposive Sampling rules said that, the researcher uses his or her own judgment about which respondents to choose, and picks those who best meets the purposes of the study. From those point discussed above the researcher has selected respondents for a questioners 85 and 11 interviews from middle level management members, and senior experts to explain the effects of QMS implementation on organizational effectiveness and to fulfill the gap of questioners to point out weakness which has selected for this particular research.

In relation to sample size determination, the researcher has followed scientific procedures and criteria. Mugenda (2003) states where time and resources allow a big sample should be taken. This enables findings to be a true representative of the whole population. According to Kothari (2004) for the target population which is not large in number from 5%-10% of the total could be enough. Although there are more complex formulae, the general rule of thumb is that not less than 50 participants for a correlation or regression are required. Accordingly, 25% of the targeted population was therefore picked for the study.

Table 3. Sample Size

No	Departments	Sample size
I	Respondents for questionnaire	
1	Audit, Public relation & legal Services	2
2	Planning & Programming Service	2
3	Tube and others metal manufacturing Department	14
4	Finance department	12
5	Administration and Human Resources Department	15
6	Research and Quality Assurance Department	1
7	Factory technic Department	10
8	Marketing and Sales Department	9
9	Trailers and Cargo bodies department	8
10	Business development project department	1
11	Supply Department	11
	Total	85

Source: Own survey, Addis Ababa, 2021

3.4 Data Analysis Techniques

The data collected from the field for the purpose of the study has been edited and coded for completeness and accuracy of information at the end of every field data collection day. The quantitative data and descriptive statistics were analyzed by the use of statistical package for social scientists (SPSS) and results have been reported in the tables showing percentages, frequency distributions, mean and standard deviation to seen the descriptive statistical values of the five-point Likert scale data. Beside to this, multivariate analysis has fitted. Accordingly, ANOVA analysis in order to find out the connection between independent variables and dependent variables of the study has been done.

The best fitted model selected, for the purposes of fulfilling the objectives of the study, was Multiple Regression Model. Multiple regression attempts to model the relationship between two or more explanatory variables and a response variable by fitting a linear equation to observed data, and for Qualitative data collected by semi interview narrative analysis were used.

Every value of the independent variable x was associated with a value of the dependent variable y . The multiple regression formulas adopted for this study were presented as follows.

$$Y_1 = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \varepsilon$$

$$Y_2 = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \varepsilon$$

$$Y_3 = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \varepsilon$$

Model 1, 2, 3 Where;

Y = effectiveness models of (Product Quality, Operational efficiency, and Profitability) of Kaliti metal products factory

X_1 = Customer focus

X_2 = Leadership

X_3 = Engagement of people

X_4 = Process Approach

X_5 = Improvement

X_6 = Evidence based decision making

X_7 = Relationship management

$\beta_0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7$ = the coefficient of the variables and

e = the error term

3.5 Validity and Reliability

Validity: The questionnaire has standard questioner on Quality Management Systems (ISO 9001:2015). It taken from the work of Fahmi Abu Al-Rub FOODQA Coordinator Director of the Applied Scientific Research Fund, and Professor at Jordan University of Science and Technology in Jordan and different scholars has been modified to fit for the subject area of the study. In order to meet sufficiency all the seven principles of ISO 9001-2015 are included in the questionnaire. The questionnaire has valid and reliable since it tried to cover all the principles and detailed questions for each principle.

Reliability: analysis was conducted to determine the reliability of the summated scores calculated for the various factor categories. The Item analysis was conducted for statements in the questionnaire that were summated into scores for the 7 factor categories. For each factor Cronbach's coefficient α was calculated and a factor analysis specifying a one factor model was conducted. Internal reliability test of the factors in each category was conducted by determining their Cronbach's coefficient α value as shown in table 4

Table 4. Reliability Analysis

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.791	.776	7

Item-Total Statistics	
Variables	Cronbach's Alpha
Customer Focus	.851
Leadership	.744
Engagement of People	.744
Process Approach	.742
Empowerment	.758
Evidence Based Decision Making	.757
Relationship Management	.712

Source: Own survey, Addis Ababa, 2021

Cronbach's α value for all factor categories were $> .70$, it has adequate proof of internal consistency. Cronbach's α values of 0.50 to 0.70 are acceptable.

3.6 Model Specification and Description of Study Variables

The general objective of the study is to determine the Effect of ISO 9001 QMS implementation on organizational effectiveness of Kaliti Metal products factory. In this regard, independent and dependent variables were listed.

Independent Variables

1. Customer focus
2. Leadership
3. Engagement of people
4. Process approach
5. Improvement
6. Evidence based decision making
7. Relationship management

Dependent Variables

1. Product quality
2. Operational efficiency
3. Company's Profitability

CHAPTER FOUR

RESULTS & DISCUSSIONS

4.1 Introduction

This chapter presents the empirical data collected from the case company through standard questionnaire, which was triangulated by interviewing middle level management and senior experts of the company questions. The analysis of the data has been done by making use of SPSS 20.0 data processing software. The findings of the data collected were analyzed and discussed thoroughly so as to meet the research objectives defined and answer research questions posed. 85 respondents from the case company approached through personal contact for data collection as designed in the research methodology of this research. These respondents were requested to complete the designed questionnaire. Out of these 85 respondents, 71 respondents agreed and responded, resulting in a response rate of 84 percent. It can be inferred that the response rate was good. According to Mugenda (2003) a response rate of 70% and over is excellent for analysis (as cited in Kanorio, 2014).

4.2 Profile of respondents

After the standard questionnaire had been tested for the content validity, it has been distributed to 85 respondents. Fortunately, all questionnaires were completed. Hence the data collected from 71 respondents were used for analysis. Demographic information described individual profile. The profile section included aspects of Education Level, occupational position, Monthly salary, and service years in the company.

There have been equity and gender balance in most organizations in employing employees on gender consideration. The study sought to establish gender of the respondents to determine whether the company observes gender balance in their employment. Table 5 below shows that, the sex of the respondents, majority of the respondents were males, i.e. 71.8% (51) representing the largest part of the sample group and the rest respondents were female 28.2% (20). The study found that male respondent employees were viewed to be more than female respondent employees in case company and they formed the greater percentage.

Table 5: sex of respondents

		Sex			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	F	20	28.2	28.2	28.2
	M	51	71.8	71.8	100.0
	Total	71	100.0	100.0	

Source: Own survey, Addis Ababa, 2021

The study found it paramount to establish the age of the respondents. This is a demographic feature that affects behaviors or perception of an individual on issues in the company. In relation to age distribution of respondents, table 6 below shows, majority of respondents were found to be under the age category of 30-45 (71.8%), followed by age category of 18-29(15.5%) and age category of between 45-60 (11.3%) and the rest respondents' age category was found above 60 (1.4%). It was observed that the majority of the respondents were aged between 30 and 45 years in the case company.

Table 6: Age of respondents

		Age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18 - 25	11	15.5	15.5	15.5
	30 - 45	51	71.8	71.8	87.3
	46 - 60	8	11.3	11.3	98.6
	above 60	1	1.4	1.4	100.0
	Total	71	100.0	100.0	

Source: Own survey, Addis Ababa, 2021

The respondents were asked to state their highest academic level. The level of education is a key factor when it comes to employee understanding and perception of quality management implementation issues in the company. As indicated in table 7 below, it showed clearly majority of respondents possessed bachelor degree (74.6%) and advance degree such as second degree and above (2.8 %). Respondents with level of college diploma were of 22.5%. This indicates the respondents are well educated and has the ability to understand the questions they were presented with and to provide the right information.

The finding also indicates that the case company employs educated and professional employees. Thus employees understand the effect of QMS implementation on organizational effectiveness.

Table 7: Education Level of Respondents

educational level					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	BA/BSC	53	74.6	74.6	74.6
	Diploma/	16	22.5	22.5	97.2
	MA/MSC	2	2.8	2.8	100.0
	Total	71	100.0	100.0	

Source: Own survey, Addis Ababa, 2021

Occupational position data was intended for the purpose of establishing on the respondents who provide information by knowledge or experience. In this regard, respondents who have significant role in designing, planning, implementation, controlling and evaluation of ISO 9001:2015 QMS systems were selected. With regard to the position of respondent's, majority (62%) of them were found to Expert, and followed by respondents who were Section Head, Service Head and manager represented by 22.5%, 11.3% and 4.2% of the respondents respectively.

This implies that expert employees form the largest majority in the case company. With this kind of distribution, the researcher was satisfied that all areas were covered.

Table 8: occupational position of Respondents

occupational position					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Expert	44	62.0	62.0	62.0
	Manager	3	4.2	4.2	66.2
	Section Head	16	22.5	22.5	88.7
	Service Head	8	11.3	11.3	100.0
	Total	71	100.0	100.0	

Source: Own survey, Addis Ababa, 2021

The respondents were asked to state their monthly salary. The level of income is a key factor influencing the productivity of employees in the case company. As indicated in table 9 below, Monthly salary of Respondents monthly income majority (60.6%) of respondents have earned more than 10,000 birr followed by 38% of respondents who have earned 5,000-10,000 birr and 1.4% of respondent earned 3,000 – 5,000 birr. This

result indicates majority of the respondents have a better monthly income which encourage them to perform better in their company.

Table 9: Monthly salary of Respondents

		monthly salary			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3,000 - 5,000	1	1.4	1.4	1.4
	5,000 - 10,000	27	38.0	38.0	39.4
	above 10,000	43	60.6	60.6	100.0
	Total	71	100.0	100.0	

Source: Own survey, Addis Ababa, 2021

The study found it important to establish the current working experience of the respondents. Working experience is an important factor that influence the individual understanding of quality management issues in the company. The more experienced employees perform a quality performance in there company. As shown in Table 10 a large number of respondents work experience in relation to service year in their company, the majority (66.2%) of respondents have stayed in this company from 2 to 8 years followed by 19.7%, 8.5%, and 5.6% who have been serving from 9 to 15years, 26 to 40 years and 16 - 25 years.

Therefore, majority of respondents lie above 2 years of work experience. this indicates that, the respondents are well knowledgeable about ISO 2015 quality management system implementation practices and overall activities of their company and its organizational effectiveness.

Table 10: service years in the company of Respondents

		Service years in the company			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2 - 8	47	66.2	66.2	66.2
	9 - 15	14	19.7	19.7	85.9
	16 - 25	4	5.6	5.6	91.5
	26 - 40	6	8.5	8.5	100.0
	Total	71	100.0	100.0	

Source: Own survey, Addis Ababa, 2021

4.3 Descriptive Analysis of the Finding

The descriptive analysis has been done according to the research questions of the study mentioned earlier. It deals with implementation practice of ISO 2015 QMS principles Endeavored, correlation, and regression analysis of QMS implementation on organizational effectiveness models. Accordingly, the findings and discussions of the study were presented as follows.

4.3.1 Implementation practice of QMS Principles Endeavored

The research question deals to assess the level of QMS implemented practices at Kaliti metal products factory. Accordingly, the level of QMS principles implementation practice have been examined and discussed as follows.

The respondents were asked to indicate the extent to which they agreed with the statements on the Quality Management Practices used by kaliti metal products factory. The scale that was applicable was: 1=very small extent, 2= small extent, 3= moderate extent, 4= Large extent, 5= to a very large extent. The scores of “Very small extent” and “Small extent” have been taken to represent a variable which had a mean score of 0 to 2.5 on the continuous Likert scale; ($0 \leq S.E < 2.4$). The scores of “moderate extent” have been taken to represent a variable with a mean score of 2.5 to 3.4 on the continuous Likert scale: ($2.5 \leq M.E. < 3.4$) and the score of both “Great extent” and “Very great extent” have been taken to represent a variable which had a mean score of 3.5 to 5.0 on a continuous Likert scale; ($3.5 \leq L.E. < 5.0$).The interval of level of implementation was applied based on several relevant studies based on five categories of Likert scale (Wu D,2007).

4.3.1.1 Customer focus

Table 11: Customer focus, Kaliti Metal Products Factory

No	customer focus	Mean	Std. Deviation	Level
1	The company assume that ensuring customer satisfaction is its major responsibility	3.82	1.086	high
2	The company emphasizes on assessing current customers' needs and expectations.	3.54	.939	high
3	The company Align organizational objectives with customer needs and expectations	3.56	.874	high
4	Customer needs and expectations are communicated throughout the organization	3.59	.935	high
5	The company incorporates data on customer expectations and/or satisfaction when designing new products	3.20	.920	moderate
6	The company Measure customer satisfaction with customer satisfaction questionnaire	3.62	1.061	high
7	The company has consistent tracking of complaints and procedures for all cases of complaints	3.34	.925	moderate
8	The company use various methods to build relationships with customers and to increase repeat business and positive referrals	3.41	.935	moderate
	Valid N (list wise) 71 Sub Total	3.51		High

Source: Own survey, Addis Ababa, 2021

The results in Table 11 reveal that the mean score for the items used to measure customer focus was 3.51. In this section respondents were asked eight questions to rate its practice of customer focus indicate the extent to which customer focus implementation practice was in the company. The results show the mean score for customer focus practices based research were 3.82, 3.54, 3.56, 3.59, 3.20, 3.62, 3.34, and 3.41 respectively.

The overall mean score of 3.51 indicated that the employees agreed on customer focus have a positive effect on organizational effectiveness in kaliti metal products factory. This is expected to enable the company to create products and services of superior value, thereby ensuring customer satisfaction, current customers' needs and expectations, Measure customer satisfaction with customer satisfaction questionnaire, and to build relationships with customers it helps the company effectiveness.

The results imply that the firm surveyed was customer focused, and this was indicated as a result, the average value (mean) is 3.51 that lies in high category. As a whole, kaliti metal products factory priorities on customer focus. So that, customer focus as QMS implementation practice endeavor fully implemented in the company.

4.3.1.2 Leadership

Table 12: Leadership, Kaliti Metal Products Factory

No	Leadership	Mean	Std. Deviation	Level
1	The top management of the company Communicate on mission, vision & strategy and processes throughout the organization	3.72	1.124	High
2	The top management create and sustain share values, fairness and ethical models for behavior at all levels of the organization	3.28	1.111	Moderate
3	Top management establish trust and commitment to quality improvement by eliminating fear	3.62	.900	High
4	Management sets the organization quality policy and implements it by using offering resources and training.	3.21	1.230	Moderate
5	The management allows participative and engagement of employees in making decisions on quality issues	2.83	1.069	Moderate
6	The management inspire, encourage, and recognize employees contribution	2.62	1.047	Moderate
	Valid N (list wise) 71 Sub Total	3.21		Moderate

Source: Own survey, Addis Ababa, 2021

The results in Table 12 reveal that the mean score for the items used to measure Leadership was 3.21. In this section respondents were asked six questions to rate its practice of Leadership or top management commitment on the company. It indicates the extent to which leadership implementation practice was in the company.

According to the implementation practices of leadership in kaliti metal products factory the average value (mean) is 3.21 which is found in moderate category, but the mean ranging from 2.62 to the least and 3.72 to the highest level. It implies leadership as QMS practice that has been implemented found to be somehow efficient, that means partially implemented by the leaders or top management commitment in kaliti metal products factory.

4.3.1.3 Engagement of People

Table13: Engagement of People, Kaliti Metal Products Factory

No	Engagement of People	Mean	Std. Deviation	Level
1	Engagement of people thought has been used as an input to make any quality decision.	3.45	.983	moderate
2	Recognition and reward activities effectively stimulate employee commitment to quality management	3.48	.843	moderate
3	Engagement of people involvement and empowerment encourages them to exert the best of their abilities to improve quality	3.70	.818	high
4	The company offers employees opportunity for career growth through training and development	3.31	.855	moderate
5	The company improves working conditions in order to recognize employee quality management efforts	3.07	.915	moderate
6	Supervisors, unit heads and divisional managers assuming active roles as facilitators of continuous improvement, coaches of new methods and leaders of empowering people	2.83	.910	moderate
7	The company has an effective system for people to make suggestions to management on how to improve quality	3.15	.920	moderate
Valid N (list wise) 71 Sub Total		3.29		

Source: Own survey, Addis Ababa, 2021

The results in Table 13 reveal that the mean score for the items used to measure Engagement of People was 3.29. In this section respondents were asked seven questions to rate its practice of Engagement of People on the company. It indicates the extent to which Engagement of People implementation practice was in the company.

According to the implementation practices of Engagement of People in kaliti metal products factory the average value (mean) is 3.29 which is found in moderate category, but the mean ranging from 2.83 to the least level and 3.70 to the highest level. It implies Engagement of People as QMS implementation practice that has been implemented found to be somehow efficient, that means partially implemented by the kaliti metal products factory.

4.3.1.4 Process Approach

Table 14: Process Approach, Kaliti Metal Products Factory

No	Process Approach	Mean	Std. Deviation	Level
1	Procedure and strategy offers clearness and team's workforce to gain sure goals.	3.72	.959	High
2	Work instructions, quality plans and workmanship requirements verify that every process is being done efficiently	3.48	1.107	Moderate
3	A quality manual and helping procedures have been created and are maintained	3.55	1.066	High
4	The company uses innovation and creativity to improve processes by adopting self-managed teams, business process improvement and idea schemes.	2.85	.920	Moderate
5	Devices and measuring tools are calibrated often, and statistics maintained.	3.30	1.101	Moderate
6	The company change processes and evaluate the benefits through process improvement or re-engineering teams, project management and involving customers, and suppliers.	3.23	.865	Moderate
7	The company process of risk management is the identification of risk, measurement, risk control and risk mitigation	2.82	1.234	Moderate
	Valid N (list wise) 71 Sub Total	3.28		Moderate

Source: Own survey, Addis Ababa, 2021

The results in Table 14 reveal that the mean score for the items used to measure Process Approach was 3.28. In this section respondents were asked seven questions to rate its practice of Process Approach on the company. It indicates the extent to which Process Approach implementation practice was in the company. With a mean score of 3.72, respondents agreed that Procedure and strategy offers clearness and team's workforce to gain sure goals. Subsequently, the respondents agreed that with a mean score of 3.55, a quality manual and helping procedure have been created and are maintained this points found better. According to the implementation practices of Process Approach in kaliti metal products factory the average value (mean) is 3.28 which is found in moderate category, but the mean ranging from 2.82 to the least level and 3.72 to the highest level. It implies Engagement of People as QMS practice that has been

implemented found to be somehow efficient, that means partially implemented by the kaliti metal products factory.

4.3.1.5 Improvement

Table 15: Improvement, Kaliti Metal Products Factory

No	Improvement	Mean	Std. Deviation	Level
1	Training is offered to employees on regular basis in order to enhance their skills and expertise	3.37	1.085	Moderate
2	The company is continuously improving itself by trying to apply the latest knowledge and technologies in the industry	2.73	1.041	Moderate
3	The company has set time limit to meet efficiency of products delivery	3.15	1.250	Moderate
4	There are set benchmarks for internal quality realization and conformity	3.18	1.175	Moderate
5	Quality audits are carried out continuously as per ISO certification requirements	3.63	1.245	High
6	There is continuous improvement reviews through internal quality audits	3.55	1.119	High
7	Creation and change of any quality documentation are exactly managed by set up procedures.	3.63	1.162	High
8	There is research & development department in the organization and identification of areas for continuous improvement are assessed.	2.42	1.401	Low
9	Manage charts, graphs and different techniques of evaluation decide how well a method is operating and facilitate continuous improvement.	2.72	.988	Moderate
10	The corrective action system specializes in identifying the basis causes of quality issues and any corrective and preventative actions required.	3.30	.991	Moderate
11	Your company implements various inspections effectively (e.g., incoming, process and final products)	3.25	1.262	Moderate
	Valid N (list wise) 71 Sub Total	3.18		Moderate

Source: Own survey, Addis Ababa, 2021

As shown in Table 15, the overall mean score of 3.18 it indicates that firms agreed that continuous improvement contributes to effectiveness in kaliti metal products factory. With a mean score of 3.63, respondents agreed that Quality audits are carried out

continuously as per ISO certification requirements and majority of the respondents agreed that With a mean score of 3.63, Creation and change of any quality documentation are exactly managed by set up procedures. Subsequently, the respondents agreed that continuous improvement reviews through internal quality audits mean score 3.55. However respondents agree in this level also continues improvement of the company shows the least score on research & development department in the organization and identification of areas for continuous improvement mean score 2.42.

According to the implementation practices of improvement in kaliti metal products factory the average value (mean) is 3.18 which is found in moderate category, but the mean ranging from 2.42 to the least and 3.63 to the highest. Generally, the responses are clustered around the mean responses and the overall standard deviation is Moderate, It implies continuous improvement as QMS practice that has been implemented found to be somehow efficient, that means partially implemented in kaliti metal products factory.

4.3.1.6 Evidence Based Decision - Making

Table 16: Evidence Based Decision - Making, Kaliti Metal Products Factory

No	Evidence Based On Decision - Making	Mean	Std. Deviation	Level
1	Every activity in the company is recorded by employees and checked by supervisors for accuracy on a daily basis	3.51	1.229	High
2	Top management seeks summarized reports of the facts recorded on a daily basis to make quality related decisions	3.34	1.133	Moderate
3	The company application of systems for the measurement of tracking progress, identifying opportunities, and comparing performance internally and externally helped to improve quality	3.48	1.067	Moderate
4	The company provides planned targets for every employees and subsequent decisions are made based on deviations of actual and targeted outcomes	3.00	1.171	Moderate
5	The company applies objective tools to evaluate contributions of its internal and external stake holders in cases of rewarding and recognizing its employees, suppliers and customers	3.17	1.171	Moderate
	Valid N (list wise) 71 Sub Total	3.30		Moderate

Source: Own survey, Addis Ababa, 2021

The results in Table 16 reveal that the mean score for the items used to measure Evidence Based Decision Making was 3.30. In this section respondents were asked five questions to rate its practice of Evidence- Based Decision -Making on the company. It indicates the extent to which Evidence Based Decision Making implementation practice was in the company. With a mean score of 3.51, respondents agreed that every activity in the company is recorded by employees and checked by supervisors for accuracy on a daily these points found better.

According to the implementation practices of Evidence Based Decision Making in kaliti metal products factory the average value (mean) is 3.30 which is found in moderate category, but the mean ranging from 3.00 to the least and 3.51 to the highest. It implies Engagement of People as QMS practice that has been implemented found to be somehow efficient, that means partially implemented by the kaliti metal products factory.

4.3.1.7 Relation Ship Management

Table 17: Relation Ship Management, Kaliti Metal Products Factory

No	Relation Ship Management	Mean	Std. Deviation	Level
1	The company 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	3.54	1.026	High
2	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	3.77	.944	High
3	The company recruit suppliers and have a way to retain them that supported the organization to improve quality	3.34	.999	Moderate
4	The company has closer relationship with its suppliers which helped the organization to get technical support from its suppliers when needed rather than merely exchange of goods.	3.56	.922	High
5	The company regularly conducts supplier quality audit	3.35	.927	Moderate
	Valid N (list wise) 71 Sub Total	3.51		High

Source: Own survey, Addis Ababa, 2021

The results in Table 17 reveal that the mean score for the items used to measure customer focus was 3.51. In this section respondents were asked five questions to rate its practice of Relation Ship Management indicate the extent to which Relation Ship Management implementation practice was in the company. The results show the mean score for customer focus practices based research were 3.54, 3.77, 3.34, 3.56, and 3.35 respectively.

The overall mean score of 3.51 indicated that the employees agreed on Relation Ship Management have a positive effect on organizational effectiveness in kaliti metal products factory. The company plans and manages the external partnerships, developing a stronger working relationship with suppliers, the way recruit suppliers, closer relationship with its suppliers and regularly conducts supplier quality audit which leads to superior firm effectiveness. The results imply that the firm surveyed was Relation Ship Management, and this was indicated As a result, the average value (mean) is 3.51 that lies in high category. As a whole, kaliti metal products factory priorities on Relation Ship Management. So those, Relation Ship Management as QMS implementation practice endeavor fully implemented in the company.

Table 18: Quality Management System Summary, Kaliti Metal Products Factory

No	Quality Management System Summary	Mean	Std. Deviation	Level
1	Customer Focus	3.51	.590	High
2	Leadership	3.21	.808	Moderate
3	Engagement of people	3.29	.482	Moderate
4	Process approach	3.28	.687	Moderate
5	Improvement	3.18	.834	Moderate
6	Evidence based decision making	3.30	.840	Moderate
7	Relationship management	3.51	.723	High
	Valid N (list wise) 71 Total	3.33		Moderate

Source: Own survey, Addis Ababa, 2021

The quality management system implementation practices considered in this research as defined in the standard questionnaire and discussed in the literature part are Customer Focus, Leadership or top management, Engagement of people, Process approach, Improvement, Evidence based decision making and, Relationship management. As shown in Table 18 indicates, minimum score value for constructs were

above the mean value, 3.18. Whereas the maximum mean value was 3.51. The mean average value was also for all greater than the average value, 3.33; this indicates the respondents agree the quality management system practices had partially positive effect on the effectiveness of the organization.

The total average of all dimensions of QMS was 3.33, which means the level of implementation categorized under moderate category. Along with this, the level of implementation practices regarding customer focus and relationship management found to be high level. It shows that, the company tries more on customer satisfaction and expectation, and supply chain relationship management and stakeholders. In general the company practices of QMS implementation as moderate level that means partially practiced in the case company.

4.3.2 Correlation test of QMS implementation, and organizational effectiveness

The second research question intended to examine the relationship between QMS implementation and organizational effectiveness models of (Product Quality, Operational Efficiency, and Profitability).

Correlation is a statistical tool which can determine the strength and direction of relationship between two variables (Khalid & Irshad, 2010). Correlation measures the degree of association between two or more variables simultaneously (Njeru & Omondi, 2016). Correlation implies only a relationship rather than a cause-and-effect relationship. The Pearson (product moment) correlation coefficient (denoted as r) varies over a range of +1 through 0 to -1 (Cooper & Schindler, 2014). Correlation coefficients reveal the magnitude and direction of relationships. A value of +1 represents a perfect positive correlation. A value of -1 represents a perfect negative correlation. A value of 0 meaning the variables are perfectly independent (Saunders, 2007).

According to Saunders (2007) testing the probability of a relationship between variables occurring by chance alone if there really was no difference in the population from which that sample was drawn is known as significance testing. If the probability of test statistic or one more extreme having occurred by chance alone is very low (usually $p = 0.05$ or lower), then you have a statistically significant relationship. If the probability of

obtaining the test statistic or one more extreme by chance alone is higher than 0.05, then you conclude that the relationship is not statistically significant.

In this regard, the test had made against the dependent variables; Product Quality, operational efficiency, and profitability of the case company. Accordingly, the following tables presented the results followed by the test.

Table 19: Pearson Correlation test between QMS implementation and Product Quality

QMS implementation		Product Quality
Customer Focus	Pearson Correlation	.487**
	Sig. (2-tailed)	.000
Leadership	Pearson Correlation	.511**
	Sig. (2-tailed)	.000
Engagement of people	Pearson Correlation	.426**
	Sig. (2-tailed)	.000
Process approach	Pearson Correlation	.458**
	Sig. (2-tailed)	.000
Improvement	Pearson Correlation	.510**
	Sig. (2-tailed)	.000
Evidence based decision making	Pearson Correlation	.432**
	Sig. (2-tailed)	.000
Relationship management	Pearson Correlation	.322**
	Sig. (2-tailed)	.006

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

(Source: Own survey, Addis Ababa, 2021)

Table 19: describes the Pearson's correlation coefficient test between QMS implementation and Product Quality, which was found using the SPSS. As the results indicate, all ISO 9001:2015QMS the seven principles.

The Pearson correlation test finds that, at $p < 0.01$, company product quality has statically significant and moderately and positively correlated with all QMS implementation of Customer Focus ($r = 0.487$), Leadership ($r = 0.511$), Engagement of people ($r = 0.426$), Process approach ($r = 0.458$), Improvement ($r = 0.510$), Evidence based decision making ($r = 0.432$), and Relationship management ($r=0.322$).

Table 20: Pearson Correlation test between QMS implementation and operational efficiency

QMS implementation	Operational efficiency	
Customer Focus	Pearson Correlation	.347**
	Sig. (2-tailed)	.003
Leadership	Pearson Correlation	.538**
	Sig. (2-tailed)	.000
Engagement of people	Pearson Correlation	.405**
	Sig. (2-tailed)	.000
Process approach	Pearson Correlation	.250*
	Sig. (2-tailed)	.036
Improvement	Pearson Correlation	.364**
	Sig. (2-tailed)	.002
Evidence based decision making	Pearson Correlation	.364**
	Sig. (2-tailed)	.002
Relationship management	Pearson Correlation	.127
	Sig. (2-tailed)	.289

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

(Source: Own survey, Addis Ababa, 2021)

Table 20: describes the Pearson's correlation coefficient test between QMS implementation and operational efficiency, which was found using the SPSS. As the results indicate, all ISO 9001:2015QMS the seven principles.

The Pearson correlation test finds that, at $p < 0.01$, company operational efficiency has statically significant and moderately and positively correlated with Customer Focus ($r = 0.347$), Leadership ($r = 0.538$), Engagement of people ($r = 0.405$), Process approach ($r = 0.250$), Improvement ($r = 0.364$), and Evidence based decision making ($r = 0.432$). But, the company operational efficiency has statistically in significant and weakly and positively correlated with Relationship management ($r = 0.127$).

Table 21: Pearson Correlation test between QMS implementation and company Profitability

QMS implementation		Profitability
Customer Focus	Pearson Correlation	.556**
	Sig. (2-tailed)	.000
Leadership	Pearson Correlation	.465**
	Sig. (2-tailed)	.000
Engagement of people	Pearson Correlation	.493**
	Sig. (2-tailed)	.000
Process approach	Pearson Correlation	.388**
	Sig. (2-tailed)	.001
Improvement	Pearson Correlation	.500**
	Sig. (2-tailed)	.000
Evidence based decision making	Pearson Correlation	.634**
	Sig. (2-tailed)	.000
Relationship management	Pearson Correlation	.379**
	Sig. (2-tailed)	.001

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

(Source: Own survey, Addis Ababa, 2021)

The Pearson correlation test finds that, at $p < 0.01$, company profitability has statically significant and moderately and positively correlated with all QMS implementation of Customer Focus ($r = 0.556$), Leadership ($r = 0.465$), Engagement of people ($r = 0.493$), Process approach ($r = 0.388$), Improvement ($r = 0.500$), Evidence based decision making ($r = 0.634$), and Relationship management ($r = 0.379$).

Therefore, correlation test implies that the proper implementation of QMS, it enhance organizational effectiveness of (product quality, operational efficiency, and profitability) and efficiency of kaliti metal products factory.

4.3.3 Regression Analysis

The third research question intended to determine the effect of QMS implementation on organizational effectiveness models of (Product Quality, Operational Efficiency, and Profitability). In this regard, the analysis has made against the dependent variables.

Before using multiple regressions, part of the process involves checking to make sure that the data can actually be analyzed using multiple regressions. Therefore, it is important to do because it is only appropriate to use multiple regression if the data "passes" five assumptions that are required for multiple regression to give us a valid result.

Assumption 1: There needs to be a linear relationship between (a) the dependent variable and each of independent variables, and (b) the dependent variable and the independent variables collectively. Whilst there are a number of ways to check for these linear relationships, here creating scatterplots and partial regression plots using SPSS Statistics has been implemented. Consequently, visually inspected these scatterplots and partial regression plots to check for linearity. Consequently, the relationship displayed in the scatterplots and partial regression plots are linear. Therefore, it is possible to run multiple regression.

Assumption 2: The data has showed homoscedasticity, which is, where the variances along the line of best fit remain similar as move along the line.

Assumption 3: The data must not show multi- collinearity, which occurs when we have two or more independent variables that are highly correlated with each other. This leads to problems with understanding which independent variable contributes to the variance explained in the dependent variable, as well as technical issues in calculating a multiple regression model. Therefore, in this case the data not showed multi-collinearity through an inspection of correlation coefficients and Tolerance/VIF values.

Assumption 4: There is no significant outlier, high leverage points or highly influential points. Outlier, leverage and influential points are different terms used to represent observations in data set that are in some way unusual. Thus, it was possible to perform a multiple regression analysis.

Assumption 5: Finally, residuals (errors) were checked. It showed that the residuals (errors) were approximately normally distributed this enhanced multiple regression. The method to check this assumption was a histogram (with a superimposed normal curve) and a Normal P-P Plot.

The study conducted multiple regression analysis to establish the effect of Quality management system implementation on organizational effectiveness, in the case of kaliti metal products factory. multivariate analysis has done to calculate the influence variables QMS implementation (x) ,organizational effectiveness models (y). The 0.05 level of significance was used to determine the strength of the relationship between the independent and dependent variables.

The linear regression equation of Product Quality, operational efficiency, and company profitability of kaliti metal products factory are:

$$Y_1 = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \varepsilon$$

$$Y_2 = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \varepsilon$$

$$Y_3 = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \varepsilon$$

Model 1, 2, 3 Where;

Y = effectiveness models of (Product Quality, Operational efficiency, and Profitability) of the case company.

X1 = Customer focus

X2 = Leadership

X3 = Engagement of people

X4 = Process Approach

X5 = Improvement

X6 = Evidence based decision making

X7 = Relationship management

$\beta_0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7$ = the coefficient of the variables and

e = the error term

4.3.3.1 Regression Model Summary

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

the independent variables (Khalid & Irshad, 2010). The following tables and analysis deals with organizational effectiveness of (product quality, operational efficiency, and profitability) factors.

Table 22: Model Summary of product quality

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.737	.544	.493	.26870

a. Predictors: (Constant), Relationship management, Improvement, Customer Focus, Engagement of people, Leadership, Evidence based decision making, Process approach

b. Dependent variable: Product Quality

(Source: Own survey, Addis Ababa, 2021)

As table 22: indicates, the model summary which specifies product quality as a function of QMS implementation: Relationship management, Improvement, Customer Focus, Engagement of people, Leadership, Evidence based decision making, and Process approach. R square of the model was 0.544 which entails that 54.4% of the variation in the dependent variable i.e. Product Quality is accounted or associated for by this model was good. That is, the variance in product quality has been significantly explained by the independent variables. It indicates that QMS is a significant predictor of Product Quality.

Table 23: Model Summary of operational efficiency

Mode	R	R Square	Adjusted R Square	Std. Error of the Estimate
2				
1	.779 ^a	.607	.564	.27150

a. Predictors: (Constant), Relationship management, Improvement, Leadership, Engagement of people, Customer Focus, Evidence based decision making, Process approach

b. Dependent variable: operational efficiency

(Source: Own survey, Addis Ababa, 2021)

As table 23: indicates the model summary which specifies Operational efficiency as a function of QMS implementation: Relationship management, Improvement, Leadership, Engagement of people, Customer Focus, Evidence based decision making, and Process approach. R square of the model was 0.607 which entails that 60.7% of the variation in the dependent variable i.e. Operational efficiency is accounted for by this model which was good has employed for the study.

Table 24 : Model Summary of profitability

Mode	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.797 ^a	.635	.594	.21341

- a. Predictors: (Constant), Relationship management, Improvement, Leadership, Customer Focus, Evidence based decision making, Process approach, Engagement of people
 b. Dependent variable: profitability

(Source: Own survey, Addis Ababa, 2021)

As table 24: indicates the model summary which specifies Profitability as a function of QMS implementation: Relationship management, Improvement, Leadership, Customer Focus, Evidence based decision making, Process approach, and Engagement of people. R square of the model was 0.635 which entails that 63.5% of the variation in the dependent variable i.e. Profitability is accounted for by this model which was good has employed for the study.

The model summary results of product quality, Operational efficiency, and profitability shows that the independent variables in each model play a strong role in organizational effectiveness of the kaliti metal products factory

4.3.3.2 ANOVA TEST

In this study ANOVA test of linearity were selected to test the linearity relationship of the variables. In ANOVA table when F significance value is below the critical value (less than 0.05) then there is significant nonlinearity.

Table 25 ANOVA a Product quality

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	5.423	7	.775	10.731	.000 ^b
	Residual	4.548	63	.072		
	Total	9.972	70			

- a. Dependent Variable: Product quality
 b. Predictors: (Constant), Relationship management, Improvement, Customer Focus, Engagement of people, Leadership, Evidence based decision making, Process approach

As table 25 points out, the ANOVA test of the model which specifies product quality as a function of QMS implementation: Relationship management,

Improvement, Customer Focus, Engagement of people, Leadership, Evidence based decision making, and Process approach. ANOVA tells the overall goodness of fit of the model. F-statistic of the model was 10.731, which was quite good and the “Sig.” Column in the Coefficients table shows which variables are statically significant.

Table 26: ANOVA a Operational efficiency

Model 2	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	7	1.027	13.930	.000 ^b
	Residual	63	.074		
	Total	70			

a. Dependent Variable: Operational efficiency

b. Predictors: (Constant), Relationship management, Improvement, Leadership, Engagement of people, Customer Focus, Evidence based decision making, Process approach
(Source: Own survey, Addis Ababa, 2021)

As table 26 points out, the ANOVA test of the model which specifies operational efficiency as a function of QMS implementation: Relationship management, Improvement, Leadership, Engagement of people, Customer Focus, Evidence based decision making, and Process approach. ANOVA tells the overall goodness of fit of the model. F-statistic of the model was 13.9, which was quite good and the “Sig.” Column in the Coefficients table shows which variables are statically significant.

Table 27: ANOVA a Profitability

Model	Sum of Squares	D f	Mean Square	F	Sig.
1	Regression	7	.713	15.65	.000 ^b
	Residual	63	.046		
	Total	70			

a. Dependent Variable: Profitability

b. Predictors: (Constant), Relationship management, Improvement, Leadership, Customer Focus, Evidence based decision making, Process approach, Engagement of people

(Source: Own survey, Addis Ababa, 2021)

As table 27: points out, the ANOVA test of the model which specifies profitability as a function of QMS implementation : Relationship management, Improvement,

Leadership, Engagement of people, Customer Focus, Evidence based decision making, and Process approach. ANOVA tells the overall goodness of fit of the model. F-statistic of the model was 15.652, which was quite good and the “Sig.” Column in the Coefficients table shows which variables are statically significant.

The F significance values were greater than the critical values (see table 25, 26, and 27). Thus, in this study, the relationship existed between variables showed linearity relationship and signifies moderate positive correlation between the variables of the study.

4.3.3.3 Regression Coefficients

Table 28 : Regression Coefficients of Product quality

	Model 1	Un standardized Coefficients		Standardized Coefficients	T	Sig. (P-Values)
		B	Std. Error	Beta		
1	(Constant)	1.204	.279		4.315	.000
	Customer Focus	.049	.066	.072	.738	.463
	Leadership	.186	.056	.359	3.305	.002
	Engagement of people	.207	.091	.261	2.284	.026
	Process approach	.196	.088	.284	2.237	.029
	Improvement	.303	.053	.627	5.772	.000
	Evidence based decision making	.185	.053	.401	3.504	.001
	Relationship management	.219	.058	.416	3.798	.000

a. Dependent Variable: Product quality

b. Predictors: (Constant), Relationship management, Improvement, Customer Focus, Engagement of people, Leadership, Evidence based decision making, Process approach

(Source: Own survey, Addis Ababa, 2021)

Table 28: depicts that the results of the model predicting in which Product quality through the variables of Customer Focus, Leadership, Engagement of people, Process approach, Improvement, Evidence based decision making, and Relationship management have been presented. In that line, all the variables have a positive correlation and significant effect with Product quality except customer focus. However it was customer focus also have positive correlation and insignificant effect on Product quality. Different to that in regression analysis as showed above, the variable of Leadership, Engagement of people, Process approach, Improvement , Evidence based decision making and

Relationship management were found to be significant at 0.000,0.026,0.029, 0.000, 0.001 and 0.000 respectively. Therefore, QMS implementation have an effect on product quality of the organization has been confirmed.

Table 29 : Regression Coefficients operational efficiency

Model 2	Un standardized Coefficients		Standardized Coefficients	T	Sig. (P –values)
	B	Std. Error	Beta		
1 (Constant)	2.671	.261		10.218	.000
Customer Focus	.149	.070	.257	2.144	.036
Leadership	.119	.059	.230	2.020	.048
Engagement of people	.337	.087	.457	3.886	.000
Process approach	.162	.075	.317	2.154	.035
Improvement	.254	.050	.583	5.105	.000
Evidence based decision making	.153	.055	.368	2.777	.007
Relationship management	.069	.062	.140	1.110	.271

a. Dependent Variable: Operational efficiency

b. Predictors: (Constant), Relationship management, Improvement, Leadership, Engagement of people, Customer Focus, Evidence based decision making, Process approach

(Source: Own survey, Addis Ababa, 2021)

As table 29: depicts, the results of the model predicting kaliti metal products factory operational efficiency through the independent variables have been tested. Accordingly, the regression analysis as showed above, variables such as Customer focus, Leadership, Engagement of people, Improvement, and Evidence based decision making were found to be a positive correlation and significant effect with operational efficiency except Relationship management. However it was Relationship management also has positive and insignificant effect on operational efficiency. Different to that in regression analysis as showed above, the variable of Customer focus, Leadership, Engagement of people, Improvement, and Evidence based decision making were found to be statically significant at 0.036,0.048, 0.000, 0.035,0.000 and 0.007 respectively. Therefore, QMS implementation have an effect on operational efficiency of the organization has been confirmed.

Table 30 : Regression Coefficients profitability

Model 3		Un standardized Coefficients		Standardized Coefficients	T	Sig. (p - values)
		B	Std. Error	Beta		
1	(Constant)	2.948	.218		13.521	.000
	Customer Focus	.282	.058	.496	4.848	.000
	Leadership	.031	.058	.057	.539	.592
	Engagement of people	.169	.083	.237	2.047	.045
	Process approach	.159	.058	.315	2.729	.008
	Improvement	.098	.039	.245	2.530	.014
	Evidence based decision making	.151	.045	.378	3.374	.001
	Relationship management	.033	.054	.063	.609	.545

a. Dependent Variable: Profitability

b. Predictors: (Constant), Relationship management, Improvement, Leadership, Engagement of people, Customer Focus, Evidence based decision making, Process approach

(Source: Own survey, Addis Ababa, 2021)

As table30: depicts, the results of the model predicting kaliti metal products factory profitability through the independent variables have been tested. Accordingly, the regression analysis as showed above, variables such as Customer Focus, Engagement of people, Process approach, Improvement, and Evidence based decision making were found to be a positive correlation and significant effect with profitability except Leadership, and Relationship management. However it was Leadership and Relationship management also have positive correlation and insignificant effect on profitability. Therefore, QMS implementation have an effect on profitability of the organization has been confirmed. To this end, the third research question has been answered as discussed above once again.

Generally, the second and the third research questions on QMS implementation on relationship and effect on organizational effectiveness have been answered as discussed above. Therefore, QMS implementation have an effect on organizational effectiveness models of product quality, operational efficiency, and profitability as the regression analysis results, assumptions, and empirical studies had been confirmed.

4.3.4 Discussion

Including the case company's management members, there were 11 different people from the middle level management and senior experts as key informants which were interviewed for the purpose of this study. The questions were 7 as depicted in Appendix.

According to the interviewees, the kaliti metal product factory certified to international standards such as the ISO. It was first registered & certified on August 7, 2008. However it was the interviewees know about the company certified to international standards but only one respondent from those middle level management and senior experts answer the exact years of certification.

The interviewees on the motives of the company to developed Quality management system (QMS) most of the respondents have somehow the same idea they reflected or show. "...to increases the profit of the company, customer satisfaction, to produce quality product and to develop organizational culture". From this idea what the company tried to introduce about the motives of implemented QMS in the company. Different researches show Motives for developing QMS; to effectively and correctly manage challenge activities, to decrease poor quality of production techniques and products, to enter the worldwide development market, for the betterment of the company's general management system, to complete the bidding process by completing the customer's request, improve the situation of the company (e.g. image, Reputation), and to improve business overall performance. So that the respondents tried to answer the question raised in the motives of implementation quality management system in the company.

For question rose on the experience of ISO 9001:2015QMS, all the interviewees have experience because they were stayed more than two years in the company. So they have adequate experience on ISO 2015QMS implementation, but the question raised on how ISO 2015 QMS differ from ISO 20008 QMS they have different experience on the implementation of ISO 2008QMS. Six interviewers had full experience of ISO 9001:2008QMS implementation beginning from registration and gap analysis to certification and system maintenance. So that, all respondents have knowledge about ISO 2015QMS but how it differ from ISO 2008QMS on this point the senior's experts and middle level manager who have experience explain the difference in detail.

“.....ISO 9001:2015QMS focus on input and output of products, based on risk mitigation, leadership commitment, meet delivery time, and reduced wastage.....”

Researches show about ISO 2015QMS differ from the previous ISO 2008QMS are (Chiarini, 2017; Fonseca, 2015; Wilson, & Campbell, 2016): Understanding the organization and its context; More focus on the role of top management; High level structure according to Annex SL; A risk-based approach; Introduction to organizational knowledge management; More emphasis on process approach and less documentation. Based on risks identification and risks control, this standard has promoted a shift to risk-based thinking. Its high-level structure with 10 clauses makes it easier to integrate with other management standards (ISO 9001:2015: Quality Management Systems-Requirements, 2015).

The interviews on the effects of ISO9001:2015QMS implementation on the manufacturing industry effectiveness especially on product quality, operational efficiency, and profitability. In this part, the information collected from qualitative data has been incorporated so as to triangulate and cross check the credibility of the quantitative finding. Most of the interviewees have been discussed that the effect of ISO 9001:2015QMS implementation on manufacturing industry effectiveness ,product quality, operational efficiency, and profitability found to be significant effect on the company effectiveness. In connection to this one respondent said:

“... if QMS implemented fully leads to better products manufactured at lower cost, using high quality information to improve processes reduces waste and saves time, and leading to reduced expenses that can be passed along to clients in the form of lower prices.....”. Furthermore, it has contributed a lot for organizational competency and sustainability so far. Studies have also shown that over time if the organizations implement proper QMS and have a good continual improvements cycle going on than these organizations progress and improve in performance which is clearly reflected when they gain market share, increase sales and profit, fulfill all the legal and regulatory requirements, even have a competitive edge on their rivals, have an excellent customer perception, giving a good return on investment to their shareholders more to international market.

Beside to this, all interviewees have confirmed that QMS Principles strongly affected manufacturing industry effectiveness on product quality, operational efficiency, and profitability through improving business performance and customer satisfaction. In this regard one respondent said:

“...one of the company’s strong side is a firm stand not to compromise on product quality, by any means so far; and it tries to meet the customer needs and expectation in most aspects and it builds strong relationship with its suppliers”. In addition to this, they have discussed that there is a certain gap related to employee’s competency and automated service provision.

As the results show, as per both qualitative and quantitative findings, that organizational effectiveness is highly influenced by providing quality products, utilization resources, and profitability of the company. These findings also indicate that QMS implementation produce competitive advantage to the organization and intended to improve the organizational effectiveness. In connection to this one respondent added:

“...our strong and persistent effort that intended to supply diversified, and quality products that has been Contributed to put our company on better position in the competitive market, and protect good will of our company”.

Researches show that, (Parvadavardini, Vivek, & Devadasan, 2015),Continually improving and proper performing QMS also enhances the performance of the organization by improving product quality, increasing production and productivity, making a 100% quality product every time, reducing employee turnover, reducing wastage of material, reducing the production cost hence giving the organization’s business, meet customers need, exceeds customer’s expectation, increase customer’s satisfaction, improve customer’s perception about the organization, creating more jobs, making the organization and product more acceptable in the market, increase the profit margin, gain more sales etc.

These findings were in line with previous studies in the literature, QMS implementation, mostly have been linked directly to organizational effectiveness .Most of the results found from quantitative findings have been supported by the qualitative one through interview. Accordingly, the findings from interviews showed that factors such

shortage of raw materials, motivation of employees, new technology usage, rewarding mechanisms and on job trainings have been not satisfactory and it is also intended to influence the product quality, operational efficiency, and profitability of the manufacturing company effectiveness.

In relation to company's product quality, operational efficiency and profitability, respondents agreed that the company attained the organizational effectiveness on all aspects. It implies the qualitative findings supported the quantitative one. Generally, the findings confirmed that the dimensions of QMS have positive effect on organizational effectiveness.

The major hindrances in QMS implementation in the manufacturing industry of kaliti metal products factory that most respondents agreed that:

“...Lack of top management commitment and support, Insufficient understanding of how QMS can improve company's daily activities, Lack of internal communication, old production machineries, unavailability of risk management system, gaps to implement laws and regulations, and too much documentation process...”. In addition to these the support of government or government policy on the last two years especially on lack of foreign currency for manufacturing company became of these the company suspended for shortage of raw materials.

Beside to this, all interviewees recommended that, if QMS implemented practices fully in the company it improves Product Quality, Operational efficiency and Profitability of the company and increase the competitiveness and effectiveness of the company. From respondents idea the researcher conclude that, the company has effective on the country as metal products factory, for more improvement and effectiveness if the company try to answer the questions raised by employees and minimize turnover of skilled man power it become more effective and competent in the metal manufacturing industry

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The objective of the study is to determine the Effect of ISO 9001 QMS implementation on organizational effectiveness of Kaliti Metal products factory. For the achievement of the research objective, scientific procedure has been followed. The first procedure has been done to understand the theoretical aspect and empirical findings of the ISO quality management system. For this, review of related literature has been carried out. The literature review focused on the concept, empirical application, and conceptual and empirical relationships among the ISO quality management system and organizational effectiveness model dimensions including product quality, operational efficiency and profitability.

A total of seven quality management principles that implemented and three organizational effectiveness model constructs has been identified and examined for this study whether there was effect on organizational effectiveness as a result of ISO quality management system implementation. Standard questionnaire prepared and distributed. From 85 distributed questionnaires, 71 questionnaires have been responded which results in 84% response rate and interviews done with 11 middle level managers and senior experts of the case company to fill the gap of questioner. The standard questionnaire had been tested for the content validity and modified us the research aim and the reliability of the items and the measuring scale has been done by making use of Cronbach's α coefficient with all the groups α value of greater than the minimum 0.6. The aggregate was with α coefficient value of 0.791 which is acceptable to make further analysis.

Demographic information described individual profile. The profile section included aspects of Education Level, occupational position, Monthly salary, and service years in the company, and the descriptive analysis has been done according to the research questions of the study mentioned earlier. It deals with implementation practice of ISO 2015 QMS principles endeavored, correlation test, and regression analysis of QMS

implementation on; product quality, operational efficiency, and profitability of the case company.

The research question deals with the extent in which the implemented QMS practiced at Kaliti metal products factory. Accordingly, the level of QMS principles implementation practice have been examined and discussed. The quality management system practices considered in this research as defined in the standard questionnaire and discussed in the literature part are Customer Focus, Leadership or top management, Engagement of people, Process approach, Improvement, Evidence based decision making and, Relationship management.

As shown in Table 18, Quality Management System Summary indicates minimum score value for constructs are above the mean value, 3.0. Whereas the maximum mean value was 3.51. The mean average value was also for all greater than the average value, 3.0; this indicates the respondents agree the quality management system practices partially practiced on the case company. The total average of all dimensions of QMS was 3.33, which means the level of practices categorized under moderate category. Along with this, the level of practices regarding customer focus and relationship management found to be high level. It shows that the company more focused on customer satisfaction and expectation and supply chain relationship and stakeholder. Generally, moderate level implementation practice means nearly sufficient but not absolutely effective practice or partially implemented practiced in the case company.

The second research question intended to examine the relationship between QMS implementation and organizational effectiveness models. In this regard, the test has made against the dependent variable of organizational effectiveness models; Product Quality, operational efficiency, and profitability.

Pearson correlation has been used in order to determine whether there was significant relationship between QMS implementation and effectiveness variables. The seven ISO 9001:2015 QMS principles, have statically significant and moderate positive association with Product Quality, Operational efficiency, and Profitability, except Relationship management with Operational efficiency. Relationship management shows that its relationship has statistically insignificant and weak positive relationship with

operational efficiency in the case company. Therefore, correlation test implies that the proper implementation of QMS, it enhance organizational effectiveness of (product quality, operational efficiency, and profitability) and efficiency of the case company.

The third research question intended to determine the effect of QMS implementation on organizational effectiveness models. In this regard, the regression analysis results has made against the dependent variables. This study conducted multiple regression analysis to establish the effect of Quality management system on organizational effectiveness of kaliti metal products factory.

The model summary which specifies organizational effectiveness as a function of QMS implementation: Customer Focus, Leadership, Engagement of people, Process approach, Improvement, Evidence based decision making, and Relationship management. R square of the model was 54.4%, 60.7%, and 63.5% of the variation in the dependent variable i.e. Product Quality, Operational efficiency, and profitability was accounted or associated for by this model was good. That was, the variance in dependent variables has been significantly explained by the independent variables. It indicates that QMS is a significant predictor of organizational effectiveness. The model summary results of product quality, Operational efficiency, and profitability shows that the independent variables in each models play a strong role in organizational effectiveness of the case company.

The ANOVA test is used to determine whether the model is important in predicting the dependent variables as a function of QMS implementation, NOVA tells the overall goodness of fit of the model. F-statistic of the model was 10.731, 13.9, and 15.652 respectively, which was quite good and being statistically significant at $P = 0.000$ which is less than 0.05 level of significance. In this study, the relationship existed between variables showed linearity relationship and signifies moderate positive correlation between the variables of the study.

Regression Coefficients depict that the results of the model predicting in which effectiveness models through the variables of Customer Focus, Leadership ,Engagement of people, Process approach, Improvement, Evidence based decision making, and

Relationship management have been tested. In that line, all the variables have a positive correlation and significant effect with Product quality except customer focus, all the variables have a positive correlation and significant effect with operational efficiency except Relationship management, and all the variables have a positive correlation and significant effect with profitability except Leadership, and Relationship management. However it was the exceptions also have positive correlation and insignificant effect on organization effectiveness models. Therefore, QMS implementation have an effect on organizational effectiveness models of product quality, operational efficiency, and profitability as the regression analysis results, assumptions, and empirical studies had been confirmed.

According to Qualitative result, the interviews on the effects of ISO9001:2015QMS implementation on the manufacturing industry effectiveness especially on product quality, operational efficiency, and profitability. In this part, the information collected from qualitative data has been incorporated so as to triangulate and cross check the credibility of the quantitative finding. Beside to this, all interviewees have confirmed that QMS implementation strongly affected manufacturing industry effectiveness through improving business performance and customer satisfaction.

The major hindrances in QMS implementation in the manufacturing industry of kaliti metal products factory that most respondents agreed that: "...Lack of top management commitment and support, Insufficient understanding of how QMS can improve company's daily activities, Lack of internal communication, old production machineries, unavailability of risk management system, gaps to implement laws and regulations , and too much documentation process....". In addition to these the support of government or government policy on the last two years especially on lack of foreign currency exchange or opening LC for manufacturing company so that the company suspended for shortage of raw materials.

Finally, the result indicated that ISO 9001:2015QMS implementation contributes towards the adoption of Quality Management, Even though the company is moderate in practice of QMS activities, it should be do more to implement them at their full extent.

5.2 Conclusion

The objective of the study is to determine the Effect of ISO 9001 QMS implementation on organizational effectiveness of Kaliti Metal products factory. For the achievement of the research objective, scientific procedure has been followed. The literature review focused on the concept, empirical application, and conceptual and empirical relationships among the ISO quality management system and organizational effectiveness dimensions by several researchers. This research has also assured that the implementation of ISO 9001:2015 Quality management systems have positive effect on organizational effectiveness as a result of ISO quality management system implementation as observed in the case company. The descriptive analysis has been done according to the research questions of the study. It deals with implementation practice of ISO 2015 QMS principles endeavored, correlation test, and regression analysis of QMS implementation; product quality, operational efficiency, and profitability.

Quality Management System implementation practices in the case company indicates, it implemented practically on moderate level implementation that means partially implemented practices in the case company.

The seven ISO 9001:2015 QMS principles, have statically significant and moderate positive association with Product Quality, Operational efficiency, and Profitability, except Relationship management with Operational efficiency. Therefore, correlation test implies that the proper implementation of QMS, it enhance organizational effectiveness of (product quality, operational efficiency, and profitability) and efficiency of the case company.

The regression analysis results has made against the dependent variables. The model summary results of product quality, Operational efficiency, and profitability shows that the independent variables in each model play a strong role in organizational effectiveness of the case company. The ANOVA test is used to determine whether the model is important in predicting the dependent variables as a function of QMS implementation, in the study the relationship existed between variables showed linearity relationship and signifies moderate positive correlation between the variables of the study.

Regression Coefficients depict that the results of the model predicting in which effectiveness models through the variables all the variables have a positive correlation and significant effect with Product quality except customer focus, all the variables have a positive correlation and significant effect with operational efficiency except Relationship management, and all the variables have a positive correlation and significant effect with profitability except Leadership, and Relationship management. Therefore, QMS implementation have an effect on organizational effectiveness models of product quality, operational efficiency, and profitability as the regression analysis results, assumptions, and empirical studies had been confirmed.

The interviews on the effect of ISO9001:2015QMS implementation on the manufacturing industry effectiveness especially on product quality, operational efficiency, and profitability. From respondents idea the researcher conclude that, the company has effective by implemented ISO 2015 QMS on rate of product defect reduction, input material utilization rate improvement and earned more than total annual expense as the models of effectiveness as the metal products manufacturing factories. For more improvement and effectiveness, if the company tries to answer the questions rose by employees and minimize turnover of skilled man power it become more effective and competent in the metal manufacturing industry in Ethiopia. Overall, results are supported by most of the previous studies, such as: Steers, (1977), McCornac, (2006), Drinke, Janovs, & Administration, (2011), J Priede, (2012), Kafetzopoulos, (2014).

There is growing evidence that QM implementation has improved organizations' effectiveness and significantly impacted on most organizations (Dewhurst, Martinez-Lorente, & Sanchez-Rodriguez, 2003). Several studies showed that QMPs had the strongest effect on the quality performance measures such as Flynn et al. (1994) and others founded positively correlated with organizational effectiveness such as (Powell, 1995; Ahire et al., 1996; Samson & Terziovski, 1999; Agus, 2003; Rao et al., 1999; Kaynak, 2003; Prajogo & Sohal, 2003; 2006; Sila & Ebrahimpour, 2005; Zu, 2009).

5.3 Recommendations

Based on the findings of the study, the researcher forwards the following suggestions:

- The company QMS implementation practices at full extent, the ISO Quality management system 9001:2015 principles the company became more competitive and effective as a manufacturing factory.
- The company motivates employees by adequate training about the process of implementation so as to acquire the necessary knowledge and experience, good relationship between employees and employer, and giving rewards to employees to minimize the turnover of senior employees from the company.
- Top management commitment is an essential practice that companies which intend to implement ISO QMS should ensure its existence in their company.
- Beside to this, all interviewees recommended that, if QMS implemented fully in the company it improves Product Quality, Operational efficiency and Profitability of the company and increase the competitiveness and effectiveness of the company.
- It is recommended that more studies carried out covering the metal products as well as a manufacturing industry to establish effective implementation framework. It is also recommended to conduct longitudinal research in this case company to track what changes have happened after full implementation of kaliti metal products factory quality management systems.

5.4 Future Research Direction

- The implementation of ISO 9001:2015 QMS in the operations of a case company it will be able to improve consistency in product and process performance: on consistent method of operations, reduce the number of customers' complaints on product non-conformance and improve delivery performance.
- The researcher suggests other researches to study QMS implementation from different viewpoint such as: Employees, Customers, and Suppliers etc.

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Appendices:

Annex I: Questionnaire JIMMA UNIVERSITY

College of Business and Economics
School of Graduate Studies

Survey Questionnaire for the Master's Thesis on:

The effect of Quality management system on organizational Effectiveness of Kaliti Metal products factory

Consent Statement

You are being asked to participate as a volunteer in a research study conducted by Mr. Afework Achalu, a post graduate student at Jimma University. The purpose of this survey question is to collect data related to ISO 9001:2015 quality management system implementation and its effect on organizational effectiveness the case of kaliti metal products factory.

Please be assured that information provided in this questionnaire is purely for academic purpose and therefore would be treated with utmost CONFIDENTIALITY.

Sincerely,

Name: Afework Achalu

Tel. 0917807755

Section one; Demographic and Related variables

1. Sex: Female le
2. Age: 18-29 30-45 46-60 Above 60
3. Highest level of education attained:
Diploma/Certificate BA/BSc MA/MSc PHD/Other
4. Your current occupational position/working in the organization:
Manager Service Head Division Head Section Head Expert
5. Monthly salary:
Less than 3,000 3,001-5,000 5,001-10,000 Above10, 000
6. Years of service in this company:
2-8 9-15 16-25 26-40

Section two; Quality management system principles and the implementation of practices used by manufacturing industries related questions

The following items which are related to your organizations effectiveness as measured from the contribution of ISO 9001 QMS implementation. Please indicate the extent to which you agree with the following statements related to QMS implementation practices. Please indicate your rate of agreement as per your company case by ticking appropriately on a scale of 1-5, where 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5= strongly agree.

No	Statement	Strongly disagree	disagree	Neutral	Agree	Strongly Agree
A. customer focus						
1	The company assume that ensuring customer satisfaction is its major responsibility					
2	The company emphasizes on assessing current customers' needs and expectations.					
3	The company Align organizational objectives with customer needs and expectations					
4	Customer needs and expectations are communicated throughout the organization					
5	The company incorporates data on customer expectations and/or satisfaction when designing new products					
6	The company Measure customer satisfaction with customer satisfaction questionnaire					
7	The company has consistent tracking of complaints and procedures for all cases of complaints					
8	The company use various methods to build relationships with customers and to increase repeat business and positive referrals					
B. Leadership / Top Management Commitment						
1	The top management of the company Communicate on mission, vision & strategy and processes throughout the organization					
2	The top management create and sustain share values, fairness and ethical models for behavior at all levels of the organization					
3	Top management establish trust and commitment to					

	quality improvement by eliminating fear					
4	Management sets the organization quality policy and implements it by using offering resources and training.					
5	The management allows participative and engagement of employees in making decisions on quality issues					
6	The management inspire, encourage, and recognize employees contribution					
C. Engagement of people						
1	Engagement of people thought has been used as an input to make any quality decision.					
2	Recognition and reward activities effectively stimulate employee commitment to quality management					
3	Engagement of people involvement and empowerment encourages them to exert the best of their abilities to improve quality					
4	The company offers employees opportunity for career growth through training and development					
5	The company improves working conditions in order to recognize employee quality management efforts					
6	Supervisors, unit heads and divisional managers assuming active roles as facilitators of continuous improvement, coaches of new methods and leaders of empowering people					
7	The company has an effective system for people to make suggestions to management on how to improve quality					
D. process approach						
1	Procedure and strategy offers clearness and team's workforce to gain sure goals.					
2	Work instructions, quality plans and workmanship requirements verify that every process is being done efficiently					
3	A quality manual and helping procedures have been created and are maintained					
4	The company uses innovation and creativity to improve processes by adopting self-managed teams, business process improvement and idea schemes.					
5	Devices and measuring tools are calibrated often, and statistics maintained.					
6	The company change processes and evaluate the benefits through process improvement or re-					

	engineering teams, project management and involving customers, and suppliers.					
7	The company process of risk management is the identification of risk, measurement, risk control and risk mitigation					
E. Improvement						
1	Training is offered to employees on regular basis in order to enhance their skills and expertise					
2	The company is continuously improving itself by trying to apply the latest knowledge and technologies in the industry					
3	The company has set time limit to meet efficiency of products delivery					
4	There are set benchmarks for internal quality realization and conformity					
5	Quality audits are carried out continuously as per ISO certification requirements					
6	There is continuous improvement reviews through internal quality audits					
7	Creation and change of any quality documentation are exactly managed by set up procedures.					
8	There is research & development department in the organization and identification of areas for continuous improvement are assessed.					
9	Manage charts, graphs and different techniques of evaluation decide how well a method is operating and facilitate continuous improvement.					
10	The corrective action system specializes in identifying the basis causes of quality issues and any corrective and preventative actions required.					
11	Your company implements various inspections effectively (e.g., incoming, process and final products)					
F. Evidence-based decision-making						
1	Every activity in the company is recorded by employees and checked by supervisors for accuracy on a daily basis					
2	Top management seeks summarized reports of the facts recorded on a daily basis to make quality related decisions					

3	The company application of systems for the measurement of tracking progress, identifying opportunities, and comparing performance internally and externally helped to improve quality				
4	The company provides planned targets for every employees and subsequent decisions are made based on deviations of actual and targeted outcomes				
5	The company applies objective tools to evaluate contributions of its internal and external stake holders in cases of rewarding and recognizing its employees, suppliers and customers				
G. Relationship Management					
1	The company 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				
2	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				
3	The company recruit suppliers and have a way to retain them that supported the organization to improve quality				
4	The company has closer relationship with its suppliers which helped the organization to get technical support from its suppliers when needed rather than merely exchange of goods.				
5	The company regularly conducts supplier quality audit				
H. Product Quality					
1	The company's rate of product defect reduced and there was increased conformance to specifications after implementation of ISO 9001:2015 QMS	YES			NO
I. Operational Efficiency					
1	There was input material utilization rate improvement observed after the implementation of ISO 9001:2015 QMS in the company.	YES			NO
J. Profitability					
1	Company has earned more than total annual expense for the preceding two years (2019 & 2020 profited)	YES			NO

Thank you for your valuable time!

ANNEX II: INTERVIEW GUIDE

The effect of Quality management system on organizational Effectiveness of Kaliti Metal products factory

Consent Statement

You are being asked to participate as a volunteer in a research study conducted by Mr. Afework Achalu, a post graduate student at Jimma University. The purpose of the interview is to gather middle managers, and senior experts' views on the ISO 9001:2015 quality management system implementations and its effect on organizational effectiveness of kaliti metal products factory.

Please be assured that information provided in this INTERVIEW is purely for academic purpose and therefore would be treated with utmost CONFIDENTIALITY.

1. Is your company certified to international standards such as the ISO? If so, what is the year of certification?
2. What are the motives your company to developed Quality management system (QMS)?
3. What is your ISO9001:2015QMS experience? How it differ from ISO9001:2008 QMS?
4. How do you explain the impact of ISO9001:2015QMS implementation on the manufacturing industry effectiveness (product quality, operational efficiency, and profitability)?
5. Are there any factors in which affect manufacturing industry effectiveness (product quality, operational efficiency, and profitability) how?
6. What are the major hindrances in QMS implementation in the manufacturing industry? Why?
7. What do you recommend to make ISO9001:2015QMS implementation effective in a way to (product quality, operational efficiency, and profitability)?

Thank you for your valuable time!