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The Effect of Total Quality Management Critical Success Factors on Organizational Performance

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Abstract:
It has been seen that due to globalization, technological changes and changing customer's needs and demands for better quality, Kombolcha textile manufacturing Share Company is facing severe competition by abroad textile businesses. In this dynamic business competition, customers never compromise on quality matters being it is one key strategic factor. However, to achieve high organizational performance, successful implementation of Total Quality Management is one of the peak advantageous requirements. The purpose of this study was to investigate the effect of total quality management on organizational performance by taking critical success factors top management commitment, customer focus, employee fulfillment, continuous improvement and organizational learning as independent variables. The research design was explorative and quantitative data obtained using rating scale questionnaire from 181 employees of the organization, and qualitative data from journals and books. The sampling technique was stratified and systematic sampling techniques. With the help of SPSS, data reliability, validity, correlation, factor loading and standard multiple regression analysis were made. The results of the analysis revealed that there were positive and significant effects of TQM on organizational performance. Hence, the company may adopt TQM in search of Organizational Performance.

Keywords: *Total Quality Management (TQM), Critical Success Factors (CSFs), Organizational Performance (OP)*

1. Introduction

Total quality management (TQM) has been a popular business strategy in many leading manufacturing organizations over the past few years. There are manufacturing firms in the world that have been successful, and some have been failed with TQM implementation. A large number of companies that have implemented TQM are large multinationals companies (MNCs) such as Hawlett-Packard (HP), International Business Machines (IBM), and Nokia (Babak*et al*., 2011).

To gain competitive advantages the production costs are expected to decrease, the product quality should improve, and the environmental impact reduced (Adele *et al*., 2011). Global international trade, the complexity of the over lapping effects on the process of decision-making in confronting constant changes led to a situation which is characterized by competition on markets and hence emphasis focused on total quality management practice (Sami *et al*.,2012).

The industry has been benefited from opportunities in the global market such as African Growth Opportunity (AGOA) giving quota and duty-free access to the USA market for sub- Saharan African countries. Among the factors that has been affecting the performance of Ethiopian garment industry; poor product quality and loose competitive position are the major ones (Selam, 2012). Implementation of total quality management helps or aids organizations to achieve the higher level of performance (S.M. Irfan and D.M.H. Kee, 2013; M. Shafiq, 2012*; M.M.* Movahedi *et al,* 2011*).*

Kombolcha Textile Share Company is implementing and following quality management system and one of the ISO 9001 QMS certified company since 2008. Even though QMS practiced in the organization, TQM policy and procedure never designed as QMS in the company. Due to the fact that TQM has been widely applied by organizations across the world and companies have to a great extent emphasized that quality must be put in place and integrated into all aspects of the organization to improve performance, the researcher was highly motivated to study the effect of TQM by selecting five critical success factors. The independent variables were selected to predict from management, customer, employees, continuous improvement and organizational learning perspective.

2. Statement of the Problem

Total quality management is a holistic quality improvement approach to firms for the purpose of improving performance (Gul et al., 2011; Hamid 2013; and Shekoufeh*et al*., 2013). Companies have pursued quality management implementation by tacking it as one of the competitive strategies for improving the business performance in a global market and intern would increase market share (Julian *et al*., 2014).

Total quality management (TQM) principles and techniques have been a well-accepted part of almost every manager's 'tool kit'(Musran,2013). According to Robert *et al* (2000), customers demand quality and competitors respond to such demands. Businesses turned to total quality management as a key to enhance overall performance. Quality award

programs like the Malcolm Baldrige National Quality Award from the United States, the European Quality Award, and Deming Prize from Japan, the Canadian Quality Award and the Australian Quality Awards were taken as a guide for those interested in implementing proven performance in their respective countries.

Generally, firms implement TQM to raise the competitive advantage and to increase the profit (Shekoufeh and Siavash, 2013). Competitive advantage designed by each organization have one or more of the following capabilities when compared to its competitors, such as lower prices, higher quality, shorter delivery time and these will enhance the organization's overall performance. Organizations can charge premium prices and increase their profit margin from sales growth and shorten return on investment (ROI), if they can able to offer the high-quality products consistently, so they will enjoy a higher market share (Musran*et al*., 2013).

Faisal et al., (2010) conducted comprehensive analysis on the relationship between total quality management and quality performance by which get across on 17 total quality management critical success factors (TQMCSFs) with major focus on quality performance but it was the limitation to see the effect of TQMCSFs on organizational performance. Researches which were conducted to test the impact of TQM practices on company performance by Shekoufeh and Siavash, (2013) and role of TQM on organizational performance Hamid*et al***,** (2013) indicate that there was a positive relationship between TQM practices and organizational performance.

Among large domain of TQM critical success factors, the researcher selected only five total quality management critical success factors to test their effect on performance. The CSFs adopted in this paper were top management commitment, customer focus, continuous improvement, employee fulfillment and organizational learning as predictor variables of organizational performance. The rational on the selection of variables were just to include factors from top management, customer aspects, employees' issues, continuous improvement of products and organization learning development issues regarding protecting mistakes not to appear again.

Kombolcha Textile Share Company is one of the ISOO 9001 and 14001 quality awarded or certified Textile Company. ISO 9001 is a global acknowledged quality standard with point of departure in TQM fundamentals. The company has implemented quality management programs in all its operational areas. The implementation of total quality management has been never adopted in the company to boost organizational performance. Therefore, this study attempts to statistically measure the effect of total quality management critical success factors on organizational performance in Kombolcha Textile Manufacturing Share Company.

3. Research Hypothesis

The hypothesis of the research was the domain of the total quality management critical success factors and their effect on the organization performance. The list of variables that the researcher attempts to test formulated as follows:

- H_1: Top management commitment has a positive effect on organizational performance.
- H2: Customer focused production has a positive effect on organizational performance
- H3: Continuous improvement has a positive effect on organizational performance.
- H4: Employee fulfillment has a positive effect on organizational performance.
- H5: Organizational learning has a positive effect on organizational performance.

4. Definition of Terms and Concepts

4.1. Total Quality Management

Is an integrated management philosophy aiming at continuous improvement in all functions of an organization to produce products in line with customers' needs and requirements? It focuses on improving the organization's performance to customers' and achieving sustained improvements to organizational Performance (Karoline et al., 2013).

4.2. Top Management Commitment

Top Management has proved to be the key in the continuous quality improvement process and of quality management practices (Singla et al., 2011). It is explained in terms of long terms of clarity of vision (Masood, et al., 2014) and the allocation of resources TQM implementation with open communication system (Karoline et al., 2013).

4.3. Customer Focus

Meeting the needs and requirements of customers is the main focus of TQM. Efforts by companies must not be only restricted to merely meeting specifications, reducing defects and errors or eliminating complaints, these must emphasize designing new products and responding rapidly to changing consumer and market demands (Singla et al., 2011).

4.4. Employee Fulfillment

Employee fulfillment is the propensity of an organization to satisfy the needs of their employees continually and it is exemplified by job commitment, job satisfaction, pride of workmanship and the existence of training and development programs in the company (Masood et al., 2014).

4.5. Continuous Improvement

The organizational capability to pursue incremental and innovative improvements of its products and is exemplified by continuous improvement of products (Massod*et al*., 2014). It is the best way to improve continually organizational outputs (Alexandros G. and Constantinos Vasilos, 2007).

4.6. Organizational Learning

It is companywide educational development, process knowledge, training, foundational knowledge, managerial learning and continuous self-improvement (Masood*et al*., 2014). It is the development of an organizational learning mechanism that enables the company to learn from their past mistakes not to appear those mistakes again in the organization (Gul*et al*., 2011).

4.7. Organizational Performance

Encompasses the measurement of three specific areas of the company outcomes in terms of financial performance (return on investment) and market performance (sales growth, market share)(Suhong*et al*., and 2004).

5. TQM and Other Operation Management Practices

There were many forms of best management practices in operation management and several companies have applied TQM critical success factors in order to increase their chances of competition (Kamyar*et al.*, 2014). The delay in execution of TQM could hinder organizations from being innovative (Daniel and Amrik, 2014). From all operations management practices, one of the best that bring the attention in the last two decades was Total Quality Management (TQM) (Musran and *et al*., 2013). But there are some manufacturing firms that have been successes, and some have been failed with TQM implementation (Salman *et al*., 2011).

According to Suhong*et al*, (2004), the understanding and implementation of supply chain management has become an essential prerequisite for staying competitive in the global race and for enhancing profitably to improve the performance of an individual organization, and performance along the supply chain. The goal of SCM is linking both information and material flows across the supply chain as an effective competitive strategy. Alan *et al*., (2011) argued that Supply chain management is collaborative strategy among supply chain firms, capture cost savings, fulfill customer satisfaction, facilitate synergies creation, add values to all supply chain partners and ultimately to remain competitive. Both TQM and SCM require participation from all internal functions and continuous collaboration with all external partners. SCM is complex and involves a network of companies in the effort of producing and delivering a final product. However, TQM focuses more on internal participation whereas SCM places more emphasis on external collaboration.

The other production operations management practice is Lean Manufacturing is a production practice that considers the expenditure of resources for any goal other than the creation of value for the end customer to be wasteful and thus a target for elimination. It was originally from the Toyota Production System (TPS) whereas; TQM is characterized by increased customer satisfaction through continuous improvement, in which all employees in the companies participate actively (Alireza*et al*., 2011).

The third operation management practice is Six Sigma. The primary objective of the Six-Sigma Management tool is the implementation of a measurement-based strategy, which focuses on process and sub-processes improvement through the application of Six-Sigma best practice i.e. DMAIC and DMADV. The Six-Sigma DMAIC (Define, Measure, Analyze, Improve, and Control) approach is applied for improving existing processes and looking for incremental improvement.

The Six-Sigma DMADV approach is applied for developing new processes or products at Six-Sigma quality levels. The success of this methodology within an organization has significant momentum that can only lead to fundamental organizational cultural transformation (Karoline and Anne, 2013; Satish and Punjab, 2014). According to Satish *et al*., (2014) that Six-Sigma is a fashionable method of management, but if organizations want to obtain dramatic benefits from the implementation, they must enhance the implementation of the critical success factors and highlighted that continuous improvement techniques are the recognized way of making significant reduction to production costs.

6. Total Quality Management and Organizational Performance

Organizational Performance measurement is very important for effective management in organization. According to Deming without measuring something, it is impossible to improve the upcoming implementations of the company. Deming also identified 14 principles of quality management to improve productivity and performance of the organization. The importance of total quality control to improve organizations' performance also emphasized. Organizational performance refers to how well an organization achieves its market-oriented goals as well as its financial goals with respect to the planned Total Quality Management programs (Musran*et al*., 2013).

A number of prior studies have measured organizational performance using both financial and market criteria, including return on investment (ROI), market share, and growth of sales, (Suhong*et al*., and 2004). In line with the above literature, the same items will be taken by the researcher to measure organizational performance in this study.

The most commonly used methods for measuring organizational performance it might be placed within operational, financial and non-financial performance. Operational performance concerns the internal operations of the organizations; financial performance comprises financial measures whereas non-financial performance includes elements such as competitive profile and successful product development (Karoline and Anne, 2013).

It is considered to be an effective way to bring about radical changes in philosophy and style in the way work is done in order to achieve the highest levels of quality and to be used as a bridge to higher customer satisfaction and retention because any loss of any clients or customers may put the future of the organization and its survival at risk (Sami *et al*., 2012).

According to C. Lakshman (2006) a research on #A Theory of Leadership for Quality;; there are three generally accepted core principles of total quality management i.e. customer focus, participation and teamwork, and continuous improvement provide the building blocks of the theory of leadership for quality, with the associated values and behaviors of leaders.

Total quality management practices can be applied either in manufacturing or service, public or private. If properly analyzed in business specific context, designed and implemented, TQM can help private firms to attain competitiveness both in domestic and international markets, and it can enable nations to achieve their economic growth ultimate objectives (Neeta, 2013).

7. Empirical Studies on Total Quality Management

Global economic competitive environment induces the organizations to become customer focused and meet the rising demands of customers. The implementation of Total Quality Management (TQM) at all levels had become a source of competitive advantage for the organizations. The key factor that contributes in success of TQM implementation is termed as Critical Success Factors (S.M. Irfanand D.M.H. Kee, 2013).

Empirical study conducted by Musran (2013) on the impact of total quality management practices towards competitive advantage and organizational performance by taking leadership, strategic planning, customer focus, information and analysis, people management, process management, and supplier management variables as total quality management critical success factors shows that total quality management (TQM) practices has significant effect toward organizational performance. The results for the mean value of research variables show that leadership has very high (4.45), strategic planning high value (4.11) followed by information analysis (4.10) and customer focus (3.88) but process management as a lower indicator (3.20). The result also confirms that the implementation TQM critical success factors may directly improve an organization's financial (ROI) and marketing (sales growth and sales) performances.

More to these top management and quality managers regarded TQM as the first priority for the survival of the companies. Appropriate implementation of TQM critical success factors can produce benefits such as understanding customers' needs, improved customer satisfaction, improved internal communication, better problem solving and fewer errors.

The success of TQM program can increase when its implementation is extended to the overall company. Thus, effective implementation of TQM is valuable asset in each organization.

According to Alemu et al (2011), the results of the research shows that low quality means high costs; and companies without continuous improvement philosophies may not improve their business performance in long-term. Since the basement of continuous improvement is TQM, thinking towards improvement of business performance without TQM and related change practices are difficult and offended. The research also confirms that QM critical success factors improve overall business performance by Reducing operation costs and increasing resource utilization by eliminating problems at their sources before they cause big damages in the business process, motivating workers to do things right first time and Increasing employees' skill, capability and productivity with providing necessary training & education.

The other research on the assessment of TQM Dimensions and their relationship with firm performance by Masood et al (2014) by taking critical success factors continuous improvement, employee fulfillment, organizational learning, customer focus, leadership, organizational leadership and process management shows that each construct of TQM is positively and significant impact on firm performance.

According to Karoline and Anne (2013) empirical research on effects of TQM Critical Success Factors in organizational performance in small and medium sized manufacturing companies, tacks constructs top management commitment, supplier quality management, people management, Customer focus, process management and quality data and reporting. The results of the empirical analysis show the relative importance of the independent variable, Customer focus, in predicting the dependent variable organizational performance, is thus fairly high, compared to the predictive capabilities of the independent variable top management commitment.

Extensive focus on the importance of customer focus and customer satisfaction throughout the literature of TQM, it comes as no surprise that a significant and positive relationship between customers focus and organizational performance.

Concerning the relation between top management commitment and organizational performance, resulted the exogenous variable and TQM critical success factor, top management commitment, thus has a strong influence on the prediction of the dependent variable organizational performance, despite the influence being relatively smaller compared to Customer focus.

Training and education programs at all levels are vital to success of TQM. It should cover all aspects of TQM, from the general concepts, through the development of customer focus as a merit, to the measurement of quality and should include information about effective team-based action on production and use of problem-solving techniques and it helps in successful implementation of quality culture. One of the main focuses of TQM is to meet the needs and necessities of customers (Singla et al., 2011).

A research conducted by A.Addae(2013) on total quality management as a source of competitive advantage, with a broad strategic view noted the problems of total quality management implementation as industries do not have even single perception of quality, lack clear vision, mission, and hard institutional policy, lack of time, resources and more attention on short term goals than aspiring the long ones, the process of achieving total quality management is complicated and require time to change the employees traditional quality concept. Opposition to change and lack of commitment is some of the challenges faced in TQM implementation (Karani and Bichanga, 2012).

8. Total Quality Management Critical Success Factors

8.1. Top Management Commitment

Leadership is the most important element for achieving TQM and inspirational vision of managers like, strategic direction which will be understandable for all the employees, setting values which will lead the lower level employees and dedication from the managers in leading the employees.

In the first place, manager has to understand the policy of TQM, to believe in it, then he has to demonstrate his belief and dedication through his daily practice. The leader promotes the importance of quality in the organization, provides conditions for continuous education and training of employees, as well as maintaining constant contacts with the employees, consumers and suppliers (Serafimovska and Siavash, 2011).

Top management has the role in defining the strategic views of the company like a vision, mission, strategic objectives, and shared values for the organization's growth and development. In quality management context, the visionary leaders need to emphasize transformation, and open communication to achieve a shared approach to the change (Muhammad, 2010).

Top management, unlike internal management control, is the management task of maintaining and practicing a vision of the organization with respect to customer requirements. Examples of visionary management are ''clarity of vision, long-range orientation, coaching management style, participative change, employee empowerment, planning and implementing organizational change''

The growing literature on total quality management stresses the importance of TQM to organizational performance and has repeatedly stressed the lack of leadership support for the failure of many TQM initiatives.

Some investigators have examined the implementation of total quality management and its impact on organizational performance C. Lakshman*et al*., (2006). Many believe that the worldwide effort to improve the quality of products and services through the application of TQM principles represents a fundamental change in management style and philosophy that will dramatically alter the way successful enterprises are managed (Ali 2012).

The main instigator of QM implementation is senior management, which creates the values, goals, and systems needed to meet customers' expectations and improve the performance of the organization by the help of the most valuable resources i.e. employees and they should receive adequate training regarding their company's policies and methods (Masood*et al*., 2014; Abdulrahman, 2013).

Similarly,Shekoufeh and Siavash (2013), the senior management must understand the purpose and principles of TQM and should also consider the internal strategic management processes, training and development, participation of their staff, and their own role in implementing the TQM approaches in managing the OP.

Quality work and continuous improvements should start with committed leadership, and involvement of the top management as it is highly crucial for creating an organization culture for quality, defining organizational quality values and goals, and providing necessary resources and infrastructure for operating a quality management system (Gul*et al*., 2011).

8.2. Continuous Improvement

The total quality management concept aims to satisfy the changing needs of customers by continuous improvements. The organizational capability to pursue incremental and innovative improvements of its products, services, processes and is exemplified by continuous improvement (Masood*et al*., 2014). TQM theory is the best way to improve continually organizational performance (Alexandros G. and Constantinos Vasilos, 2007).

It is a dynamic process and there should be an essential part of any business strategy and everyday practice and the implementations of these concepts require a blend of creativity, clear thinking, and the ability to get things done. It requires thinkers and doers to work closely together (Z. Irani*et al*., 2004). The top management commitment to continuous improvement and innovation historically originated in manufacturing firms; but it was spread quickly to the service business sector (Musran 2013). Similarly, Shekoufeh*et al*., (2013) also agree that implementation of a Total Quality Management (TQM) system enhances the innovation process in organizations due to TQM elements such as continual improvement or customer focus.

8.3. Organizational Learning

Organizations knowledge and skills are essential for improving quality. It is the degree to which organization identify and develop its knowledge base, abilities and skills. It is illustrated by companywide educational development, process knowledge, training, foundational knowledge, managerial learning and continuous self-improvement (Masood*et al*., 2014). According to Gul*et al*., 2011), the development of an organizational learning mechanism enables companies to learn from their past mistakes not to appear those mistakes again in the organization. Based on this, learning is vital in continually improving the existing processes within an organization in order to meet the expectations of the customer and thereby create competitive advantage.

8.4. Employee Fulfillment

Concern for employees is another focus of TQM and it aims to motivate employees to improve quality by full filling needs of employees. Employee fulfillment is the propensity of organization to satisfy the needs of their employees continually. This is exemplified by job commitment, job satisfaction and pride of workmanship (Masood et al., 2014).

8.5. Customer Focus

Literature provides customer-centered definition of quality. The quality of a product is measured on the ability to satisfy stated or implied needs of customers. Sadia*et al., (*2013) described that customer focus as how efficiently the organization determines the current and future need of customers, their requirements and expectations. Customer focus is maintaining close relationship with customers to understand them, their needs and supplying the products meeting the customer needs is necessary for TQM implementation. The increasing focus on the creation of competitive advantages, quality ought to be defined from an external perspective of customer expectations, rather than from predetermined internal specifications, focusing on target market needs, increasing in customer satisfaction and reducing cost are the benefits of total quality management implementation (Karoline and Anne, 2013).

9. Research Conceptual Frame Work

The research framework modified and developed by the researcher indicated in fig 2.1. The framework shows that TQM critical success factors which can define as organizational performance as a predictor variable.

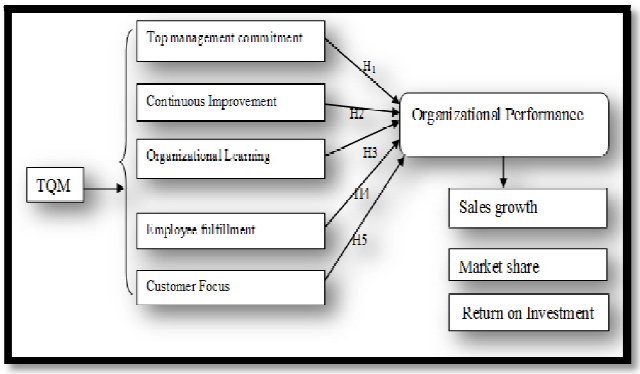

Figure 1: Research Framework Modified from Masoodet Al (2014)

10. Data Variables Measurement

The study survey questionnaire was used five-point Rating scale for scoring responses (5 = strongly agree; 4= agree; 3 = neutral; 2 = disagree; 1 = strongly disagree). For the ease of interpretation of the results of the questionnaire, the scale is changed into interval class as follows: (1) 1.00 to 1.80 = Very Low; (2) 1.81 to 2.60 = Low; (3) 2.61 to 3.40 = high enough, (4) 3.41 to 4.20 = High; and (5) 4.21 to 5.00 = Very High (Musran et al. 2013; Tarinee et al., 2007).

11. Polynomial Regression Model

The output of the analysis was formulated in linear regression equation. The proposed polynomial regression model equation:

Organizational Performance (Y) = $a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5$

Where a= y-intercept when x=0

Y= Organizational performance

b_1 - b_5 = Coefficient of Variables

$x_1 - x_5$ = Values of Variables

12. Data Quality Measurements

12.1. Reliability and Validity of Preliminary Survey

There were two variables studied, namely: Total Quality Management (TQM) critical success factors, and organizational performance. Total Quality Management (TQM) critical success factors were taken as independent variables. While, organizational performance is dependent variable. Five items were used to measure TQM critical success factors in organizations based on the constructs top management commitment (Karoline Borum and Anne Fomsgaard *et al.,* 2013; Faisal *et al.*,2010; customer focus Hamid *et al.,*2013; Musran, 2013; Faisal *et al.*,2010);continuous improvement (Sadia*et al.,*2014; S.M. Irfan and D.M.H. Kee*et al.,* 2013;S.M. Irfan and D.M.H. Kee*et al.,*2013; Singla et al., 2011; Faisal *et al.*,2010; Tito A. Conti, 2007), employee fulfillment (S.M. Irfan and D.M.H. Kee*et al.,* 2013); Sadia*et al.*,2014; Faisal *et a.l.,*2010) and organizational learning (Sadia*et al.,* 2014;Shekoufeh and Siavash, 2013; Faisal *et al.*, 2010). The dependent variable organizational performance was measured based on the financial performance measurement aspect return on investment (ROI),and market performance measurement sales growth and market share (Musran, 2013).

The variables validity instrument was tested by Pearson Product Moment Correlation. Based on the reliability and validity preliminary survey, both critical success factors construct has a correlation above 0.3, ranging from 0.617 to 0.790 and organizational performance indicator variables has also a correlation greater than 0.3 ranging from 0.773 to .830 which shows both valid variables (Musran et al., 2013).

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S/N	Code	Variables/Indicators	Corrected item total correlation	Cronbach's α	Description
1		TQM Critical Success Factors		0.867	Reliable
1.1	TOPMGT	Top Management Commitment	0.617	0.849	Valid
1.2	CUSFOCUS	Customer Focus	0.665	0.736	Valid
1.3	EMPFULL	Employee Fulfillment	0.628	0.794	Valid
1.4	CONTIMPRO	Continuous Improvement	0.790	0.809	Valid
1.5	ORGLEAR	Organizational Learning	0.759	0.739	Valid
2		Organizational Performance		0.893	Reliable
2.1	SAGR	Sales Growth	0.787		Valid
2.2	MARSH	Market share	0.830		Valid
2.3	ROI	Return on investment	0.773		Valid

Table 1: Reliability and Validity of Preliminary Survey Model
Source: Survey Result, 2015

The reliability of the preliminary survey was pre-tested based on Cochran sample size pre – test a pre sample n = 30 Hamid et al., (2013) and accordingly a preliminary survey was taken from 30 samples. Reliability of constructs was tested with Cronbach's Alpha. The reliability of total quality management critical success factor constructs revealed 0.867 and reliability of the dependent variable 0.893. The cut off point for Cronbach's Alpha were taken as > 0.70 or greater as indicating a reliable scale (Perry R., 2004; Nunnally, 1978 cited at Juliet, 2005; Nunnally, 1970 cited at Karani and Bichanga, 2012). Hence it can be concluded that the instrument used in this study was valid and reliable to carry on the remaining data collection, discussion and analysis of the research processes.

12.2. Reliability and Validity of the Final Sample

The research design projected that the number of sample size was 183 respondents. The actual Reponses counted while collecting the questionnaires were 181(98.9%). The reliability of the preliminary pretest confirms that the data either reliable or valid. Accordingly, the quality of the measurement instruments of the final research sample on constructs was tested and it was both valid and reliable. Table 4.4 shows the results of scale reliability test on dependent and independent variables.

The reliability of total quality management critical success factors based on Pearson product movement Cronbach'sα is 0.868 which indicates that it was reliable. In the same measurement tool, the reliability of the dependent variable organizational performance is 0.915 which conforms reliable (Karoline et al., 2013). In the same data analysis, the validity of both dependent and independent measurement indicators was tested. The result of the analysis indicates that the corrected item correlation of validity of independent and dependent variables ranging from 0.639 to 0.773 and 0.816 to 0.848 respectively. The final research sample data validity was greater than 0.3 and hence it is valid (Masood, 2014; Musran et al., 2013; Karoline et al., 2013).

S/N	Code	Variables/Indicators	Corrected item total correlation	Cronbach's α	Description
1		TQM Critical Success Factors		0.883	Reliable
1.1	TOPMGT	Top Management Commitment	0.752	0.889	Valid
1.2	CUSFOCUS	Customer Focus	0.688	0.775	Valid
1.3	EMPFULL	Employee Fulfillment	0.680	0.814	Valid
1.4	CONTIMPRO	Continuous Improvement	0.786	0.829	Valid
1.5	ORGLEAR	Organizational Learning	0.772	0.779	Valid
2		Organizational Performance		0.915	Reliable
2.1	SAGR	Sales Growth	0.816		Valid
2.2	MARSH	Market share	0.848		Valid
2.3	ROI	Share Return on investment	0.821		Valid

Table 2: Reliability and Validity of Final Sample Model
Source: Survey Result, 2015

12.3. Research Variables Mean Values and Measurement

The researcher defined the criteria to measure the level of variables using five level rating scales. In the discussion of the results, the variable value was defined by utilizing width of class interval (Musran 2013; Tarinee et al., 2007) as follows:

Interval width of each level = the highest score – the lowest score
Interval number
= 5-1 = 0.8
5

Strongly Agree(5)	Agree (4)	Average (3)	Disagree (2)	Strongly Disagree (1)
4.21-5.00	3.41-4.20	2.61-3.40	1.81-2.60	1-1.80

Table 3: Width of Class Interval

The respondents have as explained above has different demographic characteristics and the level perception of respondent on total quality management constructs can be seen from mean value of variables.

Based on table 4.6, the majority of the total respondents gave importance to total quality critical success factor customer focus valuable indicator would be selected (X =4.04), followed continuous improvement (X =3.92), organizational learning (X =3.90), top management commitment (X =3.76), and employee fulfillment (X =3.41). Respondents replied that organizational performance among indicators in this thesis has mean values sales growth (X =4.11), market share (X =4.09), return on investment (X =3.95). The values of the mean values for critical success factors and organizational performance indicators shows high values based on the stated measurement.

S/N	Variables	Mean(X)	Description
1.	TQM Critical Success Factors	**3.81**	High
1.1.	Top Management Commitment	3.76	High
1.2.	Customer Focus	4.04	High
1.3.	Employee Fulfillment	3.41	High
1.4.	Continuous Improvement	3.92	High
1.5.	Organizational Learning	3.90	High
2.	Organizational Performance	**4.05**	High
2.1	Sales Growth	4.11	High
2.2	Market Share	4.09	High
2.3	Return on Investment	3.95	High

Table 4: Results for Mean Value of Research Variables
Source: Survey Result, 2015

12.4. Data Normality, Linearity and Homoscedasticity Test

In the Fig 4.4 shown all points neatly arranged in a narrow cigar shape. This suggests there is a quite strong relationship or correlation among variables. The normal probability of the regression standardized residuals graph presents that points were lie in a straight diagonal line from bottom left to top right. This indicates us that there were no major deviations from normality. The relationship between predictor and criterion variables were linear roughly straight line on the scatter plot score.

Fig.4.3. On the other hand, the shape of the cluster it starts off narrow and then gets fatter, this implies that the data not violating the assumption of homoscedasticity and this indicates a positive relationship, high scores on the predictor variables axis associated with high scores on dependent variable. Likewise, the Scatter plot reveals that residuals were roughly rectangular distribution with most of the scores accumulated in the center (Julie 2013). Hence there was no violation of the model and there was linearity between variables.

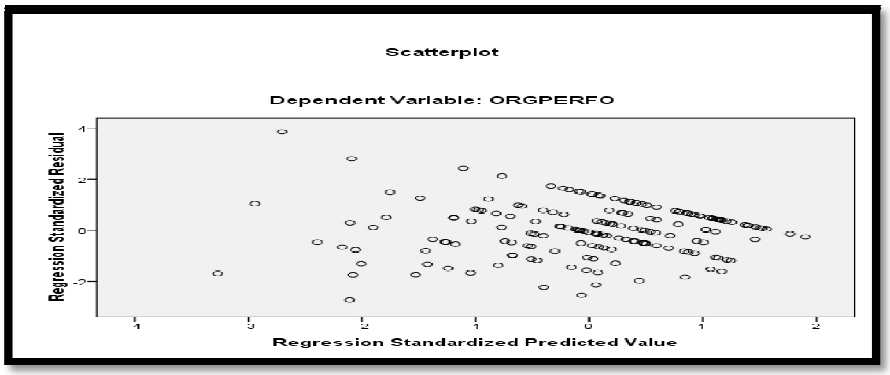

Figure 2: Scatter Plot on Independent Variables Vs Dependent Variable
Source: Survey Result, 2015

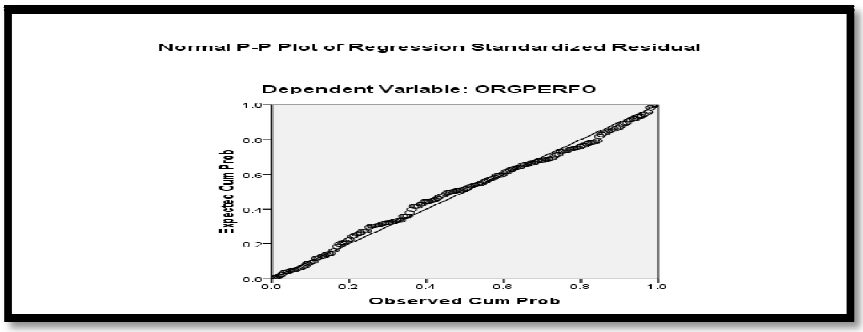

Figure 3: Normal Probability Plot of Regression Standardized Residual
Source: Survey Result, 2015

13. Research Variables Relationship Analysis

In the theoretical discussion part of the research, it was indicated that the relationship of total quality management critical success factors with organizational performance. Table 4.7 shows the means, standard deviations and provides a correlation matrix of the constructs. The matrix confirms that every dimension of TQM construct has statistically significant correlation (**correlation is significant at the 0.01). Moreover, Matrix of correlation confirms that all the critical success factor variables are positively and significantly correlated with each other. The increase on one of the total quality management critical success factors results a positive increase on the other variable and vice versa.

This implies that the application of one of the variables over the other while TQM implementation for organizational performance in this construct results an increase on the other factor to boost performance either on sales growth, market share and return on investment of the company. The relationship of the variables with organizational performance is large, except the relationship of customer focus and continuous improvement with organizational performance was medium and all variables correlate with dependent variable positively (Cohen, 1998 cited at Julie, 2005).

TQMCSFs	Mean	SD	TOP MGT	CUSFCUS	EMFULL	CONTIPRO	OGLEAR	ORGPERFOR
TOPMGT	3.76	1.02	1					
CUSFOCUS	4.04	.73	.59**	1				
EMPFULL	3.41	.98	.65**	.48**	1			
CONTIPRO	3.92	.78	.63**	.69**	.61**	1		
ORGLEAR	3.86	.70	.66**	.61**	.58**	.74**	1	
ORGPEFOR	4.05	.88	.50**	.49**	.36**	.60**	.63**	1

Table 5: Correlation Analysis Matrix

*Note: **Correlation Is Significant at the 0.01 Level; Topmgt=Top Management, Cusfocus=Customer Focus, Emfull=Employee Fulfillment; Contimpro= Continuous Improvement; Orglear=Organizational Learning, Orgperfor=Organizational Performance*
Source: Survey Result, 2015

14. Research Variables Coefficient of Determination Analysis

Table 4.7 indicate statistically significant results ($p < .05$) with positive correlation (r) values among independent variables ranging from .48 to .74, correlation of predictors with criterion variable range from .36 to .63. Although the context of these variables varies from top management commitment, Customer focus, continuous improvement, employee fulfillment, and organizational learning but it conveys the message that TQM critical success factors has positive relationship with firm performance (Masood et al., 2014).

The coefficient of determination (r^2) of the independent variable top management commitment has 25.0% of the variance, customer focus 24.0% of the variance, employee fulfillment 13.0% of the variance, continuous improvement 36.0% of the variance and organizational learning 40.0% of the variances to explain organizational performance. The value of R^2 generated in this paper resulted in a value of 0.454, indicating that the five independent constructs are capable of explaining 45.4% of the variance in the dependent variable, Organizational performance. Research studies with R^2 values ranging from 0.32 to 0.56 considered as satisfactory (Karoline 2013).

15. Principal Component Analysis of Variables

The 25 items of both the dependent and independent variables were subjected to principal component analysis (PCA) using SPSS. Before it has been performing PCA, the suitability of data for factor analysis has been assessed. Inspection of correlation matrix table 4.7 indicates the existence of many coefficients of .3 and above. The Kaiser-Meyer-Oklin value on table 4.9 was .911 which indicate Measure of Sampling Adequacy and exceed the recommended value of .6 and reached statistical significance (P<.05), hence the factor analysis was appropriate and supporting the factorability of the correlation matrix (Masood et al., 2014; Julie et al. 2005).

In addition to assessing the collective reliability, the reliability of each of the variables must be assessed by means of the individual correlations between variables. An adequate correlation between the independent variables and dependent variable is important in order to ensure that the latent construct is reacted in the manifest variables. The reliability of the individual independent variables is evaluated on the basis of how much each of the dependent variable

and variables with loadings below 0.40 should always be eliminated from reflective scales, as the correlations might be subscribed to coincidences instead of true identifiable relations (Kroline et al., 2005). The factor analysis of the thesis was never with score loading of below .527 and accepted with no elimination from the scale.

Indicator/Variables	List of Items/Factors	Factor Loading
Top Management Commitment (α = .881)	. Management committed to the TQM Philosophy . Allocate resources for TQM implementation . Visionary leaders to implement Change . Communication system in the company	.718 .695 .747 .724
Customer Focus (α = .775)	. Follows up on customers complaints . Company focused on customer satisfaction . Periodical Market study . Management believes to meet customer needs	.610 .614 .563 .631
Employee Fulfillment (α = .814)	. Effectiveness of training programs on TQM . Reward system in the organization . Employees satisfaction on the implementation of TQM . Employees commitment to TQM implementation	.640 .595 .636 .527
Continuous Improvement (α = .829)	. Continuous improvement of systems . Improve products on an ongoing basis . Management believes on continuous improvement . Integrated process to improve quality . Participation of all employees to improve performance	.573 .726 .700 .550 .693
Organizational Learning (α = .769)	. Continuous learning to protect mistakes . Continuously improving learning to meet customer expectations . Organizational learning developed for competition . Managerial learning to improve quality . Continuous self-improvement on employees	.643 .620 .631 .648 .607
Organizational Performance (α = .915)	. Sales growth of the company . Market share of the company . Return on investment of the company	.685 .671 .669

Table 6: Component Factor Analysis Matrix
Source: Survey Result, 2015

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.911
	df	300
	Sig.	.000

Table 7: KMO Test
Source: Survey Result, 2015

16. Standard Multiple Regression Analysis

To analyze the effects of critical success factors on organizational performance, the research procedure was carried out linear regression of total TQM critical success factors as independent and organizational performance dependent (sales growth, market share and ROI) factors. Based on the analysis generated in table 4.10, the regression analysis result of the separate dependent variable factors, the adjusted R Square results of each indicates that critical success factors explained 37.50% of the variance in sales growth, 35.20% of the variance in market share and 39.90% of variance in ROI. In the other hand, each of the total quality management critical success factors are positively related to organizational performance constructs sales growth, market share and ROI. Moreover, the models' respective F values are significant at P<.05.

Dependent Variable Factors		
Sales Growth	Market Share	ROI
Adj.R^2F	Adj.R^2FAdj.R^2F	
.375 22.626*	.352 20.592*	.399 24.872*

Table 8: Regression Analysis of Dependent Variables
Source: Survey Result, 2015

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.674[a]	0.454	0.439	0.65911	1.777

Table 9: Regression Analysis Model Summary
Source: Survey Result, 2015

The separate dependent variable analysis as indicated in table 4.10 with the variance change of each dependent variables of organizational performance. Table 4.11 also shows that the TQMCSFs independent variables top management commitment, customer focus, continuous improvement, employee fulfillment and organizational learning in the model define 45.40% of the variance in organizational performance. More to this, the regression analysis ANOVA Table 4.12 indicates us the statistical significance F (5, 175) = 29.12, at 5%.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	63.253	5	12.651	29.120	.000[a]
	Residual	76.025	175	.434		
	Total	139.278	180			

Table 10: Anova Regression Analysis
Source: Survey Result, 2015

17. Effect Size of Variables on Performance

The evaluation of the construct variables R^2 values indicate that, the change in R^2, following an omission of one of the specified independent variables from the model, can be applied to evaluate whether the omitted construct has a considerable impact on the dependent variable organizational performance. This measure is referred to as the effect size (f^2) and is calculated as follows:

$$f^2 = \frac{R^2 \text{ included} - R^2 \text{ excluded}}{1 - R^2 \text{ included}} \quad \text{---------- (4.1)}$$

The values of R^2 included and excluded were calculated by omitting one of the variables to measure its effect on the criterion variable. According to Cohen (1998) cited at Karoline (2013), f^2 effect size values of 0.02, 0.15 and 0.35, represent small, medium and large effects of the predictor's variables on organizational performance respectively. Therefore, top management commitment, employee fulfillment, and continuous improvement have medium effect, organizational learning largest effect but customer focus was small effect on organizational performance in this construct.

Measure	TOPMGT	CUFOCUS	EMPFULL	CONTIMPRO	ORGLEAR
R2 Included	.454	.454	.454	.454	.454
R2 Excluded	.446	.453	.443	.423	.398
Effect Size(f^2)	.022	.002	.02	.057	.103

Table 11: Effect Size of the Variables on Performance
Source: Computation of Variables from SPSS Output, 2015

18. Research Hypothesis Test

18.1. Top Management Commitment and Organizational Performance

Concerning to hypothesis H1, the top management commitment has positive effect on organizational performance; variables top management philosophy on TQM, allocation of resources for TQM implementation and effective communication system were taken as top management commitment indicators. To find out the effect of top management commitment on organizational performance, the researcher used standard multiple regression analysis at a significant level of 5%.

Predictor Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	r^2
	B	Std. Error	Beta			
(Constant)	0.696	0.311		2.24	0.026	
TOPMGT	0.219	0.074	0.186	1.599	0.012*	0.25
CUSFOCUS	0.172	0.099	0.201	1.73	0.028*	0.24
EMPFULL	0.131	0.071	0.141	1.845	0.033*	0.14
CONTIMPRO	0.215	0.11	0.242	2.873	0.005*	0.36
ORGLEAR	0.373	0.113	0.23	4.191	0.000*	0.40

Table 12: Standard Multiple Regression Analysis
Source: Survey Result, 2015
**Significant at 5%*

- H_1: Top management commitment has a positive effect on organizational performance

The output of the regression analysis on table 4.14 shows that top management commitment explained 25 percent of the variance in organizational performance. Moreover, beta coefficient and t values are significant (r = 0.5, t = 1.599, β= 0.219, p <.05) which confirm top management commitment has a positive effect on organizational performance and hence H1 is supported.

It is confirmed that responsibility by the top management, in determining a well-adapted and quality focused organizational culture, vision and overall quality policy, is positively linked to organizational performance within the manufacturing industry, through top management commitment Karoline (2013). In continuation hereof, an organizational wide communication by top management of unambiguous quality objectives, as well as the allocation of adequate resources aimed at fulfilling these quality objectives and it is the most important element for achieving TQM and inspirational vision of managers (Serafimovska and Siavash, 2011).

Top management has also the responsibility to define the vision, give emphasis on transformation, and open communication to achieve a shared approach to the change Mohammed (2010). Top management commitment has a significant and positive effect on TQM implementation. It is the major driver for TQM movement in the organization (S.M. Irfan *et al*., 2013). If properly implemented it results improved internal communication, better problem solving and fewer errors (Musran, 2013). In addition to this, Prior researches on total quality management by Karoline and Anne, (2013) support that top management commitment has effect on organizational performance.

18.2. Customer Focus and Organizational Performance

On the survey questionnaire, the research was focused on sub variables comprises of follow up of the company on customer complaints, customer satisfaction, follow up on periodical market study and believes of management on quality to meet customer needs as a tool to measure customer focus.

Given the extensive focus on the importance of customer focus and customer satisfaction throughout the literature of TQM, it comes as no surprise that a significant and positive relationship between customers focus and organizational performance.

- H_2: Customer focused production has a positive effect on organizational performance

The regression analysis on table 4.14 shows that customer focus explained 24 percent of the variance in organizational performance. Moreover, beta coefficient and t values are significant (r = 0.49, t = 1.73, β= 0.172, p <.05) which confirm customer focus has a positive effect on organizational performance and hence H2 is Supported.

In the standard regression statistical analysis, the strongest relationship, displaying a Sig. value of 0.028, which was less than 0.05. The relationship between customer focus and organizational performance found positive. There was a clear support of hypothesis H_2. The relative importance of the dependent variable customer focus in predicting organizational performance (OP) was also positive.

Likewise, as documented in the component factor statistical analysis, all of the independent variable indicators attached to the independent variable with their factorable loadings (Karoline and Anne, 2013).

Thus, determining and meeting customer requirements may be argued to be a necessary step to improve organizational performance (Karoline 2013). Imperial studies on determinants of organizational performance by Corina et al., (2011); and the impact of TQMCSF on organizational performance and competitive advantage by Musran (2013) also support the significant differences between firms characterized by a greater orientation towards customers and firms characterized by lower customer orientation. The first category of firms, showed noticeably higher performance than the latter.

Customer focus is maintaining close relationship with customers to understand customers and their needs and supplying products to meet customer needs is necessary for TQM implementation (Masood et al., 2014). It was found that focusing on the critical success factor of TQM customer focus, throughout the organization is essential, as it proved to have a positive impact on the organizational performance of the company. The analysis at all part of the paper was found that having an understanding of customer needs through periodical market studies, and adjusting the customer complaints through the participation of management on quality proved to be positively aligned with organizational performance.

18.3. Employee Fulfillment and Organizational Performance

To access the effect of employee fulfillment on organizational performance, the researcher demanded employee fulfillment indicator variables effectiveness of training programs on TQM, reward system in the organization, employee satisfaction on the implementation of TQM, and employee's commitment to TQM implementation were taken as tools to analyze the statistical data. To find out the effect of employee fulfillment on organizational performance, standard multiple regression analysis was used at a significant level of 5%.

- H_3: Employee fulfillment has a positive effect on organizational performance

The regression analysis on table 4.14 shows that employee fulfillment explained 13 percent of the variance in organizational performance. Moreover, beta coefficient and t values are significant (r = 0.36, t = 1.845, β= 0.131, p <.05) which confirm employee fulfillment has a positive effect on organizational performance and hence H3 is Supported In the standard regression statistical analysis table 4.14, the strongest relationship, displaying a Sig. value of 0.033, which was less than 0.05. The relationship between employee fulfillment and organizational performance found positive. There was a clear support of hypothesis H3. The relative importance of the dependent variable employee fulfillment in predicting organizational performance (OP) was also positive.

Employee fulfillment one of the total quality management critical success factors concern to assure quality issues of the organization. It is the propensity of organization to satisfy the needs of their employees continually and exemplified by job commitment, job satisfaction and pride of workmanship (Masood et al., 2014).

18.4. Continuous Improvement and Organizational Performance

To analyze the impact of the independent variable TQMCSF continuous improvement on organizational performance, the researcher adopted sub factors of the predictor variables: Continuous improvement of systems, improve products on an ongoing basis, Management believe on continuous improvement, integrated process to improve quality, and Participation of all employees to improve performance. Continuous improvement has positive correlation and it has effect size of 0.057 as shown on Table 11, this implies that the variable has medium effect on performance Cohen (1998) cited at Karoline (2013). To find out the effect of continuous improvement on organizational performance, the researcher used standard multiple regression analysis at a significant level of 5%.

- $H_{4:}$ Continuous improvement has a positive effect on organizational performance

The regression analysis on table 4.17 shows that continuous improvement explained 36 percent of the variance in organizational performance. Moreover, beta coefficient and t values are significant ($r = 0.60$, $t = 2.873$, $\beta = 0.215$, $p < .05$) which confirm continuous improvement has a positive effect on organizational performance, and hence H4 is Supported.

Continuous improvement engaged by the organization has a positive and significant effect on organizational performance. TQM CSFs are the best way to improve continually organizational output and can increase business performance (Alexandros G. and ConstantinosVasilos, 2007). Implementations of these concepts require a blend of creativity, clear thinking, and the ability to get things done. It requires thinkers and doers to work closely together (Z. Irani*et al*., 2004). Continuous improvement enhances innovation process in organizations (Shekoufeh*et al*., 2013). Prior researches conducted by Masood et al., (2014), S.M. Irfan and D.M.H. Kee, (2013) confirmed that continuous improvement has positive and significant effect on organizational performance.

18.5. Organizational Learning and Organizational Performance

To analyze the impact of organizational learning on organizational performance, indicator variables: Continuous improvement of learning to protect mistakes, continuously improving learning to meet customer expectations, Organizational learning developed for competition, Managerial learning to improve quality, and Continuous self-improvement on employees were taken for analysis.

The correlation analysis matrix table 4.7 confirms that, organizational learning has positive correlation among top management commitment, customer focused production, employee fulfillment and continuous improvement ranging from .58 to .74 significant at 0.01 which shows large correlation and it has large effect size (f^2) on organizational performance Cohen (1998) cited at Karoline and Anne (2013).

- $H_{5:}$ Organizational learning has positive effect on organizational Performance

The regression analysis on table 4.14 shows that organizational learning explained 40 percent of the variance (r^2) in organizational performance. Moreover, beta coefficient and t values are significant ($r = 0.63$, $t = 2.873$, $\beta = 0.373$, $p < .05$) which confirm organizational learning has a positive effect on organizational performance, and hence H5 is Supported.

To find out the effect of organizational learning on organizational performance, the researcher used standard multiple regression analysis at a significant level of 5%. Data analysis result on table 4.14 indicates that sig. is .000, which is less than 0.05, and it results in accepting the hypothesis (H5). This proved that organizational learning features that the organization eventfully engaged has a positive effect on organizational performance. Organizational learning is illustrated by foundational knowledge, managerial learning and continuous self-improvement (Masood*et al*., 201). Organizational learning mechanism enables companies to learn from their past mistakes not to appear those mistakes again (Gul*et al*., 2011).

Kombolcha Textile Share Company is implementing and following quality management system and one of the ISO 9001 QMS certified company in 2008. The company has been adopting continuous improvement of systems to assure quality and retain customers. The interview held with company senior managers reveal that QMS designed in policy and procedure. But the TQM system never designed as QMS in the organization and it doesn't mean that the company is totally not accepting TQM rather part of the requirements included in QMS like continuous improvement of quality. On the other hand, quality management practices carried out in the company will serve as a foundation to implement total quality management critical success factors. The company is currently adopting textile technologies which support the production system almost with no defect and improve the performance of the company but there is also a challenge in the quality of raw materials like cotton that meet the requirement of the adopted technology. This is due to the gap that the external customers never been well trained and communicated to the supply requirements. This implies that the adoption of TQM solves this type of issues by taking internal and external customers as vital through playing their role. One of the hindrances to implement TQM was that the company never seen TQM and its associated factors equivalently as QMS and yet no inclusion in the strategic plan of the company.

19. Standard Regression Collinearity Statistics

The collinearity statistics of the analysis on table 4.15 shows that the specific independent variable used in the research not explained by the other independent variable in the model which was calculated by $1\text{-}R^2$ for each variable. The cut off point for tolerance and VIF (variance inflation factor) was .10 and 10 Juilet (2005).

The result of the analysis on tolerance value of each independent variable confirms that were no data that exceed the cut off point for both tolerance and VIF and hence not violated multicollinearity assumption. The cut - off point by Karoline

and et al., (2013) also support this thesis that VIF values above 5.00 in the constructs are generally considered as an indication of collinearity.

If Collinearity is prevalent, one may consequently consider eliminating or merging independent variables into a single construct. Because of there was no the existence of the problem in this thesis. The generated Tolerance and VIP outputs of analysis tabulated as follows:

Variables/Indicators	Collinearity Statistics	
	Tolerance	VIF
Top Management Commitment	.423	2.362
Customer Focused Production	.470	2.127
Employee Fulfillment	.507	1.974
Continuous Improvement	.336	2.978
Organizational Learning	.386	2.593

Table 13: Collinearity Statistics
Source: Survey Result, 2015

20. Polynomial Regression Model Equation

The output of the SPSS data analysis can support to formulate the regression in linear equation. The proposed linear regression model equation was:

Organizational Performance (Y) = $a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5$ …… (4.2)

Where a= y-intercept when x=0

Y= Organizational performance

$b_1 - b_5$ = Coefficient of Variables

$x_1 - x_5$ = Values of Variables

Therefore, the regression equation for the construct model:

$Y= .696 + .219x_1+.172x_2 +.131x_3+.215x_4+.373x_5$ ..... (4.3)

Based on the regression analysis, the standardized coefficient β indicates that a unit change in TQMCSFs top management commitment, customer focused, employee fulfillment, continuous improvement, and organizational learning results a 0.186, 0.201, 0.141, 0.242 and 0.23 standard deviation change on organizational performance respectively. On the other hand, each of the independent variables has statistically significant contribution to predict organizational performance.

Taking other variables remains controlled, continuous improvement (t= 2.873, P = 0.005) and organizational learning (t= 4.191, P= 0.000) CSFs variables have the largest and significant contribution to predict organizational performance.

In the regression equation model formulated, TQMCSFs top management commitment (t= 1.599, P = 0.012), customer focused (t = 0.73, P = 0.028), employee fulfillment (t = 1.844, P = 0.033), continuous improvement (t= 2.873, P = 0.005), and organizational learning (t= 4.191, P= 0.000) were significant with 25.0%. 24.0%, 13.0%, 36.0% and 40.0% shared variance or coefficient of determination (r^2) to explain organizational performance respectively.

21. Research Findings Summary

The results of hypothesis testing, the independent variables top management commitment, customer focus, continuous improvement, employee fulfillment and organizational learning total quality management critical success factors has positive effect on organizational performance.

The regression analysis standardized residual on Fig 4.4 shown all points neatly arranged in a narrow cigar shape. This suggests there is a quite strong relationship or correlation among variables. The normal probability of the regression standardized residuals graph presents that points were lie in a straight diagonal line from bottom left to top right. This indicates us that there were no major deviations from normality. The relationships between predictor and criterion variables were linear. Likewise, the Scatter plot on Fig. 4.3 indicate us, residuals were roughly rectangular distribution with most of the scores accumulated in the center (Julie 2013). Hence there was no violation of the model and there was linearity between variables.

Table 4.7 presents the correlation matrix of all the study variables. Pearson's Correlation is a measurement of the strength of a linear relationship between variables. The table also shows a high degree of significance correlations between TQM critical success factors and organizational performance (Pearson's correlation is significant at 0.01 level). The collinearity statistics on table 4.15 represents the tolerance value ranges from 0.336 to 0.507 and the VIF statistics values account ranges from 1.97 to 2.98. With respect to the cutoff point 0.1 and VIF above 5.00, this eliminates the possibility of multi-collinearity (Julie, 2005). Similarly, Table 4.14 shows the overall regression analysis of predictor variables.

Hypothesis H1 states that TQMCSF top management commitment has a positive effect on the organizational performance. The results of correlation analysis as shown in Table 4.7 indicate a positive significant relationship between top management commitment organizational performance ($r = 0.5$, $p < 0.01$). Moreover, Regression analysis as shown in Table 4.14 also confirms the high effect of top management commitment on organizational performance. Hence, we can conclude that top management commitment explained 25 percent of the variance in organizational performance.

Moreover, beta coefficient and t values are significant (r=0.50, t = 1.599, β= 0.219, p <.05) which confirm top management commitment has a positive effect on organizational performance, hence, H1 is supported.

Hypothesis H2 states customer focused production has a positive effect on organizational performance. The results of correlation analysis as shown in Table 4.7 indicate a positive significant relationship between customer focus and organizational performance (r = 0.49, p < 0.01). In addition, Regression analysis as shown in Table 4.14 also confirms there was the effect of customer focused production on organizational performance. Hence, we can conclude that customer focus CSF explained 24.0 percent of the variance in organizational performance. Moreover, beta coefficient and t values are significant (r = 0.49, t =1.73, β= 0.172, p <.05) showing the effect of customer focus on organizational performance, hence, H2 is supported.

Hypothesis H3 states Continuous improvement has a positive effect on the Organizational performance. The results of correlation analysis as shown in Table 4.7 indicate a positive significant relationship between CSF continuous improvement and organizational performance (r = 0.60, p < 0.01). Moreover, Regression analysis as shown in Table 4.14 also confirms the effect of continuous improvement on organizational performance. Hence, we can conclude that continuous improvement explained 36.0 percent of the variance (r^2) in organizational performance. Moreover, beta coefficient and t values are significant (r =0.36, t =2.873, β= 0.215, p <.05) showing that continuous improvement has a positive effect on organizational performance and hence, H3 is supported.

Hypothesis H4 states employee fulfillment has a positive effect on the Organizational performance. The results of correlation analysis as shown in Table 4.7 indicate a positive significant relationship between CSF employee fulfillment and organizational performance (r = 0.36, p < 0.01). Moreover, Regression analysis as shown in Table 4.14 also confirms the effect of employee fulfillment on organizational performance. Hence, we can conclude that employee fulfillment explained 13.0 percent of the variance in organizational performance. Moreover, beta coefficient and T values are significant (r=0.49, t =1.844, β= 0.131, p <.05) showing that employee fulfillment has a positive effect on organizational performance and hence, H4 is supported.

Hypothesis H5 states organizational learning has a positive effect on the Organizational performance. The results of correlation analysis as shown in Table 4.7 indicate a positive significant relationship between CSF organizational learning and organizational performance (r = 0.63, p < 0.01). Moreover, Regression analysis as shown in Table 4.14 also confirms the effect of organizational learning on organizational performance. Hence, we can conclude that organizational learning explained 40% percent which is the largest of the variance in defining organizational performance in this construct. Moreover, beta coefficient and t values are significant (r = 0.63, t =4.191, β= 0.373, p <.05) showing that organizational learning has a positive effect on organizational performance and hence, H5 is supported.

The research construct correlation analysis matrix on table 4.7, the coefficient of determination (r^2) of the independent variable top management commitment has 25.0%, customer focus 24%, employee fulfillment 13.0%, continuous improvement 36% and organizational learning 40.0% shared variances to explain organizational performance.

H	**Relationship**	**Sig. Value**	**Decision**
H1	Top management commitment → Organization Performance	.012	Supported
H2	Customer Focus → Organization Performance	.028	Supported
H3	Continuous Improvement → Organization Performance	.033	Supported
H4	Employee Fulfillment → Organization Performance	.005	Supported
H5	Organizational Learning → Organization Performance	.000	Supported

Table 14: Hypothesis Testing Summary
Source: Survey Result, 2015

The relationship between TQMCSFs adopted predictor variables and the criterion was linear with positive relationship. The increase in one of the independent variable results in a corresponding increment on organizational performance of the company. In the regression equation formulated:
Organizational Performance (Y) = $.696 + .219x_1 + .172x_2 - .131x_3 + .215x_4 + .373x_5$, where the variables x_1, x_2, x_3, x_4, and x_5 represent values of top management commitment, customer focus, continuous improvement, employee fulfillment and organizational learning respectively. Among the CSFs used in this thesis, organizational learning has the greatest effect size on the organizational performance of the company. The predictor variables adopted in this thesis can define 45.40% of the dependent variable.

22. Conclusions

The aim of this study was to test the impact of TQM critical success factors on organizational performance at Kombolcha Textile Company. The proposed hypotheses were significant values and supported. The coefficient of determination (r^2) of the independent variables top management commitment has 25.0%, customer focus 24.0%, employee fulfillment 13.0%, and continuous improvement 36% and organizational learning 40.0% shared variances to explain organizational performance.

The regression analysis of dependent variable indicators on table 4.14 indicate study has analyzed & found the positive and significant effects of TQM critical success factors on organizational performance. As a whole, these TQMCSFs were explained a larger proportion on organizational performance measures sales growth, market share and return on investment (ROI) variance. TQMCSFs variables explain (37.5%) of variance in sales growth, 35.2% of variance in market share and 39.9% of variance on return on investment performance. Sales growth (Adj.R^2 =0.375, F = 22.626), Market share (Adj.R^2 =0.352, F = 20.592) and Return on Investment (Adj.R^2 =0.399, F = 24.872) has statistically significant values.

This result shows that the implementation of total quality management critical success factors top management commitment, customer focus, employee fulfillment, continuous improvement and organizational learning can improve the performance of the organization in terms of performance measures sales growth, market share and return on investment of the company. The result of current research has been confirmed the view of prior researches (Masood et al., 2014; S.M. Irfan and D.M.H. Kee, 2013; Musran et al., 2013; Karoline and Anne, 2013).

23. Recommendations

The aim of this study was to test the effect of total quality management critical success factors top management, customer focus, employee fulfillment, continuous improvement and organizational learning to organizational performance in Kombolcha Textile Share Company. Though data analysis results fund that total quality management critical success factors have positive and significant effect toward organizational performance and hence the company implement total quality management to raise from quality management (QMS) to total quality management practice which is the peak level of quality management system that improve organizational performance.

24. References

i. Addae (2013). Total quality management: a source of competitive advantage. A comparative study of manufacturing and service firms in Ghana: *International Journal of Asian Social Science*, 3(6), 1293-1305.http://www.aessweb.com/journal- detail.php? id=5007.Accessed on December 6, 2015.

ii. Abdulrahman Alsughayir (2013). The Impact of Quality Practices on Productivity and Profitability in the Saudi Arabian Dried Date Industry: *American Journal of Business and Management,* Vol. 2, No. 4, 340-346. DOI: 10.11634/216796061302465/ http://www.worldscholars.org. Accessed on 6, 2015.

iii. Adele Wiman, Andre Martunizzi, Robert Kudlack, and Claus Faber (2011). Corporate Social Responsibility Activities and impacts of Textile Sector: *Working paper,* Vol.2/2011, Vienna, Austria.

iv. AlemuMoges, Josu Takala, Fentahun Moges & Petri Helo (2012).Effects of Quality Management Practices and Concurrent Engineering in Business Performance*: International Journal of Business and Management*, Vol. 6, No. 3.www.ccsenet.org/ijbm. December 06, 2014.

v. Alexandre Pignanelli, João Mario (2008). The Impact of Quality Management on Profitability: *The Flagship Research Journal of International Conference of the Production and Operations Management Society,* Volume 1• Number 1

vi. Alexandros G., Constantinos Vasilios (2007). Understanding Total Quality Management in Context: Qualitative Research on Managers' Awareness of TQM Aspects in the Greek Service Industry: *The Qualitative Report,* Volume 12 No. 1, 40-66. www.nova.edu/ssss/QR/QR12-1/psychogio. December 8, 2014.

vii. Ali Abdullah, (2012). A thesis submitted in fulfillment of the requirement for the award of the Degree of Master of Science in Technology *Management total quality management practices in yemeni public universities* (unpublished Mater thesis), University Tun Hussein Onn, Malaysia. eprints.uthm.edu.my/2861/1/Ali_Abdullah_Hussein_Al-Amri_1.pdf**.**Accessed on December 14, 2014.

viii. Alireza Anvari, Yusof Ismail, Seyed Mohammad and Hossein Hojjati (2011). A Study on Total Quality Management and Lean Manufacturing: Through Lean Thinking Approach: *World Applied Sciences Journal,* 12 (9): 1585-1596. idosi.org/wasj/wasj12 (9)/34.pdf. December 8, 2014.

ix. Andries J. Fourie (2009). Total quality management: Middle and top management perceptions of the successful Application of a quality management system from a General management, strategic management, quality management and human resources management view: *Master's Thesis on* MBA, 2009. scholar.sun.ac.za/bitstream/handle/10019.1/.../fourie_total_2009.pdf. January 10, 2015.

x. AsiyaGul, Syed AamirSaeedJafery, JavedRafiq and Dr. HummayounNaeem(2012).Improving employee performance through total quality management: *International Journal of Economics and Management sciences,*vol.1, No.8, 19-24.www.managementjournal.org/journals/. December 18, 2014.

xi. BabakMahmood, Salman Khalid, and Muhammad Zohaib (2011). TQM Implementation in Textile Manufacturing Industry to Success: *Review and Case Study: International Business Research,* Vol. 4, No. 4. doi:10.5539/ibr. v4n4p242/ www.ccsenet.org/ibr.Accessed on January 9, 2015.

xii. Lakshman (2006). A Theory of Leadership for Quality: Lessons from TQM for Leadership: Total *Quality Management,* Vol.17, No.1, 41–60. DOI: 10.1080/14783360500249729. jpkc.henu.edu.cn/glxlx/uppic/A%20theory%20of%20leadership%20.pdf.Accessed on January 9, 2015.

xiii. Chin S., Fang C., Yu C., David C. (2006). The effects of total quality management on firm performance: evidence from Taiwan information-related industries: *Proceedings of the 11th Annual Conference of Asia Pacific Decision Sciences Institute*, June 14-18, 2006(PP.214-217) *Hong Kong.*

xiv. Daniel I., Amrik S. (2014). The relationship between organization strategy, total quality management (TQM), and organization performance––the mediating role of TQM: *European Journal of Operational Research* 168 (2006) 35–

50. DOI 10.1108/02656710310493625.http:// www.emeraldinsigh t.com/0265-671 X.ht/. Accessed on December 09/2014.

xv. Faisal Talib, M.N. Qureshiand Zillur Rahman (2010). Pareto analysis of total quality management factors critical to success for service industries: *International Journal for Quality research,* Vol.4, No. 2, 113-128. www.ijbmss-ng.com. January 9, 2015.

xvi. GulPolat, Atilla Damci, and Yalcin Tatar (2011). Barriers and benefits of total quality management in the construction industry: evidence from turkish contractors: *7th Research/Expert Conference with International Participations #QUALITY 2011;* Neum, B&H, June 01 – 04.

xvii. Hamid Reza, Hamid reza R., Mehrdad Goudarzvand (2011). The role of implementation total quality management system on performance in saipa group companies: *Kuwait Chapter of Arabian Journal of Business and Management Review, Vol. 3, No.4. 25-32.*

xviii. Jinmei Tang, Xiangzhi Bu, and Robert Guang, 2012. Quality Award and Market Performance*:* An Empirical Investigation about Chinese Stock Market: *Journal of Applied Business and Economics,* vol. 13(3). www.na-businesspress.com/JABE/BuX_Web13_3_.pdf. January 9, 2015.

xix. Julian Paul, Syed azizi and Syed khalid (2014). Quality management implementation and quality of production in Malaysia's manufacturing companies: *International Journal of Research in Business Management*Vol. 2, Issue 3, 53-60. www.impactjournals.us.December 14, 2015.

xx. Julie Pallant(2005). A step by step guide to data analysis using SPSS for Windows (Version 12), 2nd edn. Australia

xxi. Kamyar, Mahmood, Seyed, Shabnam (2014). Relationship between Total Quality Management, Innovation and Customer satisfaction in Service Organizations: *Top class Journal of Business Management and Innovations,* Vol. 1(2), 61-66. http://www.topclassglobaljournals.org**.** December 14, 2015.

xxii. Kannan S., GovindaRajan (2011).Organizations' support to quality circles – A comparative study of public and private sector in India: *Asian journal of management research* Volume 2 Issue 1. www.ipublishing.co.in/ajmrvol1no1/voltwo/EIJMRS2020.pdf.January 10, 2015.

xxiii. Karani, Sharon R. and Bichanga, Walter Okibo(2012). Effects of Total Quality Management implementation on business performance in service institutions: A case of Kenya Wildlife Services: *International Journal of Research Studies in Management,* Volume 1 Number 1, 59-76.DOI:10.5861/ijrsm.2012.v1i1.61. Accessed on January 24, 2015.

xxiv. Karoline Borum and Anne Fomsgaard(2013). The effects of TQM Critical Success Factors on Organizational Performance.(*Unpublished Master Thesis),* Aarhus University Business and Social Sciences.pure.au.dk/.../The_effects_of_TQM_Critical_Success_.....

xxv. M. Shafiq (2012). Implementation of quality management Systems and business excellence frameworks in Pakistan textile companies: *Journal of Quality and Technology Management,* Volume VIII, Issue II, 11–23. pu.edu.pk/.../journal/.../PDF.../02-Implementatio....January 9, 2015.

xxvi. M.M. Movahedi and M. NouriKoupaei (2011). A Framework for Applying ERP in Effective Implementation of TQM: *Middle-East Journal of Scientific Research* 10 (4): 489-495.

xxvii. Muhammad Asif Khan (2010).Evaluating the Deming Management Model of Total Quality in Telecommunication Industry in Pakistan – An Empirical Study: *International Journal of Business and Management* Vol. 5, No. 9.www.ccsenet.org/ijbm. December 20, 2015.

xxviii. MusranMunizu (2013). The Impact of Total Quality Management Practices towards Competitive Advantage and Organizational Performance. *Pakistan Journal of Commerce and Social Sciences*Vol. 7 (1), 184-197. www.iosrjournals.org/ccount/click.php?id=5154.December 10, 2014.

xxix. Mustafa Dilber, NizamettinBayyurt, SelimZaim, MehvesTarim (2005). Critical Factors of Total Quality Management and Its Effect on Performance in Health Care Industry*: A Turkish Experience*businessperspectives.org/journals_free/.../PPM_EN_2005_04_Dilber.December 20/21014.

xxx. N.K.K. Prasanna, TusharN. (2011).Quality circle implementation for maintenance management in petrochemical industry: *Journal of Engineering Research and Studies* Vol.2/ Issue 1,155-162www.technicaljournalsonline.com/.../JERS%20VOL%20II%20ISSUE%2.... December 10, 2015.

xxxi. NabeelMandahawia, Rami H. and Suleiman Obeidata (2012). An Application of Customized Lean Six Sigma to Enhance Productivity at a Paper Manufacturing Company: *Jordan Journal of Mechanical and Industrial Engineering* Volume 6, Number 1,103 – 109. jjmie.hu.edu.jo/files/v6n1/JJMIE%20-206-10.**pdf**December 15,2014

xxxii. Naim Musa (2012). TQM creative behavior among supervisor'sadministrator*: Journal of Research in International Business and Management* Vol. 2(10), 257-260. http://www.interesjournals.org/JRIBM. December 14, 2014.

xxxiii. Nair Nizar, Sami Odeh, and WaleedKalf, (2012). Application of total quality management system (TQMS) and its impact on competition policy in industrial plants*:* An empirical study on facilities of industrial sector in Jordan. *Far East Journal of Psychology and Business*, Vol. 8 No. 1.www.fareastjournals.com**.**December 11, 2014.

xxxiv. Neeta M. Mandaliya, (2013). An Empirical study A Study with Total Quality Management Approach to the Information system development processes: *International Journal of Business and Management Invention*, Volume 2 Issue 5, 44-49. www.ijbmi.org.December 11, 2014.

xxxv. Robert J. Gary L. and Jason B.(2000).A Comparative Analysis of National and Regional Quality Awards: *Quality progress* 2000, 41. www.texas-quality.org/.../125/.../Comparing%20Quality%20Awards.pdf. December 11, 2015.

xxxvi. Rohaizan R. (2011). The practices of TQM among MS: ISO 9000 certified company: *International Conference on Information and Financial Engineering,* vol.12,2011(180) Singapore:

xxxvii. S.M. Irfan and D.M.H. Kee (2013). Critical Success Factors of TQM and its Impact on Increased Service Quality: A Case from Service Sector of Pakistan: *Middle-East Journal of Scientific Research*, 15 (1): 61-74. DOI: 10.5829/idosi.mejsr.2013.15.1.828. Accessed on January 21, 2015.

xxxviii. Sachidanand S., Dr. Maruti S. (2013). Performance Improvement of Textile Sector by Implementing Quality Six Sigma (QSS): *International Journal of Application or Innovation in Engineering & Management (IJAIEM),*Volume 2, Issue 12, 2013.www.ijaiem.org.January 8, 2015.

xxxix. Satish Kumar (2014). Impact of Six-Sigma DMAIC approach on Manufacturing Industries: *International Journal of Innovative Research in Science, Engineering and Technology,*Vol. 3, Issue 5. www.ijirset.com.January 8, 2015.

xl. Selam Samuel (2012). Investigation on the Effect of Supply Chain Integration on Ethiopian Garment Industry's Performance. (unpublished master thesis), Addis Ababa University, Addis Ababa, Ethiopia.

xli. Serafimovska H. Ristova E. (2011). The impact of leadership on achieving total quality management www.google/mech-ing.com/journal/Archive/2011/.../23_Hristina%20Serafimovsk. December 22, 2014.

xlii. Sha'ri M. Yusof and Elaine Aspinwall, (1990).TQM implementation issues: review and case study: *International Journal of Operations & Production Management*, Vol. 20 No. 6, 2000, 634-655.http://www.emerald-library.com.January 8, 2015.

xliii. Shekoufeh, Siavash (2013). A study of the impact of TQM on organizational performance of the Telecommunication Industry in Iran: *European Online Journal of Natural and Social Sciences*. vol.2, No. 3, 968-978.www.european-science.com. December 11, 2014.

xliv. ShpresaSyla, GadafRexhepi (2013). Quality Circles: what do they mean and how to implement them?:*International Journal of Academic Research in Business and Social Sciences Vol. 3, No. 12.* DOI: 10.6007/IJARBSS/v3-i12/430/ www.hrmars.com/journals. Accessed on December 10, 2014.

xlv. Siew-Phaik, Alan G., MuraliSambasivan, KhalizaniKalid, andKeng-Boon Ooi (2011). Integrating Total Quality Management and Knowledge Management to Supply Chain Learning: A Structural Approach, *International Conference on Financial Management and Economics,* vol.11 IACSIT Press, Singapore.

xlvi. SinglaNitin, Khanduja Dinesh, Singh Tejinder Paul (2011).TQM for manufacturing excellence: Factors critical to success: *International journal of applied engineering research, dindigul* Volume 2, no 1.www.ipublishing.co.in/jarvol1no12010/voltwo/EIJAER2224.pdf.January15, 2015.

xlvii. SuhongLia, Bhanu Ragu, T.S. Ragu, S. Subba (2004). The impact of supply chain management practices on competitive advantage and organizational performance: *Omega International Journal of science*, doi:10.1016/j.omega.2004.08.002/www.elsevier.com/locate/omega.Accessed on January 10, 2015.

xlviii. TarineeChaipradermsak(2007). The influential factors on consumers' purchasing decision in bangkokPET retailing business.(Unpublished Master thesis).Shinawatra University, Bangkok, Thailand.

xlix. TümayAtakan, and Özdemir Ay (2009). Total quality management practices in textile and confection corporations:*Trakia Journal of Sciences,* Vol. 7, 20-23. http://www.uni-sz.bg. December 10, 2014.

l. YaredMesfin(2010).Economic Impact and Determinants of Export: The Case of Ethiopian Textile and Apparel Industry. (unpublished Master thesis), Addis Ababa University, Addis Ababa, Ethiopia.

li. Z. Irani, A. Beskese, P.E.D. Love (2004). Total quality management and corporate culture: constructs of organizationalexcellence:*Technovation.*643–650.Doi:10.1016/S0166-4972(02)00128-1/ www.elsevier.com/locate/technovation. Accessed on December 10, 2014.

lii. Zakuan, Yusof,Shamsudin,and T. Laosirihongthong (2008). Reflective Review of Relationship between Total Quality Management and Organizational Performance: *Proceedings of International Conference on Mechanical & Manufacturing Engineering.* May 21– 23, 2008.