MBA Thesis

The Impact of Implementing Quality Management System on Organizational Performance: *The Case of National Tobacco Enterprise (Eth.) S.C*

By

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December, 2017
Addis Ababa, Ethiopia

THE IMPACT OF IMPLEMENTING QUALITY MANAGEMENT SYSTEM ON ORGANIZATIONAL PERFORMANCE: THE CASE OF NATIONAL TOBACCO ENTERPRISE (ETH.) S.C

BY
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Declaration

I the undersigned declare that this thesis is my original work; prepared under the guidance of my advisor Dr. Solomon Markos. All source of material used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher institutions for the purpose of earning any degree.

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Endorsement

This thesis has been submitted to St.Mary's University, School of Graduate studies for examination with my approval as a university advisor.

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External Examiner	Signature

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Acronym

QMS	Quality Management System
ISO	International organizations for Standardization
QM	Quality Management
JIT	Just In Time
BPR	Business Process Reengineering
UNIDO	United Nations Industrial Development Organization
NTE	National Tobacco Enterprise

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Abstract

This research has been conducted to examine the impact of QMS (Quality Management System) implementation on organizational performance in the case of National Tobacco Enterprise (Eth.) S.C. This is due to the reason that companies frequently assume QMS practices and ISO certification can improve organization performances. 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. Financial statements & performance reports are used as secondary data and Questioners & interview are used as primary data. These data were collected from the case company managers, division heads, experts and staffs. Purposive sampling used to select the interviewees and respondents for the questionnaire. The collected data was analyzed using both descriptive and inferential statistics as well as tested for its significance using SPSS version 20 software. 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. The research finding has also showed that the major challenges in the course of quality management systems implementation process are gaining the work force commitment, top management commitment, lack of ISO 9001:2008 QMS knowledge and experience, insufficient time and limited budget. This research has surfaced the impact of quality management system on organizational performance, and so the case company, researchers, practitioners, affiliated institutes and organizations will be benefited from the research findings.

Key words: Quality management system, organizational performance, manufacturing industry

Chapter one: Introduction

1.1 Background of the study

This time, the major challenge for organizations is to meet the demands of the customer (Patyal & Koilakuntla, 2017). According to Patyal, Vishal Singh and Koilakuntla, Maddulety 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 & Nkemkiafu, 2015) . The optimization of the organization's performance 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 9000 family addresses various issues of quality management and holds some of ISO's best known standards. The standards provide guidance and tools for companies and organizations who want to ensure that their products and services to consistently meet customer's requirements, and that quality is consistently improved (ISO, 2017).

Several researches have shown quality management systems (QMS) have been widely applied successfully by many manufacturing companies to improve their process, increase profits and organizational performance (Awoku, 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 (Karipidis, et al., 2009; Marın & Ruiz-Olalla, 2011).

Since its first major revision in the year 2000, ISO 9001 has adopted a "process approach" to manage quality. The quality management system requires organizations to fulfill and meet key requirements, which are originally defined by customers. The key requirements are: 1) a clear commitment of the organization's top management to the quality management system; 2) a customer focus approach throughout the organization; 3) a clear quality policy and policy objectives defined by top management; 4) definition of the responsibility and authority of the various personnel involved in the quality management system and communication between them; 5) ensuring the availability of resources (including competent personnel; 6) appropriate levels of documentation; and 7) control of the various operational processes, from sales through design and development of the product or service provided, manufacture (or service provision), process monitoring, inspection and after-sales support (UNIDO, 2016).

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).

Furthermore, according to the recent empirical study conducted by UNIDO, ISO 9001 QMS certified Brazilian organizations have generally demonstrated good organizational performance (UNIDO, 2016). This ISO 9001 impact assessment asserted that, the performance of the organizations that were visited was good, and demonstrated the effectiveness of the accredited certification process within the sample population for the survey, particularly in larger organizations (with over 200 employees).

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 performance. They also proved that their finding is consistent with the findings by Shih et al. (1996) and 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 performance quality, performance improvement and causally linked positive effect on business performance improvement (Kafetzopoulos, et al., 2014).

The empirical finding by Aggelogiannopoulos, Drosinos and Athanasopoulos also 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 in 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).

Therefore, in this research, the investigation of the impact of ISO 9001 QMS on organizational performance will be investigated considering a case company to observe the existing practice is in line with the empirical findings observed in literature.

1.2. Background of the organization

The National Tobacco Enterprise (Ethiopia) Share Company was established in 1942 as Imperial Ethiopian Tobacco Monopoly by the Tobacco Regie Act No.30, 2nd year Negarit Gazetta No. 2/1935. At that time the Company was managed by a Board of Directors under the chairmanship

of the Minister of Finance. In 1981, the Company was reorganized as the "National Tobacco and Matches Corporation" by proclamation No. 1971/1981 under the supervision of the Ministry of Industry. In 1992, the Company was again reorganized as "National Tobacco Enterprise" by proclamation No. 37/1992 with the exclusive right to produce, process, manufacture, distribute, import and export tobacco and tobacco products. During this period, the Enterprise was managed by a Management Board under the direct supervision of the public Enterprises Supervising Authority.

The initial Share capital of the Company was Birr 250,000,000.00 that was fully subscribed and paid up by the government at the time of formation. Following the Share company participation of private investors, 77.85% of the total paid up share capital has been maintained by the government while the remaining 22.15 are owned by private foreign shareholders. Through time, with the sales of shares to private investors, the ownership structure of the Company changed to 100% private shareholders, and is now its registered capital is Ethiopian Birr 479,116,000.

Since the association of Share Company its capital has been raised three times.

NTE (Eth.) S.C is functioning in two sub-sectors: Tobacco planting & processing and Cigarette manufacturing. The business purpose of the company are to grow and process tobacco, manufacture, import, export, distribute, prepare, sell and purchase tobacco products including but not limited cigars, cigarillos and pipe and water pipe tobaccos, producing matches and manufacturing paper for the preparation of cigarettes. And also to carry on any other activities necessary for the successful achievement of the above mentioned purposes of the company.

NTE (Eth.) S.C is operating under corporate governance which has four major organs: General Meeting of Shareholders, Board of Directors, Managing Director and Auditor. NTE (Eth.) S.C has been organized under three core functions and twelve support activities. The company has four Tobacco development farms in Robi, Billatie, Hawassa and Wolaita covering 1,465 hectares. NTE (Eth.) S.C currently produces five brands namely: Nyala, Gissila, Elleni, Delight and Nyala Premium. The annual designed production capacity of the company was about 4 billion pieces and it is now reached 6 billion after completion of the installation of new machine. NTE (Eth.) S.C meets 70% of national annual cigarette demand.

NTE (Eth.) S.C supply the national market with five local brands and two imported brands (i.e. Rothmans and Marlboro). And as of December 31, 2016 NTE has employed 976 permanent, 223 contract and 3,805 daily laborers. Among the permanent employees 90 are professional, 152 are semi-professional and 120 have vocational certificates. Currently NTE (Eth.) S.C it in its later

stages of its five years strategic plan (2013-2017) costing Br. 1.2 billion.

NTE (Eth.) S.C is ISO 9001:2008 QMS certified Company. There has been every three years successive certification program. It was first registered & certified on March 2, 2014 and for the second time re-issued on March 31, 2017.

The Company's certificate Number is ISO 9098-QMS. And also the Company conducts QMS Internal Audit and Management Review every year since its first implementation. That is why the researcher has interested to assess the implementation impact of ISO Certification in the case Company.

2. Statement of the problem

Many researchers have sought to understand how the implementation of the ISO 9001 assists organizations to intrinsically improve their internal and external organizational processes and the respective performances. The implementation of any continuous improvement initiative is always attached to the improvement of some or whole area of the organizational performance viewing from different perspectives. Numerous empirical studies have measured the relationship between QMS practices and performance (Patyal & Koilakuntla, 2015b). It has been observed that several empirical studies have demonstrated the direct impact of QMS on organizational performance (Powell, 1995; Patyal & Koilakuntla, 2017). Knowing the economic effects of implementing a QMS grants certain advantages to companies because it provides additional information for decision making (Leonardo, 2011). Based on the assessment made by several researchers, quality improvement initiatives are, in effect, reported to have positive impact on product quality performance of the organization and usually related to have positive effect on the organization's customers' satisfaction. Among the advantage of QMS implementation has been known to become acquainted with the financial performance improvement through comparing the actual outcomes achieved with those which would have been reached if this system had not been used (Leonardo, 2011). The case study on brewery companies by Tulu, (2011) has demonstrated that ISO certification has a significant impact on the companies' performance particularly sales improvement of the firms. Implementation of QMS has also been suggested to enable organizations to learn how much they could increase their profits by implementing the management system.

The implementation of ISO QMS provides evidence of the attainment of the quality management genuine goals, beyond the mere point of receiving a certificate. This information encourages companies to manage quality on voluntarily basis and once implemented, move forward companies to take complete advantage of the QMS (Leonardo, 2011) . Furthermore, the extraordinary growth in the number of companies attaining ISO 9000 certification worldwide suggests certification will yield benefits to the firm (Tulu, 2011).

Sometimes, there are also reports that the implementation of quality initiatives including ISO 9001 QMS has no effect or negative effect on other parts of the organization performance dimensions (Awoku, 2012).

From an interview which was conducted with the top management of the National Tobacco Enterprise (Ethiopia) Share Company, it was possible to learn that the company implemented ISO 9001:2008 QMS and got certified with the quality management system standard. There has been every three years successive certification program. It was first registered & certified on March 2, 2014 and for the second time re-issued on March 31, 2017. The company conducts QMS Internal Audit and Management Review every year since its first implementation. Even though the company claims that the ISO QMS implementation could improve the companies' performance, there has no explicit research conducted to evidence that it is actually benefitted from implementation and certification of the ISO QMS standard. Therefore, the rationale to conduct this research is to examine the impact of ISO 9001:2008 QMS implementation on the performance of the case company.

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

- What is the existing QMS implementation practice of the case company
- What is the impact of ISO 9001 QMS implementation on organizational performance?
- What are the challenges faced in the implementation of Quality management systems in the NTE (Eth.) S.C?

3. Objective of the research

3.1. General Objective

The general objective of this research is to investigate the impact of ISO 9001 QMS implementation on organizational performance of National Tobacco Enterprise (Eth.) Share Company.

3.2 Specific Objective

The specific objectives are:

- To assess the practice of QMS implementation in the case company
- To examine the impact of QMS implementation on organizational performance
- To identify the challenges of quality management practices in the selected company.

4. Significance of the Study

Based on the research finings the output of this research will be expected to surface the impact of ISO 9001:2008 quality management system on organizational performance. Quality and productivity initiatives are implemented at the enterprise to ensure performance improvement from different perspectives. After implementation QMS practices and certification, impact on organizational performance assessment and examination plays a role to the validation and verification of the ISO standard. It is, therefore, the case company, researchers, practitioners, affiliated institutes and organizations will be benefited from this study finding.

5. Scope of the study

The research activity covered the investigation of the impact of ISO 9001:2008 QMS on organizational performance, NTE (Eth.) S.C. The company implemented ISO 9001:2008 QMS. ISO 9001:2008 QMS is among the means for continual improvement of organizational performance through the implementation of quality management standard system. It also involves the identification of firm performance variables which could be analyzed in the context of ISO 9001:2008 QMS

implementation.

As the research focused on the investigation of the impact of ISO 9001:2008 QMS implementation on the case company performance, organization performance constructs such as business performance, product quality and operational performance has been used as performance dimensions for the impact of the implemented QMS on the case company. Accordingly, performance measures, operating income, sales, market share, unit cost of manufacturing, profits, durability, reliability, perceived quality, productivity, conformance to specifications, process effectiveness and competitive advantage has been used for the investigation of the performance of the organization with respect to ISO 9001:2008 QMS implementation.

6. Limitation of the study

This study has been conducted on a single case company. It would be preferred to conduct the study on different types of company to make cross analysis and generate conclusive and generalized findings on the impact of QMS on organizational performance.

7. Organization of the study

The study has been organized in to five chapters. Chapter one introduces the overall concept, importance, significance and objective of the thesis. Chapter two discussed about the literature review on the concepts definitions of the terms including previous theoretical and empirical findings by several researchers. 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 methodology. Chapter four presented the data analysis and interpretation part of the study. Finally, the conclusion, summary and findings of the research have been presented in chapter five.

Chapter Two: Literature Review

2.1. Introduction

Organizations are to compete to sustain their existence. Because customers have choices for the products and services they demand, producers are challenged in meeting the increasingly consumers requirements from time to time. Operations performance dimensions also increases as the concern of varied stakeholders and their corresponding interests, influences and requirements are growing. In response to these issues, several concepts and related systems, tools and techniques have been developed so that the growth and competitiveness of organizations can be maintained. Among these several concepts, quality concept is one. "Meeting customers' requirements" is the simplest definition of quality concept.

Consequently, these days, the quality of manufacturing products has become one of the most important factors that impact local, regional and global business, and economic patterns (Aggelogiannopoulos, et al., 2007). Several quality standards have been developed and adopted over the years. Quality management system is amongst the ISO management system so far developed and applied world-wide.

2.2. The concept of quality

Quality has become a strategic weapon, which is nowadays being widely used by companies. A company with better quality has the tendency to have better market share than its competitors (Awoku, 2012). According to Awoku, Rachel Yetunde-Abiodun, several manufacturing companies have realized the importance of quality. This time, quality is a competitive dimension for companies by which they can excel their competitors and achieve wider market share.

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

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

ISO defines quality as "The degree to which a set of inherent characteristics fulfills

requirements." To fulfill requirements is to meet customers' needs and regulatory requirements. The difference between one organization and another or between one product and another is generally perceived in relation to the product or service of the company.

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

The concept of quality management systems has existed for many decades. In the 1930s, Walter Shewhart at Bell Laboratories inspired the use of statistics to identify 'best practice' in the USA. This discovery has evolved over many years into control charts and in the US was adopted by manufacturing industries before 1950. During World War II in the 1940s, quality control charts and statistical techniques were deployed to monitor production process and evaluate quality respectively (Goeff, 2001, p. 4). In the 1950s and 1960s, W. Edwards Deming and Joseph Juran saw the importance of pursuing perfection by applying quality principles and techniques to processes and management of organizations. With the U.S dominating world manufacturing, there was no practical interest in quality practices. Deming and Juran were invited to Japan to lecture on statistical quality control (Goeff, 2001). In the 1970s and 1980s, many U.S companies lost market share to foreign competition. Foreign manufacturing companies were producing lower-priced products and better quality. As the West continued to add luxury to products in order to sell at higher prices and increased profits, the East was busy adding quality to products in order to produce items better and cheaper (Goeff, 2001). In order to increase quality awareness, the ISO family standards and Malcolm Baldrige National Quality Award were established in 1987.

A Quality Management System is a set of tools for driving and controlling an organization, considering all different Quality aspects (ISO-9000 2000) including human resources, know-how

and technology, working practices, methodologies and procedures (Franceschini, et al., 2007). According to Franceschini Fiorenzo, Galetto Maurizio and Masan Domenici a quality system with its resources and processes should accomplish specific planned targets such as production, cost, time, and return of investment, stakeholders' exigencies or expectations. It can be useful for the following operations:

2.3. Brief review of QMS ISO standards

Generally speaking, a management system is the way in which an organization manages the inter-related parts of its business in order to achieve its objectives (ISO, 2017). According to ISO, these objectives can relate to a number of different areas, including product or service quality, operational efficiency, environmental performance, health and safety in the workplace and many more.

The ISO 9000 standards originated in 1987 with a bulletin from the International Organization for Standardization (Ferguson, 1996). Its purpose was to provide a series of international standards dealing with quality systems that could be used for external quality purposes (Aggelogiannopoulos, et al., 2007). The other objective was the desire to provide information to organizations about how to design their own quality systems based on individual company marketplace needs.

The standards in the ISO 9000 series intend to be generic standards for quality management and quality assurance. Indifferent of organization types, the standards are applied to any form and type of organizations, which is independent to the size of the organizations or the kind of products manufactured or services provided, in private and public organizations, including government offices. The original ISO 9000 series consisted of five standards; namely, ISO 9000, 9001, 9002, 9003 and 9004, plus ISO 8402 (Aggelogiannopoulos, et al., 2007).

The ISO 9000 family addresses various aspects of quality management and contains some of ISO's best known standards (ISO, 2017). The standards provide guidance and tools for companies and organizations who want to ensure that their products and services consistently meet customer's requirements, and that quality is consistently improved.

The management system standard that has been developed with the intention ensuring the fulfillment of customers' needs with respect to the products and services delivered is ISO 9001

quality management system and the family standards (ISO, 2017). ISO 9001 is a standard developed by the International Organizations for Standardization and serves as a framework for quality organizational management systems. The standards in the ISO 9001 Quality Management System are applied intending to make sure the fulfillment of customers' needs regarding the products and services they demand. As a result, the intention in the concept of ISO which is standardizing certain minimum characteristics of quality management system and achieving mutual benefits to suppliers and customers will be entertained. It also enables to define a contractual standard between these parties where purchasers are evaluated whether the products or services supplied by producers would conform to customers 'specifications and requirements (Yahya & Goh, 2001).

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.

Whereas, Goetsch and Davis , describes QMS as a quality management system which consists of all the organization's policies, procedures, plans, resources, processes, and delineation of responsibility and authority, all deliberately aimed at achieving product or service quality levels consistent with customer satisfaction and the organization's objectives. When these policies, procedures, plans, etc. are taken together, they define how the organization works, and how quality is managed, (Goetsch & Davis, 2005). The ISO 9000 series standard is perhaps the most well known quality management system (Al-Rawahi & Bashir, 2011).

In late 2000, the large numbers of ISO 9000 quality standards were replaced by just three standards: Namely, ISO 9000 Quality Management Systems which defines the fundamentals and vocabulary part; ISO 9001 Quality Management Systems which deals with the standard system requirements; and ISO 9004 Quality Management Systems which deals with the guidance for performance improvement of the QMS Standard.

2.4. ISO 9001:2000 Quality management System

ISO 9001 specifies requirement for a quality management system that can be used for internal application by organizations, or for certification, or for contractual purposes. It focuses on the effectiveness of the quality management system in meeting customer requirements (INTRA.ITILTD-India, 2017). This International Standard does not include requirements specific to other management systems, such as those particular to environmental management, occupational health and safety management, financial management or risk management. However, the International Standard enables an organization to align or integrate its own quality management system with related management system requirements. It is possible for an organization to adapt its existing management system(s) in order to establish quality management system that complies with the requirements of this International Standard (INTRA.ITILTD-India, 2017).

There are eight principles that ISO 9001 embeds. These are customer focus, leadership, involvement of people, process approach, system approach to management, continual improvement, factual approach to decision making and mutual beneficiary suppliers. The corresponding benefits of the organization implementing the management standard are as shown in Table 2.1.

Table 2.1: ISO 9001 Principles and organizational benefits

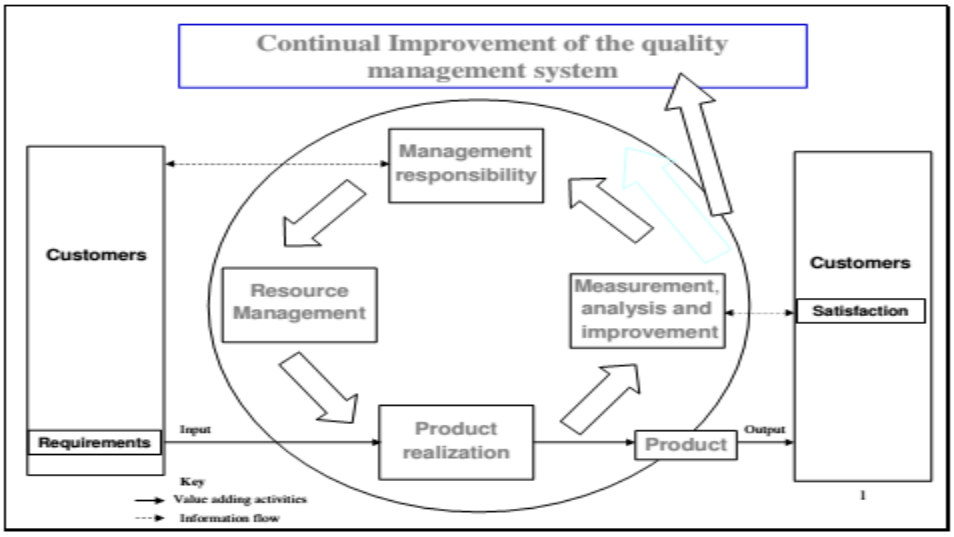
ISO 9001 principle	Organizational benefit
Customer focus	Increased revenue and market share obtained through flexible and fast responses to market opportunities. Increased effectiveness in the use of resources to enhance customer satisfaction. Improved customer loyalty leading to repeat business.
Leadership	People will understand and be motivated by organizational goals and objectives. Activities are evaluated, aligned and implemented in a unified way.
Involvement of people	Motivated, committed and involved people within the organization. People eager to participate in and contribute to continual improvement.
Process approach	Lower costs and shorter cycle times through effective use of resources. Improved, consistent and predictable results. Focused and prioritized improvement opportunities.
System approach to management	Integration and alignment of the processes that will best achieve the desired results. Ability to focus effort on the key processes.

Continual improvement	Performance advantage through improved organizational capabilities. Flexibility to react quickly to opportunities.
Factual approach to decision making	Informed decisions. Increased ability to review, challenge and change opinions and decisions.
Mutually beneficial supplier relationships	Increased ability to create value for both parties. Flexibility and speed of joint responses to changing market or customer needs and expectations. Optimization of costs and resources

Source: (BSI, 2017)

The quality management system follows the process based conceptual model as depicted in Figure 2.1. The model encompasses the major sections and clauses of the quality management standard including: management responsibility, resource management, product realizations and measurement analysis and improvement while considering the customers and the standard requirements as input and customer satisfaction as output in a continual improvement approach.

Figure 2.1: A process based quality management system Model



Source: (INTRA.ITILTD-India, 2017)

2.5. Organizational Performance Measures

Measurement is the very crucial concept that is required before control and improvement actions are taken place. As it is well known that ‘what you cannot measure, you cannot manage emphasizes the importance of measurement (Hauser & Katz, 1998). Universally measurement

system of an organization is the challenge of performance measurement, which depends on the individual, or set of measures the measurement system comprises.

A factory cannot perform well on every yardstick. There are a number of common standards for measuring manufacturing performance (Neely, 2007). Among these are short delivery cycles, superior product quality and reliability, dependable delivery promises, ability to produce new products quickly, flexibility in adjusting to volume changes, low investment and hence higher return on investment, and low costs. These measures of manufacturing performance necessitate trade-offs certain tasks must be compromised to meet others. They cannot all be accomplished equally well because of the inevitable limitations of equipment and process technology. Such trade-offs as costs versus quality or short delivery cycles versus low inventory investment are fairly obvious. Other trade-offs, while less obvious, are equally real. They involve implicit choices in establishing manufacturing policies (Skinner, 1969).

Nevertheless, performance measures that actually demonstrate the value of an organization's management systems can be difficult to develop, use, and interpret. Some organizations simply treat the cost of implementing quality management systems as a business overhead expense often hidden inside various budgets (Bell & Omachonu, 2011). However, the ISO 9000 quality management system and its associated industry specific standards remain popular as evidenced by the increasing numbers of certifications awarded each year (ISO Central Secretariat, 2008). Critics of the ISO 9000 standard contend that even certified organizations produce poor quality output (Johannsen, 1996). Indicating that certification is meaningless. However, the right business performance measures can help to focus on the quality management system certification process to be more efficient and result in a more effective system. The cost and the benefits of implementing a quality management framework can be substantial.

Different researchers employ several and varied types of performance 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 performance, business performance and product quality as major performance measures categorization (Kafetzopoulos, et al., 2014). In their study, performance 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.

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.

The effect of implementing ISO quality management system on organizational performance 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 performance measures to assess the impact of the quality management system on various organizations.

2.6. Quality management systems and organizational performance

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 performance 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 performance 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. Tsiotras and Gotzamani emphasized periodic review, formal corrective actions, and process focus as key elements of quality management systems that impact organizational performance (Tsiotras & Gotzamani, 1996). Carlsson and Carlsson identified better processes and better customer relations as benefits of implementing ISO 9000 in Swedish companies (Carlsson & Carlsson, 1996). Lee and Palmer cite monitoring day-to-day adherence to documented procedures and understanding of the corrective action process as significant challenges (Lee & Palmer, 1999). Based on the prominence of these elements in the quality literature, the following ISO 9000 system elements have been chosen for further study in this research study.

The right business performance measures help focus quality management systems to achieve desirable and required results according to ISO 9000 certification standards (Bell & Omachonu, 2011).

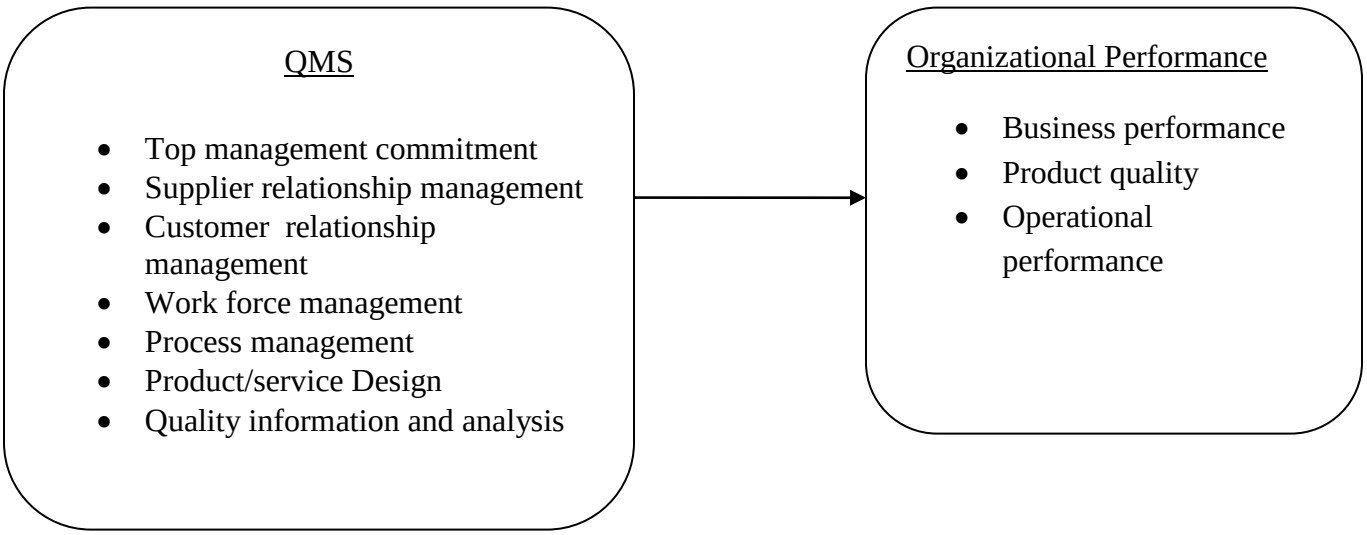
Lassâad Lakhal, FedericoPasin and Mohamed Limam observed there is a positive relationship between quality management practices and organizational performance (Lakhal, et al., 2006). Moreover, their results illustrate a direct effect of infrastructure practices on operational performance and of core practices on product quality. According to Mei Feng,; MiléTerziovski; and Danny Samson asserted that there is a positive and significant relationship between certification practices (implementation, organizational commitment and planning) with operational performance (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 ChingI 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 performance as measured by the return on assets financial measure (Bell & Omachonu, 2011). An empirical research conducted by MartõÂ CasadesuÂs and Gerusa Gime Ânez 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).

On the contrary Abdullah M.S Al- Rawahi and Hamdi A. Bashir asserted that there is no strong evidence to suggest that the motives for implementation, the process and cost of achieving certification, the perceived benefits, and the shortcomings differ significantly according to organization size or sector type (Al- Rawahi & Bashir, 2011). Their study indicated that organizations the initiation to implement ISO quality management system standards is not dependent on variables such as organizational size or sector type. All organizations are motivated to implement the system standards regardless of the mentioned factors.

Figure 2.2 Conceptual framework of the study



Chapter Three: Research Design and Methodology

3.1. Research Design and approaches

An explanatory research design has been employed to identify whether there is impact on organizational performance as a result of ISO 9001 QMS implementation at National Tobacco Enterprise (Eth.) S.C. This study followed mixed research approach. The quantitative data collected through questionnaire was manipulated to answer questions posed on the impact of ISO 9001:2008 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 interview from target individuals was analyzed qualitatively to explain the impact of the QMS standard implementation on the performance of the National Tobacco Enterprise (Eth.) S.C.

3.2. Data types and source

Literature review has been done on systematically selected international journal articles, performance reports of the NTE (Eth.) S.C for different years, and other necessary sources pertaining to the implementation of ISO 9001:2008. Moreover, quantitative data that has been consumed for the descriptive and inferential analysis of the performance measures from the questionnaire. The source of the questionnaire data has been the employees and management member of the company. The qualitative data which was gathered through interview from selected top and middle management members, and experts.

3.3. Method of Data Collection

Table 3.1: The constructs and variables for the study

Objective	Constructs	Variable	References
1. To identify the organization performance variables affected by QMS implementation 2. To analyze the effect of ISO 9001 QMS on the case company performance	Business performance	Operating income	(Kafetzopoulos, et al., 2014) (Uyar, 2009), (Feng, et al., 2008), (Lin & Jang, 2008), (Su, et al., 2008), (Lakhal, et al., 2006)
		Market share	
		Sales	
		Profits	
		Unit cost of manufacturin	
	Product Quality	performance	
		Reliability	
		durability	
		perceived quality	
		conformance to specifications	
	Operational performance	productivity	
		process effectiveness	
		competitive advantage	
		Company's ability to have access to new domestic and foreign markets	
		Efficiency	

3.4. Population and sampling techniques

The target population of this study is the National Tobacco Enterprise (Eth.) S.C Staffs and department managers and division heads who seem as experts for the enterprise. The total number of respondents for this study was 81for questionnaire and 11 for interviews.

3.5. Inclusion and Exclusion Criteria

3.5.1. Sampling procedure

This study has adopted a non-probabilistic sampling strategy. Purposive sampling method

was 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 1199 permanent and contract employees, 81 respondents and 11 interviewees (Table 1) who had significant role in designing, planning, implementation, controlling and evaluation of the QMS system has been selected.

Table 3.2: Sample Size

No	Departments	Sample Size
I	**Respondents for questionnaire**	
1	Audit, Public relation & legal Services	4
2	Planning & Programming Service	1
3	IT Service	2
4	Finance department	7
5	Administration and Human Resources Department	20
6	Marketing and Sales Department	4
7	Supply Department	7
8	Research and Quality Assurance Department	10
9	Factory Operations Department	25
10	MR Service	1
	Total	**81**

3.5.2 Inclusion Criteria

NTE(Eth.) S.C employees, experts, Divisional heads, Directors and Managers who were willing and had significant role in the design, planning, implementation and evaluation of ISO 9001:2008 QMS implementation has been included.

3.5.3 Exclusion Criteria

NTE (Eth.) S.C employees, who were assigned as field workers in the Farm areas and newly employed had inadequate information for the ISO 9001:2008 implementations.

3.6. Techniques of Data analysis and interpretation

The quantitative data collected through questioner has been analyzed by making use of inferential statistics using SPSS version 20 software. The performance measurement variables and the impact on the organizational performance dimensions has also been analyzed by employing the appropriate parametric statistical methods to determine the direction of relationship and degree of association based on the distribution of the sampled data collected. The descriptive statistics has also been presented using Tables to see the descriptive statistical values of the five-point Likert scale data. Narrative analysis followed and employed to the qualitative data collected from interview.

3.7. Reliability and validity

The reliability of the items in the questionnaire the corresponding scale has been tested by using Cronbach Alpha. This enabled the internal consistency of the measuring variables. The validity of the variables and the information obtained has been made by making use of relevant literature review and researcher and experts' judgment.

The measurement items were calculated through perceptual questions on five-point Likert scale with end points of "strongly disagree (1)" and "strongly agree (5)." There have been a total of 68 variables grouped into 10 latent variables which can measure and reflect the performance of the organization.

Prior to testing the research questions, the survey measures used, were examined for the reliability and validity. In view of the characteristics of the instrument used in this study, the inter-item reliability consistency (alpha) was used to measure its reliability. Construct validity is determined by how well certain constructs explain the variance of responses to a set of survey items.

Table 3.3: Reliability analysis test result and descriptive statistics

No	Constructs	Item	Cronbach's α	N
1	Top Management Commitment	TM1	0.779	76
		TM2		76
		TM3		76
		TM4		76
		TM5		76
		TM6		76
		TM7		76
		TM8		76
		TM9		76
		TM10		76
2	Supplier Relationship Management	SR1	0.673	76
		SR2		76
		SR3		76
		SR4		76
		SR5		76
		SR6		76
		SR7		76
3	Customer Relationship Management	CR1	0.608	76
		CR2		76
		CR3		76
		CR4		76
		CR5		76
		CR6		76
4	Workforce Management	WM1	0.701	76
		WM2		76
		WM3		76
		WM4		76
		WM5		76
		WM6		76
		WM7		76
5	Process Management	PM1	0.719	76
		PM2		76
		PM3		76
		PM4		76
		PM5		76
		PM6		76
		PM7		76

6	Product/Service Design	PSD1	0.766	76
		PSD2		76
		PSD3		76
		PSD4		76
7	Quality Information And Analysis	QI1	0.856	76
		QI2		76
		QI3		76
		QI4		76
		QI5		76
8	Business Performance	BP1	0.910	76
		BP2		76
		BP3		76
		BP4		76
		BP5		76
9	Product Quality	PQ1	0.899	76
		PQ3		76
		PQ4		76
		PQ5		76
10	Operational Performance	OP1	0.853	76
		OP2		76
		OP3		76
		OP4		76
		OP5		76
		OP6		76
		OP7		76
11	Implementation Challenges	IC1	0.746	76
		IC2		76
		IC3		76
		IC4		76
		IC5		76
		IC6		76

Reliability test was performed on QM practices as well as performance measures. Reliability is broadly defined as the degree to which scales are free from error and, therefore, consistent. This study used Cronbach's α for measuring reliability of the instrument, and detecting consistency of the measurement scale developed on the basis of the respondents' responses. The threshold value of Cronbach's α should be at least 0.60 (Patyal & Koilakuntla, 2017)and is considered highly reliable if it is beyond 0.70. Table 4.3 presents the initial Cronbach's α for each constructs and the overall 68

items together is with Cronbach's α 0.933. The value of the reliability test analysis is encouraging and acceptable for further analysis

The average responses for majority of the items, which are above the mean value of the measuring scale. The respondents agreed that many of the variables under discussion were observed greater than the mean score of 3.0. Among the constructs to be discussed in this research, the quality management implementation challenges were relatively stronger. Gaining the work force commitment was slightly a problem in the company during the course of the QMS implementation process. The highest standard deviation was observed in the top management commitment construct for the variable "In your organization, strategic decisions are affected by top management." There was a relatively greater variation in the response of the respondents on this question with standard deviation value of 1.187. The next relatively variable response was indicated in the implementation challenge of the quality management system for the question "Gaining workforce commitment to QMS implementation was a problem." Here, there was also a relatively greater variation in the response of the respondents with standard deviation 1.046. The response variation about the mean of the remaining items score result was about to 1 standard deviation or below 1.

3.8. Ethical consideration

In this research, the case company's confidential information is kept as per the guide lines put in the questionnaire and there would not be any disclosure without the consent of the company. The originality of the research has also been maintained as well as all facts and previous research findings were well acknowledged with the respective authors.

Chapter Four: Data Analysis and Interpretation

4.1. Introduction

This chapter will present the empirical data collected from the case company through standard questionnaire, which was triangulated by interviewing the four members of top management of the case 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. 81 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 81 respondents, 76 respondents agreed and responded, resulting in a response rate of 93.83 percent.

4.2. Profile of respondents

After the standard questionnaire had been tested for the content validity, it has been distributed to the 81 respondents. Fortunately, all questionnaires were complete. Hence the data collected from 76 respondents were used for analysis.

Table 4.1. Education Qualification of the respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Diploma	16	21.1	21.1	21.1
	BA/BSC	42	55.3	55.3	76.3
	Master & above	18	23.7	23.7	100.0
	Total	76	100.0	100.0	

Source: Own survey (2017)

From the respondents, 21.1% (16), 55.3 %(42) and 23.7 %(18) were diploma holders, BA/BSC professionals and masters and above in their educational background (Table 4.1).

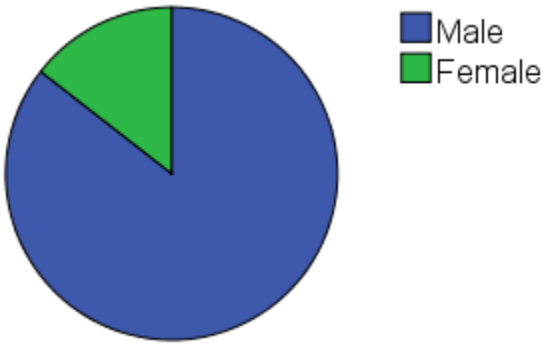
Table 4.2. Work Experience (Year)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2-8	13	17.1	17.1	17.1
	9-15	14	18.4	18.4	35.5
	16-25	15	19.7	19.7	55.3
	26- 40	34	44.7	44.7	100.0
	Total	76	100.0	100.0	

Source: Own survey (2017)

The majority (44.7%) of the respondents has work experience of 26 to 40 years. The minimum respondents work experience is two years (Table 4.2). 14.5% (11 respondents) were female respondents (Figure 4.1).

Figure 4.1: Respondents' sex profile



4.3. Descriptive analysis of major quality management practices

The quality management system practices considered in this research as defined in the standard questionnaire and discussed in the literature part are top management commitment, supply relationship management, customer relationship management, workforce management, process management, product or service design and quality information analysis. As shown in Table 4.3, minimum score value for constructs are below the mean value, 3.0. Whereas the maximum mean value for all is greater than 4.67. The mean average value is also for all greater than the average value, 3.0, and the deviation about the average mean value is for all less than 0.63531 standard

deviation. This indicates the respondents agree the quality management system practices had positive effect on the performance of the organization in a relatively small variation.

Table 4.3: Descriptive Statistics for quality management practices

	N	Minimum	Maximum	Average Mean	Std. Deviation
Top Management Commitment	76	2.60	4.80	3.7592	0.48640
Supply Relationship Management	76	2.57	4.71	3.6410	0.47609
Customer Relationship Management	76	2.17	4.67	3.5022	0.48419
Workforce Management	76	2.29	4.71	3.6241	0.50243
Product Management	76	2.00	4.71	3.3816	0.55470
Product/Service Design	76	2.75	5.00	3.8355	0.57381
Quality Information Analysis	76	2.00	5.00	3.7658	0.63531
Valid N (list wise)	76				

Source: Own survey (2017)

4.4. Descriptive analysis of major organizational performance constructs

As defined in the methodology of this research and discussed in the literature part, the performance measures which can reflect the company's performance considered in this research are business performance, product quality and operational performance variables.

Table 4.4: Descriptive Statistics for company performance

	N	Minimum	Maximum	Mean	Std. Deviation
Business Performance	76	2.00	5.00	4.0342	0.60345
Product Quality	76	2.00	5.00	3.7303	0.65290
Operation Performance	76	2.00	5.00	3.5846	0.57673
Organizational Performance	76	2.00	5.00	3.7830	0.54472

Source: Own survey (2017)

As shown in Table 4.4, minimum score value for all constructs is about 2.0,whereas the maximum mean value for all is the maximum value in the measuring scale, 5. The mean average value is also greater than the average value, 3.0 in all cases. There is above average organizational performance on all dimensions of the company performance. The deviation about the average mean value is less than 0.65290 standard units in all cases.

4.5. Bivariate Correlation Test

Pair-wise correlation analysis has been made in order to identify the strength and direction of relationship between the variables and among the constructs. Pearson correlation coefficient was considered as parametric correlation estimation test for the variables in this research as our assumption is the data is normally distributed and in consistent with parametric assumptions.

The pair-wise correlation test was first done on each item on the measuring scale as annexed in Appendix II.

Table 4.5. Correlations between constructs

		TM	SR	CR	WM	PM	PSD	QI	BP	PQ	OP
TM	Pearson Correlation	1									
	Sig. (2-tailed)										
	N	76									
SR	Pearson Correlation	.316**	1								
	Sig. (2-tailed)	.005									
	N	76	76								
CR	Pearson Correlation	.453**	.545**	1							
	Sig. (2-tailed)	.000	.000								
	N	76	76	76							
WM	Pearson Correlation	.678**	.308**	.473**	1						
	Sig. (2-tailed)	.000	.007	.000							
	N	76	76	76	76						
PM	Pearson Correlation	.409**	.296**	.393**	.481**	1					
	Sig. (2-tailed)	.000	.009	.000	.000						
	N	76	76	76	76	76					
PSD	Pearson Correlation	.353**	.429**	.333**	.318**	.460**	1				
	Sig. (2-tailed)	.002	.000	.003	.005	.000					
	N	76	76	76	76	76	76				
QI	Pearson Correlation	.547**	.470**	.500**	.524**	.513**	.473**	1			
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000				
	N	76	76	76	76	76	76	76			
BP	Pearson Correlation	.340**	.263*	.385**	.343**	.497**	.388**	.448**	1		
	Sig. (2-tailed)	.003	.021	.001	.002	.000	.001	.000			

	N	76	76	76	76	76	76	76	76		
PQ	Pearson Correlation	.409**	.368**	.501**	.445**	.462**	.427**	.571**	.680**	1	
	Sig. (2-tailed)	.000	.001	.000	.000	.000	.000	.000	.000		
	N	76	76	76	76	76	76	76	76	76	
OP	Pearson Correlation	.458**	.307**	.424**	.508**	.524**	.510**	.537**	.599**	.790**	1
	Sig. (2-tailed)	.000	.007	.000	.000	.000	.000	.000	.000	.000	
	N	76	76	76	76	76	76	76	76	76	76
**. Correlation is significant at the 0.01 level (2-tailed).											
*. Correlation is significant at the 0.05 level (2-tailed).											

Source: Own survey (2017)

Moreover, the Pearson correlation analysis finds that, at $p<0.01$, company operational performance is modestly and positively correlated with top management commitment ($r=0.458$), supplier relationship management ($r=0.307$) and customer relation management ($r=0.424$). The company operational performance is also moderately and positively correlated with work force management ($r=0.508$), product management ($r=0.524$), product or service design ($r=0.510$) and quality information analysis ($r=0.537$).

4.6. Regression analysis

Linear regression has been used to model the value of the dependent scale variables that is business performance, product quality and operational performance, based on their linear relationship to the predictors. The standard approach for describing the relationships in this problem is linear regression.

The most common measure of how well a regression model fits the data is R^2. This statistic represents how much of the variance in the response is explained by the weighted combination of the predictors, that is, top management commitment, supplier relationship management, customer relationship management, work force management, process management, product or service management and quality information and analysis. The closer R^2 is to 1, the better the model fits.

The ANOVA table (Table 4.6) reports a significant F statistic, indicating that using the model is better than guessing the mean for the independent organizational performance.

Table 4.6.ANOVA[a] for Organizational performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.990	7	1.570	9.478	.000[b]
	Residual	11.264	68	.166		
	Total	22.254	75			
a. Dependent Variable: Organizational Performance						
b. Predictors: (Constant), QI, SR, PM, TM, PSD, CR, WM						

Source: Own survey (2017)

Regressing organizational performance on the seven predictors results in an R^2 of 0.494, indicating that approximately 50% of the variance in the organizational performance is explained by the predictor variables in the linear regression (Table 4.7)

Table 4.7.Model Summary[b] for Organizational performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.703[a]	.494	.442	.40700
a. Predictors: (Constant), QI, SR, PM, TM, PSD, CR, WM				
b. Dependent Variable: Organizational Performance				

Source: Own survey (2017)

From the coefficients table (Table 4.8), the independent variable with the highest both unstanrdized and standardized coefficients is the PM. As the same time, it is significant at five percent level indicating that this variable contributes much to the model. The other variables fail the t-statistics test premises and found to be insignificant at both one and five percent level of significance.

Table 4.8Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.536	.481		1.116	.269
	TM	.023	.140	.020	.162	.872
	SR	-.060	.126	-.052	-.475	.636
	CR	.213	.129	.190	1.654	.103
	WM	.109	.137	.100	.793	.431
	PM	.218	.108	.222	2.025	.047
	PSD	.188	.101	.198	1.864	.067
	QI	.207	.104	.241	1.982	.052
a. Dependent Variable: Organizational Performance						

Source: Own survey (2017)

4.7. ISO Quality Management Systems Implementation Challenges

Table 4.9 shows that the major challenge in implementation of the quality management system in the case company has been 'gaining the work force commitment' which has larger mean score value from the respondents' agreement measurement scale. The next one was 'top management commitment.' In addition, it is evident that all the tested factors including The lack of ISO 9001:2008 QMS knowledge and experience, insufficient time and limited budget were the challenge for the organization during the implementation of the quality management system.

Table 4.9 Descriptive Statistics of QMS Implementation Challenges

Implementation Challenges	Number/ percentage					Mean	Std deviation
	1	2	3	4	5		
Gaining workforce commitment to QMS implementation was a problem	5/6.6	19/25.0	13/17.1	37/48.7	2/2.6	3.16	1.05
The lack of ISO 9001:2008 QMS knowledge and experience was a challenge during the course of implementation	1/1.3	10/13.2	15/19.7	45/59.2	5/6.6	3.57	0.854
There was insufficient time for QMS implementation in your organization	5/6.6	30/39.5	23/30.3	16/21.1	2/2.6	2.74	0.957
There was limited budget to run the implementation of the QMS system	10/13.2	29/38.2	22/28.9	15/19.7	0/0	2.55	0.958
Top management commitment was low while implementing QMS	12/15.8	32/42.1	20/26.3	12/15.8	0/0	2.42	0.942
There was organizational structure limitation during implementing QMS	9/11.8	21/27.6	25/32.9	19/25	2/2.6	2.79	1.037
1=Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, 5=strongly Agree							

Source: Own survey (2017)

4.8 Interview Question Analysis

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

According to the interviewees, the reason why the company implemented the Quality management system was to increase the quality of the product, reduce defects, increase quality information communication, increase market performance and boost customer satisfaction. The top management members were all had the ambition to achieve the reputability of the company there by increasing the sales and market performance of the company through the implementation of the management system. The interviewees as well as had diversified experience on the implementation of ISO 9001:2008 QMS. Some (five interviewees) had full experience of ISO 9001:2008 QMS implementation beginning from registration and gap analysis to certification and system maintenance. However, there were also who did not have experience on the complete implementation of the management system even though they had partial experience in the whole implementation process.

For the question, "How long you take to implement the QMS in Your Company?" the answer of all the interviewees was similar and it was nearly one and half years. With this understanding, the interviewer has also asked them the mandatory procedures that should be followed in the course of implementing ISO 9001:2008 QMS. Here, there were some variations to explain the procedures as perceived by their roles and responsibility and deep understanding of the subject matter. From their reply, the major process which were mentioned by all of the interviewees were, awareness creation, gap analysis, document preparation, putting the document into action (implementation), recording, analyzing and reporting to the management and conducting surveillance, internal, and external quality audits and registration for certification and acquiring ISO 9001:2008 QMS certificate.

The interviewees' perception on the benefits of the implementation of the ISO 9001:2008 QMS were mainly the increase on the sales performance of the company. They had also perception on the improvement of organizational performance in terms of product quality, business performance, and operational performance as well. In implementing the QMS principles, there was some misunderstanding among the interviewees. Six of them mainly the top management

members and quality experts and heads replied that the implementation of the QMS was based on the ISO 9001:2008 QMS conceptual model developed by the ISO organization and the framework was perceived to be relevant to come up with the expected level of achievements from the system implementation. The principles are imbedded in the conceptual model of the ISO 9001:2008 QMS. Starting from awareness creation to that of being certified and maintaining the implementation status, the principles need to be implemented adequately so that continuous performance improvement would be experienced. From the remaining three were part agreeing to the six ones with a relatively better understanding on the concepts as perceived during the course of the interview, and the other two were almost ignorant on the principles of the ISO 9001:2008 QMS and there were a need to explain about them.

The experience of the interviewees on the steps to be followed while implementing ISO 9001:2008 QMS was learnt by asking them the question "What steps have you taken to implement quality management systems in your organization?" there reply was more or less similar among them. After the commitment from the management, there were subsequent awareness creation programs at the different level of the organization, beginning from the top management, then middle and lower management, experts and employees. Conducting gap analysis and preparation of the quality manual, quality procedures and specifications took the subsequent step. Implementation and follow-up of the implementation process, reporting the implementation performance, and finally, auditing and get certified were the major implementation steps in the process.

When the interviewees asked the question "What steps have you taken to implement quality management systems in your organization?" almost all of them replied that 'yes we do have.' The QMS manual was the master guiding document containing, quality objective, quality policy, quality procedures, instructions and specifications and the QMS map which depicted the processes and their interaction leading to customer satisfaction.

The interviewee' were also asked to identify their understanding about how they could identify the existing gap from the standards requirements. Their response for the question "How do conduct the required gap analysis of your Organization?" were also similar. They first identified the process and resources, identify criteria and specific key performance indicators, and made sure whether the appropriate measurement, monitoring, analyzing and controlling performance tools and techniques were in place or not. These would indicate that they have a relatively good

understanding on how to conduct gap analysis.

On the exact process of certification the interviewees also asked “What exactly is the certification process in accordance with ISO 9001?” majority (9 out of 11) of them said that the certification process comprises preliminary audit, preliminary assessment, gap analysis, certificate audit and recertification.

Chapter Five: Summary of Findings, conclusion and Recommendation

5.1. Summary of Findings

The objective of this research has been to examine the impact of ISO quality management system on organizational performance. 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 practices and organizational performance dimensions including product quality, operational performance and business performance.

A total of seven quality management practices and three organizational performance constructs has been identified and examined for this study whether there is impact on organizational performance as a result of ISO quality management system implementation. A questionnaire containing 68 items has been prepared for the organizational performance dimensions, quality management practices and implementation challenge construct. From 81 distributed questionnaires, 76 questionnaires have been responded which results in 93.83% response rate. 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 0.933 which is acceptable to make further analysis.

The descriptive analysis has shown that

- The minimum score value for all constructs are below the mean value, 3.0.
- The maximum mean value for all is greater than 4.67.
- The mean average value is also greater than the average value, 3.0 for all constructs.
- The deviation about the average mean value is less than 0.63531, standard deviation in all quality management system practices considered. Similarly, the minimum score value is above the mean value for all organizational performance constructs.
- The mean average value is also greater than the average value, 3.0 in all cases.

- The deviation about the average mean value is, less than 0.65290 standard deviation for all performance dimensions.

Moreover, the Pearson correlation analysis has shown that,

- At $p<0.01$, the pair-wise interrelationship of all variables but business performance and supplier relationship management have positive with either weak or modest relationship.
- The correlation between business performance and supplier relationship management was positive and significant at $p<0.5$ but weak relationship.

The regression analysis has shown that

- Regressing organizational performance on the seven predictors results in an R^2 of 0.494, which tells that the dependent variable is explained by the predictor variables in the linear regression.

The research has also asserted that the major challenges of that the company faced in the course of the quality management system standard implementation were:

- Gaining the work force commitment,
- Top management commitment,
- Lack of ISO 9001:2008 QMS knowledge and experience,
- Insufficient time and
- Limited budget.

5.3 Conclusion

The objective of the research was to investigate the impact of QMS implementation on organizational performance of National Tobacco Enterprise (Eth.) Share Company. In literature, ISO quality management systems implementation has been considered as a means for the improvement of organization performance by several researchers. This research has also assured that the implementation of ISO 9001:2008 Quality management systems have positive impact on the organization performance as observed in the case company. The descriptive analysis has shown that the agreement of respondents that QMS practices improve the performance of the organization. The organizational performance measurement dimensions, namely business

performance, product quality and operational performance, all are, at $p<0.5$, significantly affected by the quality management system practices investigated, that is, top management commitment, supplier relationship management, customer relationship management, work force management, process management, product/service design and quality information and analysis.

Another finding of this research was about the challenges in the course of the implementation of ISO 9001:2008 QMS in the case company. The challenges were gaining the work force commitment, top management commitment, lack of ISO 9001:2008 QMS knowledge and experience, insufficient time and limited budget.

5.3 Recommendations

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

- Top management commitment is an essential practice that companies which intend to implement ISO QMS should ensure its existence in their organizations.
- Prior to implementation of ISO QMS, companies should adequately train their employees about the process of implementation so as to acquire the necessary knowledge and experience.
- It is also necessary to gain the workforce commitment in the course of implementation. As a result, the companies implementing ISO QMS should motivate their employees with appropriate means of motivation scheme.
- Companies implementing QMS should allocate the necessary budget to run the implementation of the system standard.
- It is also recommended there has to be sufficient time to implement the quality management system efficiently and effectively.
- The company is currently in a position that it can perform its production processes in a better way than before and as a result achieve better organization performance in terms of product quality, business performance and operational performance.
- To sustain this operational and production effectiveness it should further maintain the continuous assessment and consequent revision and update of the QMS implementation process. This is because the QMS standard is updated and revised at least every five to

seven years and the system requirement urges to make successive assessment, revision, and update.

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Appendix A

St. Mary's University
School of Graduate Studies

Dear Respondents,

The purpose of this survey question is to collect data related to ISO 9001:2008 quality management system implementation and its effect on organizational performance for the completion of Master Degree from St. Mary's University. Your voluntary collaboration & accurate information is vital to complete this research.

The collected data will be used for academic purpose only and will be kept confidential.

Sincerely,

Name: Geletaw Mekonnen

Tel.:0911129044

A. Demographic Characteristics

Current position: Manager ☐ Service Head ☐ Division Head ☐ Section Head ☐ Expert ☐

Highest Qualification: Diploma ☐ BA/BS ☐ Master & above ☐

Work experience [year] 2-8 ☐ 9-15 ☐ 16-25 ☐ 26-40 ☐

Sex: Male ☐ Female ☐

B. Management and Employees Opinion Measurement

The following items which are related to your organizations performance as measured from the contribution of ISO 9001 QMS implementation. It is based on your degree of agreement as rated from 1 to 5 from strong disagreement to strong agreement. Accordingly, please rate on the scale 1 to 5, with *1= strongly disagree; 2= disagree; 3= neither agree nor disagree; 4= agree; 5= strongly agree*, and please **tick "√" sign** in the corresponding cell provided.

Code	Items	Measurement scale				
		1	2	3	4	5
I	***Top management commitment***					
TM1	The top management of your organization (i.e. top executives and major department heads) assumes responsibility for quality performance					
TM2	The top management of your organization provides personal leadership for quality products and quality improvement					
TM3	Your organization's top management is evaluated for quality performance					
TM4	In your organization, major department heads participate in the quality improvement process					
TM5	In your organization, "Quality issues" are reviewed in top management meetings					
TM6	In your organization, top management views quality performance as a major objective					
TM7	In your organization, strategic decisions are affected by top management					
TM8	In your organization, quality policy is developed by top management					
TM9	In your organization information processing is efficient & effective					
TM10	Employees obtain timely, reliable, consistent & necessary data & information as they need to do their job					
II	***Supplier relationship management***					
SR1	Your organization believes in long-term relationships with suppliers and takes effort for the same					
SR2	Your organization trusts on a small number of high-quality suppliers					
SR3	Your organization allows supplier's active participation in product design/redesign process					
SR4	Your organization evaluates suppliers based on parameters related to quality, delivery and price					
SR5	Your organization has a systematic supplier rating system					
SR6	Your organization provides technical assistance to suppliers					
SR7	Your organization is working with suppliers to ensure that expectations met					
III	***Customer relationship management***					
CR1	Your organization believes in maintaining consistent contact with customers					
CR2	Your customers provide feedback on quality and delivery performance					
CR3	Your organization measures customer satisfaction of external customer					
CR4	Customer requirements are used as the basis for quality in your					

	organization					
CR5	Your employees are aware about your customers					
CR6	Your customers visit your plant					
IV	***Workforce management***					
WM1	Your organization form teams to solve problems					
WM2	Your organization provides feedback to employees on their quality performance					
WM3	Employees are also involved in quality decisions in your organization					
WM4	Supervisors encourage teamwork in your organization					
WM5	Quality-related training is given to contractual employees					
WM6	Quality-related training is given to managers and supervisors in your organization					
WM7	Your organization provides quality training as "total quality concept" (i.e. philosophy of company-wide responsibility for quality)					
V	***Process management***					
PM1	Processes in your organization are designed to minimize the chances of errors					
PM2	Your organization meets daily production schedule					
PM3	In your organization, production is stopped immediately for quality problems					
PM4	Your organization conducts preventive equipment maintenance					
PM5	Your organization provides clear process instructions					
PM6	In your organization, shop floors are well organized and clean					
PM7	Your organization has adopted statistical process control					
VI	***Product/service design***					
PSD1	Your organization reviews new product/service designs in detail before the production of product/service					
PSD2	Various departments of your organization such as marketing, manufacturing, and purchasing, etc. coordinate in the product/service development process					
PSD3	In your organization, manufacturing and quality personnel are involved in the product/service development process					
PSD4	Your organization takes effort for clearly needed specifications in the design process					
VII	***Quality information and analysis***					
QI1	Your organization manages useful data pertaining to quality (such as error rates, defect rates, scrap, defects, cost of quality, etc.)					
QI2	In your organization, data are accessible to managers, supervisors, and engineers					
QI3	Your organization manages data timely					
QI4	Your organization use data for managing quality					
QI5	Your organization use data for evaluating supervisory as well as managerial performance					

VIII	***Business performance***					
BP1	Your company operating income improved after implementation of ISO 9001:2008					
BP2	Your company Market share increased after implementation of ISO 9001:2008					
BP3	Sales of the company product improved after the implementation of ISO 9001:2008					
BP4	The implementation of ISO 9001:2008 Increased Profits of the company					
BP5	After the implementation of ISO 9001:2008 the manufacturing unit cost has been reduced					
IX	***Product Quality***					
PQ1	After the implementation of ISO 9001:2008 the reliability of the product increased					
PQ2	The implementation of ISO 9001:2008 QMS improved the consistency/durability of the product					
PQ3	The implementation of ISO 9001:2008 QMS improved the perceived quality of the product					
PQ4	the company's rate of product defect reduced and there was increased conformance to specifications after implementation of ISO 9001:2008 QMS					
X	***Operational performance***					
OP1	There was labor productivity improvement observed after the implementation of ISO 9001:2008 QMS in the company.					
OP2	There was input material utilization rate improvement observed after the implementation of ISO 9001:2008 QMS in the company.					
OP3	The production process was capable of producing variety of products after establishments					
OP4	Cycle time (from receipt of raw materials to shipment of finished products) has decreased in your organization over the past three years					
OP5	The implementation of QMS increased Company's ability to have access to new domestic and foreign markets					
OP6	There was machine efficiency improvement observed after the implementation of ISO QMS in the company					
OP7	Process variability in your organization has decreased after implementation of ISO QMS.					
XI	***Implementation challenges***					
IC1	Gaining workforce commitment to QMS implementation was a problem					
IC2	The lack of ISO 9001:2008 QMS knowledge and experience was a challenge during the course of implementation					
IC3	There was insufficient time for QMS implementation in your organization					
IC4	There was limited budget to run the implementation of the QMS system					
IC5	Top management commitment was low while implementing QMS					

Appendix B

Pearson Correlation Coefficients for the various items

1. Correlations coefficient for Supplier Relationship Management

		SR1	SR2	SR3	SR4	SR5	SR6	SR7
SR1	Pearson Correlation	1						
	Sig. (2-tailed)							
	N	76						
SR2	Pearson Correlation	.414**	1					
	Sig. (2-tailed)	.000						
	N	76	76					
SR3	Pearson Correlation	.127	.408**	1				
	Sig. (2-tailed)	.273	.000					
	N	76	76	76				
SR4	Pearson Correlation	.277*	.167	.130	1			
	Sig. (2-tailed)	.015	.149	.261				
	N	76	76	76	76			
SR5	Pearson Correlation	.389**	.422**	.227*	.521**	1		
	Sig. (2-tailed)	.001	.000	.049	.000			
	N	76	76	76	76	76		
SR6	Pearson Correlation	.114	-.090	-.027	.064	.041	1	
	Sig. (2-tailed)	.328	.437	.820	.585	.725		
	N	76	76	76	76	76	76	
SR7	Pearson Correlation	.386**	-.001	.027	.367**	.368**	.414**	1
	Sig. (2-tailed)	.001	.990	.817	.001	.001	.000	
	N	76	76	76	76	76	76	76
**. Correlation is significant at the 0.01 level (2-tailed).								
*. Correlation is significant at the 0.05 level (2-tailed).								

Source: Own survey result 2017

2. Correlations for Customer Relationship Management

		CR1	CR2	CR3	CR4	CR5	CR6
	Pearson Correlation	1					
	Sig. (2-tailed)						
CR1	N	76					
	Pearson Correlation	.407**	1				
	Sig. (2-tailed)	.000					
CR2	N	76	76				
	Pearson Correlation	.347**	.509**	1			
	Sig. (2-tailed)	.002	.000				
CR3	N	76	76	76			
	Pearson Correlation	.327**	.383**	.374**	1		
	Sig. (2-tailed)	.004	.001	.001			
CR4	N	76	76	76	76		
	Pearson Correlation	.123	.029	.042	.024	1	
	Sig. (2-tailed)	.289	.804	.719	.836		
CR5	N	76	76	76	76	76	
	Pearson Correlation	.160	.192	.024	.271*	.115	1
	Sig. (2-tailed)	.168	.097	.840	.018	.324	
CR6	N	76	76	76	76	76	76
**. Correlation is significant at the 0.01 level (2-tailed).							
*. Correlation is significant at the 0.05 level (2-tailed).							

Source: Own survey result 2017

3. Correlations for Work force Management

		WM2	WM2	WM2	WM2	WM2	WM2	WM2
	Pearson Correlation	1						
	Sig. (2-tailed)							
WM1	N	76						
	Pearson Correlation	.217	1					
	Sig. (2-tailed)	.060						
WM2	N	76	76					
	Pearson Correlation	.242*	.508**	1				
	Sig. (2-tailed)	.035	.000					

	N	76	76	76				
WM4	Pearson Correlation	.125	.260*	.266*	1			
	Sig. (2-tailed)	.281	.024	.020				
	N	76	76	76	76			
WM5	Pearson Correlation	-.096	.169	.280*	.390**	1		
	Sig. (2-tailed)	.407	.144	.014	.000			
	N	76	76	76	76	76		
WM6	Pearson Correlation	.303**	.288*	.133	.318**	.313**	1	
	Sig. (2-tailed)	.008	.012	.252	.005	.006		
	N	76	76	76	76	76	76	
WM7	Pearson Correlation	.434**	.242*	.096	.119	.250*	.547**	1
	Sig. (2-tailed)	.000	.035	.408	.306	.029	.000	
	N	76	76	76	76	76	76	76
*. Correlation is significant at the 0.05 level (2-tailed).								
**. Correlation is significant at the 0.01 level (2-tailed).								

Source: Own survey result 2017

4. Correlations for Product Management

		PM1	PM2	PM3	PM4	PM5	PM6	PM7
PM1	Pearson Correlation	1						
	Sig. (2-tailed)							
	N	76						
PM2	Pearson Correlation	.149	1					
	Sig. (2-tailed)	.199						
	N	76	76					
PM3	Pearson Correlation	.264*	.256*	1				
	Sig. (2-tailed)	.021	.025					
	N	76	76	76				
PM4	Pearson Correlation	.236*	.329**	.246*	1			
	Sig. (2-tailed)	.040	.004	.032				
	N	76	76	76	76			
PM5	Pearson Correlation	.422**	.360**	.255*	.521**	1		
	Sig. (2-tailed)	.000	.001	.026	.000			

	N	76	76	76	76	76		
	Pearson Correlation	-.018	.280*	.168	.301**	.275*	1	
	Sig. (2-tailed)	.879	.014	.147	.008	.016		
PM6	N	76	76	76	76	76	76	
	Pearson Correlation	.149	.369**	.123	.293*	.246*	.590**	1
	Sig. (2-tailed)	.200	.001	.292	.010	.032	.000	
PM7	N	76	76	76	76	76	76	76
*. Correlation is significant at the 0.05 level (2-tailed).								
**. Correlation is significant at the 0.01 level (2-tailed).								

Source: Own survey result 2017

5. Correlations for Product/Service Design

		PSD1	PSD2	PSD3	PSD4
PSD1	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	76			
PSD2	Pearson Correlation	.452**	1		
	Sig. (2-tailed)	.000			
	N	76	76		
PSD3	Pearson Correlation	.555**	.550**	1	
	Sig. (2-tailed)	.000	.000**		
	N	76	76	76	
	Pearson Correlation	.247	.526	.406	1
PSD4	Sig. (2-tailed)	.031**	.000	.000**	
	N	76	76	76	76

Source: Own survey result 2017

6. Correlations for Quality Information Analysis

		QI1	QI2	QI3	QI4	QI5
QI1	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	76				
QI2	Pearson Correlation	.592**	1			
	Sig. (2-tailed)	.000				
	N	76	76			
QI3	Pearson Correlation	.576**	.662**	1		
	Sig. (2-tailed)	.000	.000			
	N	76	76	76		
QI4	Pearson Correlation	.509**	.558**	.595**	1	
	Sig. (2-tailed)	.000	.000	.000		

	N	76	76	76	76	
QI5	Pearson Correlation	.472**	.516**	.507**	.500**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	76	76	76	76	76
**. Correlation is significant at the 0.01 level (2-tailed).						

Source: Own survey result 2017

7. Correlations for Business Performance

		BP1	BP2	BP3	BP4	BP5
BP1	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	76				
BP2	Pearson Correlation	.763**	1			
	Sig. (2-tailed)	.000				
	N	76	76			
BP3	Pearson Correlation	.813**	.799**	1		
	Sig. (2-tailed)	.000	.000			
	N	76	76	76		
BP4	Pearson Correlation	.654**	.810**	.715**	1	
	Sig. (2-tailed)	.000	.000	.000		
	N	76	76	76	76	
BP5	Pearson Correlation	.543**	.518**	.619**	.620**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	76	76	76	76	76

Source: Own survey result 2017

8. Correlations for Product Quality

		PQ1	PQ2	PQ3	PQ4
PQ1	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	76			
PQ2	Pearson Correlation	.685**	1		
	Sig. (2-tailed)	.000			
	N	76	76		
PQ3	Pearson Correlation	.669**	.753**	1	
	Sig. (2-tailed)	.000	.000		
	N	76	76	76	
PQ4	Pearson Correlation	.638	.701**	.720**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	76	76	76	76
**. Correlation is significant at the 0.01 level (2-tailed).					

Source: Own survey result 2017

9. Correlations for Operation Performance

		OP1	OP2	OP3	OP4	OP5	OP6	OP7
OP1	Pearson Correlation	1						
	Sig. (2-tailed)							
	N	76						
OP2	Pearson Correlation	.560**	1					
	Sig. (2-tailed)	.000						
	N	76	76					
OP3	Pearson Correlation	.583**	.342**	1				
	Sig. (2-tailed)	.000	.003					
	N	76	76	76				
OP4	Pearson Correlation	.425**	.104	.570**	1			
	Sig. (2-tailed)	.000	.372	.000				
	N	76	76	76	76			
OP5	Pearson Correlation	.536**	.500**	.533**	.350**	1		
	Sig. (2-tailed)	.000	.000	.000	.002			
	N	76	76	76	76	76		
OP6	Pearson Correlation	.451**	.271*	.459**	.404**	.407**	1	
	Sig. (2-tailed)	.000	.018	.000	.000	.000		
	N	76	76	76	76	76	76	
OP7	Pearson Correlation	.547**	.451**	.538**	.489**	.454**	.549**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	76	76	76	76	76	76	76
**. Correlation is significant at the 0.01 level (2-tailed).								
*. Correlation is significant at the 0.05 level (2-tailed).								

Source: Own survey result 2017

10. Correlations for Implementation Challenges

		IC1	IC2	IC3	IC4	IC5	IC6
IC1	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	76					
IC2	Pearson Correlation	.391**	1				
	Sig. (2-tailed)	.000					
	N	76	76				
IC3	Pearson Correlation	.282*	.136	1			
	Sig. (2-tailed)	.014	.243				
	N	76	76	76			
IC4	Pearson Correlation	.218	.248*	.452**	1		
	Sig. (2-tailed)	.059	.030	.000			
	N	76	76	76	76		
IC5	Pearson Correlation	.162	.280*	.391**	.404**	1	
	Sig. (2-tailed)	.163	.014	.000	.000		
	N	76	76	76	76	76	
IC5	Pearson Correlation	.265*	.257*	.400**	.535**	.515**	1
	Sig. (2-tailed)	.021	.025	.000	.000	.000	
	N	76	76	76	76	76	76
**. Correlation is significant at the 0.01 level (2-tailed).							
*. Correlation is significant at the 0.05 level (2-tailed).							

Source: Own survey result 2017

Appendix C

National Tobacco Enterprise (Eth.) S.C
Profit & Loss statement
For the Year ending from 2013 to 2016

Description	Fiscal Years			
	2013	2014	2015	2016
Net Sales	1,450,366,151	1,651,448,272	1,764,195,998	1,856,676,910
Less: Cost of Goods sold	1,072,663,198	1,203,454,547	1,301,596,169	1,284,283,394
Gross Operating Profit	377,702,953	447,993,725	462,599,829	572,393,516
Cost of sales to net sales (%)	73.96%	72.87%	73.78%	69.17%
Less: Expenses	59,537,613	74,496,157	72,489,226	89,222,482
Operating profit	318,165,340	373,497,568	390,110,603	483,171,034
Add: Other Income	2,051,117	3,908,406	3,802,671	2,892,672
Profit before Tax	320,216,457	377,405,974	393,913,274	486,063,706
Tax Expense	98,231,713	115,004,237	118,952,619	185,000,471
Net Profit after Tax	221,984,744	262,401,737	274,960,655	301,063,235

(Source: NTE. (Eth.) S.C Financial statements and performance reports.)

1. Net Sales before ISO certification(2013 budget year) was birr 1,450,366,151 and after ISO certification that is from 2014 to 2016 were birr 1,651,448,272, birr 1,764,195,998 and birr 1,856,676,910 respectively.

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2. Gross operating profit before ISO certification(2013 budget year) was birr 377,702,953 and after ISO certification, that is from 2014 to 2016 were birr. 447,993,725, birr 462,599,829 and birr 572,393 516 respectively.

3. Cost of sales to net sales is at reduced rate from 2013 to 2016 (except 2015) that is 73.96%, 72.87%, and 73 .78% and 69.17% respectively.

4. Input Material usage of Major items:-

- **Tobacco Leaf** usage per carton before ISO certification was 8.86 kg and after ISO certification from 2014 to 2016 were 8.80 k g, 8.75 kg, and 8.65kg respectively.
- **Casing Materials** usage per carton before ISO certification was 0.24 kg, and after ISO certification from 2014 to 2016 were 0.236 kg, and 0.231 kg, and 0.23 respectively.
- **Filter Rods 126mm** usage per carton before ISO certification was 1737.56pcs, and after ISO certification from 2014 to 2016 were 1727.37 pcs, 1719.91 pcs and 1707.35 pcs respectively.

- **Parceling paper** usage per carton before ISO certification was 0.34 kg, and after ISO certification from 2014 to 2016 were 0.336 kg, 0.324 and 0.33 kg respectively.

Appendix –D

Interview Questions

1. Why you are interested to implement ISO 9001:2008 QMS in your Company?
2. What is your ISO 9001:2008 QMS experience? Have you taken a company through registration?
3. How long you take to implement the QMS in Your Company?
4. Could you please explain to me the Mandatory procedures required by ISO 9001:2008?
5. What are the main benefits of implementing ISO 9001:2008 QMS?
6. How do you implement the eight principles of quality management systems?
7. What steps have you taken to implement quality management systems in your organization?

8. Do you have Quality Manual? And if so what items it contains?
9. How do you conduct the required gap analysis of your Organization?
10. Can a Company actually become efficient using ISO 9001 Certification?
11. What exactly is the certification process in accordance with ISO 9001