

# **IMPACT OF TOTAL QUALITY MANAGEMENT ON MANUFACTURING ORGANIZATION PERFORMANCE**

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## **Abstract**

It is important that the managers understand and plan strategies to obtain a greater performance. TQM as a management tool has been applied by many organizations around the world. Total Quality Management (TQM) is a management system for an organization focused on quality, based on the participation of all its members with the aim of meeting or surpassing long term success through customer's expectations and benefits to all members of the organization and to society. TQM implementation has been an important aspect for improving organizational efficiency. The relationship between TQM and performance has been studied by different researchers. While investigating the link between TQM and organizational performances researchers have used different performance types such as cost reduction, Operational performance, Inventory management performance, Employee performance, Innovation performance, and social responsibility, Customer results and Market and financial performance. Recent research on total quality management has examined the relationships between the Total quality management practices and organizational performance through leadership, Knowledge and Process Management, employee training, customer focus, Supplier Quality Management, and Strategic Quality Planning as the basis for enhancing product quality. It also examines the effect of implementing these elements on both accepted Financial and operational performance measurement. This seminar reviews the researchers' literatures on the impact of Total Quality Management (TQM) on Organizational Performance. The results from different researchers show that, those mentioned TQM factors are positively related to performance.

## CHAPTER 1 INTRODUCTION

### 1.1 Background of the Study

Throughout the world, many organizations are now having a common problem resulting from changes in the business environment. Organizations need to make efforts in improving their performance to obtain sustainable competitive advantages to survive in today's market competitiveness. This serves as crucial issues for a number of innovative strategic introduces in many organizations. To come up with the changing expectations of the organization, there is a need for continuous improvement of the organizational performance. Different techniques and measures were accounted to keep the performance of organization above the competitors all the time. In order to enhance organizational performance, and for the purposes of improving customer satisfaction; several total Quality management practices were implemented. Total Quality Management (TQM) is based on; that all organization staff should work in team spirit with each other for producing high quality products and services in order to meet customers' desires. One strategy that could be implemented in order to minimize errors is by controlling processes of manufacturing. Total Quality management has several quality instruments and techniques added to various values and beliefs that all staff within the same organization shares (Gharakhani et al., 2013). TQM can be defined as a strategy that focus on to generating and transferring more efficient and superior services, through achieving cooperation between organizational members (Lakhal et al., 2006). It can also define as a firm-wide management philosophy of continuously improving the quality of the products/services/processes by focusing on the customers 'needs and expectations to enhance customer satisfaction and organization performance. Total quality management has different definitions according to the individual thought about TQM term. Various studies were conducted by different researchers in order to review the impact of TQM practices on various organizations' performances and relationship between TQM practices and organization performances, which are the main objectives of this seminar. The scope of the investigation includes various kinds of industries such as financial, operational and quality performance. Such studies indicated that there are positive relation between the effective implementation of TQM and the organizational performance, in which when one organization applies total quality management practices ineffective way then it's

Organizational and employees' performance will largely enhanced (Prajogo et al. 2004), its productivity will increase and its operational costs will decrease (Lam,1995) .

### **1.2 Problem statement:**

TQM is philosophy and its principles and tools are not practical for a large number of Organizations managers and employees. Customers in different countries were demanding services and products with high quality. All of these reasons generate the new wave of quality interest at different business organizations all over the world. This seminar investigates different research papers done on how organizations exercising total quality management and its impact on organizations' performance. Although there are several studies about TQM and its relation with performance (Baidoun and Zairi, 2003), however this seminar will review different works done on TQM practices and its impact on organizational performance specifically.

### **1.3 Term paper objectives:**

This term paper came to find out the following objectives;

1. To identify the impact of TQM implementation on the organizational performance.
2. To identify the techniques for an effective implementation of TQM practices at organizations.
3. To investigate which of the following elements are implemented in the companies or services
  - ✓ leadership,
  - ✓ Knowledge and Process Management,
  - ✓ employee training,
  - ✓ customer focus,
  - ✓ Supplier Quality Management,
  - ✓ and Strategic
4. Examines the effect of implementing these elements on both accepted Financial and operational performance measurement
5. Investigate the relationships among TQM practices and to identify the effects of TQM practices on organization performance

## **Chapter 2**

### **LITERATURE REVIEW**

#### **2.1 HISTORY OF QUALITY MANAGEMENT**

In order to keep a competitive advantage on the market, organizations have for many years focused on the quality of their products. Different initiatives to increase the quality of products and services have evolved during the years. The early focus, at the beginning of the twentieth century, was on inspection, which included checking that the manufactured products met the specifications. During the past few decades the focus in organizations has shifted from inspection to quality control of products. Through quality control, organizations are trying to identify directly in the process, flaws which can be corrected before producing too many products that do not meet the specifications. In the evolution of the concept of quality, the focus on quality has moved even further quality assurance. Quality assurance has become a recognized practice for planning and preventing problems at the source before starting to manufacture products. The latest focus in the evolution of quality is considered to be on Total Quality Management (TQM), which invokes the application of quality management principles to all aspects of the organization, including customers and suppliers, and their integration with the key business processes (Dale, 1999). The need for quality as a functional component in the formulation of strategies for institutions to implement TQM is clearly outlined by Bilich and Neto (2000) who stated that quality as a macro function of institutions must be present in the day-to-day running of an institution, in aspects such as establishment of policies, the decision process, and selection of personnel, allocation of resources, definition of priorities and service delivery to satisfy customer requirements. In addition they stated that the quality approach as a strategic element has brought to institutions a new manner of conceiving quality as it engages the top decision – makers of the institution in effort for better performance in service delivery. According to Dale (2003) and Evans and Dean (2003) quality, reliability, delivery and price build the reputation enjoyed by the institution. Quality is the most important of these competitive weapons and is an extremely difficult concept to define in few words in order to agree on a consensus definition.

## 2.2 ISO 9000 STANDARDS:

The International Organization for standardization (ISO) is an international organization whose purpose is to establish agreement on international quality standards. It has been created to develop and promote quality. ISO 9000 consists of a set of standards and a certification process for companies. By receiving ISO 9000 certification, companies demonstrate that they have met the standards specified by the ISO. The standards are applicable for all types of companies and have gained global acceptance. In many industries ISO certification has become a requirement for doing business. One strong indication of the continued relevance of quality management to companies competing in the global market is the recent revision of the ISO 9000 series of quality standards. The 2000 version of ISO 9000— ISO 9000:2000—represents a fundamental shift from quality assurance to quality management, a significant change in approach to quality from one that is totally compliance based to one that includes the evaluation of management techniques. This change has been described as moving the standard away from a technical-practical tool toward a management tool (Larsen and Haversjo, 2000). ISO 9000:2000 is based on eight principles that are easily recognizable as the key elements of quality management. They are: customer focus, leadership, involvement of people, process approach, systems approach to management, continuous improvement, factual approach to decision making, and mutually beneficial supplier relationships. Aside from the mandate to adopt quality management practices as a result of ISO 9000:2000, it appears that many organizations have continued in their efforts to transform the way they do business, whether it's called TQM, reengineering, or cultural change (Foley, 2003). Quality does not only refer to goods and services but includes quality of

time, place, equipment and tools, processes, people, the environment and safety, information and measurement (Dale, 2003; Schonberger, 1990). Quality is an ongoing process that has to be so pervasive throughout the institution, that it becomes the philosophy and culture of the whole institution. The institution needs to adopt a strategy to serve the customer with better quality products, at lower cost, with quicker response and with greater flexibility (Schonberger, 1990).

There appears to be no uniform understanding and definition of the meaning of the term quality and even well-known authors seem to have different perspectives on this issue. According to Reeves and Bednar (1994), a search for the definition of quality has yielded inconsistent results.

### 2.3 Total Quality Management

The philosophy of total quality management is practicable throughout the world; many researcher papers were done on the matter in Ethiopia as well as in Rwanda and wide world to minimize the problems of quality faced by their companies or services in their respective country and with the objective of achieving customers 'satisfaction. There is no consensus on the definition of quality. The notion of quality has been defined in different ways by different authors. Gurus of the total quality management disciplines such as Garvin, Juran, Crosby, Deming, Ishikawa, Feigenbaum and Taguchi defined the concept of quality and total quality management in different ways. Garvin proposed a definition of quality in terms of the transcendent, product based, user based, and manufacturing based and value based approaches. Garvin also identified eight attributes to measure product quality (Garvin, 1987) such as Performance, Features, Reliability, Conformance, Durability, Serviceability, Aesthetics and Perceived Quality. Juran defined quality as "fitness for use". Juran the first part of the definition itself (use) is apparently linked to the customers 'needs, and the second part (fitness) suggests conformance to measurable products characteristics. This definition however implies an understanding of the relationship between customer satisfaction and the conformance of products characteristics to product specifications ( Juran and Gryna,1988). Joseph Juran mainly focused on a trilogy of Quality planning, quality control, and quality improvement. If a quality is improved, Project is to be successful, and then all quality improvement actions must be carefully planned out and controlled.

Juran's 10 Quality improvement steps are the following:

- ❖ Build awareness of the need and opportunity for improvement.
- ❖ Set goals for improvement.
- ❖ Organize to reach the goals (establish a quality council, identify problems, select Projects, appoint teams, designate facilitators).
- ❖ Provide training.
- ❖ Carry out projects to solve problems;
- ❖ Report progress.
- ❖ Give recognition.
- ❖ Communicate results.

- ❖ Keep score.
- ❖ Maintain momentum by making annual improvement part of the regular systems and processes of the company.

If both Deming and Juran were in favor of using statistical process control for the understanding of total quality management, Crosby (1982) on the other hand was not keen to accept quality which related to statistical methods. Crosby defined quality as “conformance to requirements or specifications “if we are to manage it (Crosby, 1979), the customers deserves to receive exactly what we have promoted to produce (Crosby, 1979).means, we must know somehow the requirements, and translate them (whenever possible) into measurable product or service characteristics. With the requirements stated in terms of numerical specifications, we can measure the characteristics of products (diameter of a hole) or service (customer service response time) to see if it is of high quality (zero defects). Zero defects are the attitude of defect prevention .it means, do the job right the first time (Crosby, 1979). Crosby provides four “absolutes” and 14 steps for the quality improvement process.

The Crosby's four absolutes are:

- Quality is adherence to requirements;
- Prevention is the best way to ensure quality;
- Zero Defects (mistakes) is the performance standard for quality;
- Quality is measured by the price of nonconformity

From the above, Crosby elaborated fourteen steps for continuous increase in quality.

- Management commitment: to make it clear where management stands on quality.
- Quality improvement team: to run the quality improvement process.
- Measurement: to provide a display of current and potential nonconformance problems in a manner that permits objective.
- Cost of quality: to define the ingredients of the cost of quality (COQ) and explain its use as a management tool.
- Quality awareness: to provide a method of raising the personal concern felt by all employees toward the conformance of the product or service and the quality reputation of the company.
- Corrective action: to provide a systematic method for resolving forever the problems which are identified through the previous action steps.
- Zero defects: to examine the various activities that must be conducted in preparation for formally launching zero-defects day.

- Employee education: to define the type of training all employees need in order actively to carry out their role in the quality improvement process.
- Planning and zero-defects day: to create an event that will let all employees realize, through a personal experience, that there has been a change.
- Goal setting: to turn pledges and commitments into action by encouraging individuals to establish improvement goals for themselves and their groups.
- Error-cause removal: to give the individual employee a method of communicating to management the situations which make it difficult for the employee to meet the pledge improve.
- Recognition: to appreciate those who participate.
- Quality councils: to bring together the appropriate people to share quality management information on a regular basis.
- Do it all over again: to emphasize that the quality improvement process is continuous

According to Deming's essential quality arguments are (Deming,1988),quality must be defined in terms of customers satisfaction ,quality is multidimensional .it is impossible to define the quality of a product or service in terms of a single characteristics or agent. There are definitely different degrees of quality .Because quality are essentially equated with customer satisfaction. As quality is essentially equated with customer satisfaction, the quality of a product will highly depend on degree of satisfying customer's needs and expectations. In addition,quality is a predictable degree of uniformity and dependability, at low cost and suited to the market. In his theory of Total Quality Management, Deming identified fourteen points of management. He also developed a system of "profound knowledge" which consists of the following four points:

- ✚ System Appreciation - an understanding of the way a firm's processes and systems work;
- ✚ Variation Knowledge - an understanding of the variation occurring and the causes of the variation;
- ✚ Knowledge Theory - the understanding of what can be known;
- ✚ Psychology Knowledge - the understanding of human nature from the above points of view.



In order to help managers improve the quality of their organizations, Deming has offered the following 14 management principles:

- Constancy of purpose; create constancy of purpose for continual improvement of product and service.
- New philosophy: adopt the new philosophy that has been created in a new economic age.
- Cease dependence on inspection: eliminate the need for mass inspection as a way to achieve quality.
- End 'lowest tender's contracts: end the practice of awarding business solely on the basis of price tag.
- Improve every process: improve constantly and forever every process for planning, production and service.
- Institute training on the job: institute modern methods of training on the job.
- Institute leadership: adopt and institute leadership aimed at helping people and machines to do a better job.
- Drive out fear: encourage effective two-way communication and other means to drive out fear throughout the organization.
- Break down barriers: break down barriers between department and staff areas.
- Eliminate exhortations: eliminate the use of slogans, posters and exhortations.
- Eliminate targets: eliminate work standards that prescribe numerical quotas for the workforce and numerical goals for people in management.
- Permit pride of workmanship: remove the barriers that rob hourly workers and people in management of the right to pride of workmanship.
- Encourage education: institute a vigorous program of education and encourage self-improvement for everyone.
- Top management commitment: top management must be permanently committed to improving quality and productivity.

While Deming's principles were stressing on the internal role of the organization, Juran (1980) was more interested on the customer's point of view of products' fitness for use or purpose. According to Juran, a product could very well meet all the Deming's specifications and still not be fit for use or purpose. Ishikawa's definition of quality makes it clear that the proof of high quality is the satisfaction of ever changing consumer expectations (Ishikawa,1985). He stated

that quality is equivalent to consumer satisfaction, quality must be defined comprehensively. It is not enough to say the product is of high quality, we must pay attention to the quality of every part of the organization's role; the customer's needs in achieving this ideal and note that this will be always changing. Hence, the definition of quality is ever changing. The price of a product or service is also important when evaluating its quality. Ishikawa believes that no matter how high quality, if the product is overpriced, it cannot gain the customer's satisfaction. Therefore, quality cannot be defined without considering price. Ishikawa also emphasized importance of total quality control to improve organizations' performance. He contributed to this area by using a cause and effect diagram (Ishikawa diagram) to diagnose quality problems (Kruger, 2001). Feigenbaum's definition of quality is obviously a level of two definitions. The main essential points of this definition are (Feigenbaum, 1983): quality must be defined in terms of customer satisfaction; quality is multidimensional. It must be defined comprehensively. Because customers have changing needs and expectations, quality is dynamic. He means that, as the quality assessment is up to the customer, we need to be close to our customer to measure their satisfaction and to have the ability to translate the satisfaction into product characteristics. This becomes essential. He emphasizes the role of marketing and production for the first evaluation of the level quality customers want and how much they are willing to pay for it. The second reduces this marketing evaluation to the customer's exact specification. However, determining how much Customers are willing to pay to obtain an approximation of their ideal product (or service) and then translating that information into specifications for a variety of Product or service characteristics can be the real challenge for every TQM expert. In addition, Feigenbaum's notion seems fairly weak on the filling of translating customer expectations into product or service characteristics. Yet, the basic components and issues of modern quality focused organization are well outlined in his book Total Quality Control (TQC). Feigenbaum described the concept of organization wide total quality control. He was the first user of total quality control concept in the quality literature. He defined quality as "the total composite product and service characteristics of marketing, engineering, manufacturing and maintenance through which the product and service in use will meet the expectations by the customer" (Kruger, 2001). Taguchi defined quality as the avoidance of financial loss of a product to society after being shipped (Taguchi and Wu, 1979). Taguchi's objective is to focus on minimizing loss to society in order to maximize quality. Process and product design can be improved through the identification

of controllable factors and their settings, which minimize the variation of a product around a target response. Major common denominators of these quality improvement plans include management commitment, strategic approach to a quality system, quality measurement, process improvement, education and training, and eliminating the causes of problems. Total quality management is the culture of an organization committed to customer satisfaction through continuous improvement. This culture varies both from one country to another and between different industries, but has certain essential principles which can be implemented to secure greater market share, increased profits, and reduced costs (Kanji and Wallace, 2000). TQM has attracted scholars because of the growing diffusion and acceptance in the business world. It is concerned with the management of quality principle in all the facets of a business including customers and suppliers (Dale et al, 1994, Lockwood et al, 1996). Total Quality Management (TQM) involves the application of quality management principles to all aspects of the organization, including customers and suppliers, and their integration with the key business processes. It is an approach which involves continuous improvement by everyone in the organization. TQM is a principle which involves the mutual cooperation of everyone that aids the business process of an organization and it involves all the stakeholders of an organization. Dale et al, ((a) 1994) cites BS.4778; part 2(1991) where 'TQM is defined as a philosophy embracing all activities through which the needs and expectations of the customer and the community, and the objectives of the organization are satisfied in the most efficient and cost effective way by maximizing the potentials of all employees in a continuing drive for improvement.' According to Mohammed (2006), TQM is an effective system for integrating the quality Development, quality maintenance and quality improvement efforts of various aspects of a system so as to enable services at the most economical level and derive full satisfaction. TQM is aimed at the satisfaction of customers' needs in an efficient, reliable and profitable way. It involves a radical direction through which an organization performs its day to day operations in order to ensure that quality is put at the top of mind of every employee and departments in which they operate. They opined that TQM is a heart and mind philosophy which recognizes that company culture affects behavior which in turn affects quality. Oakland (1989), describes TQM as an approach to improve competitiveness efficiently and flexibility for the whole organization. According to Hellsten and Klefsjö (2000), TQM can be defined as a management system which consists of interdependent units namely core values, techniques such as process management,

benchmarking customer focused planning or improvement teams and tools such as control charts. Dahlgaurd, Kristensen and Kanji (1999) saw TQM as a corporate culture that is characterized by increased customer satisfaction through continuous improvement involving all employees in the organization. Oakland (1989), noted that ‘for an organization to be truly effective each part of it must work properly together towards the same goal, recognizing that each person and each activity affects and in turn is affected by each other – the methods and techniques used in TQM can be applied throughout any organization.’ Dale (1999) defines TQM as a management approach of an organization, centered on quality, based on the participation of all its members and aiming at long-term success through customer satisfaction, and benefits to all members of the organization and to society. Dale (1999) states further that tools and methodologies are used in TQM in order to improve the organization continuously. Sheba et al. (1993) argue that Total Quality Management (TQM) is an evolving system of practices, tools, and training methods for managing companies to provide customer satisfaction in a rapidly changing world. A baseline technical definition of what TQM is all about has been given by the American Federal Office of Management Budget Circular, —TQM is a total organizational approach for meeting customer needs and expectations that involves all managers and employees in using quantitative methods to improve continuously the organization’s processes, products and services (Milakovich,1990). TQM is not merely a technical system. In fact, TQM is associated with the organization itself, which is also a social system (Morgan & Murgatroyed, 1997). Some people argue that organizations are not only technical systems but also human systems (Pike and Barnes 1996). In addition Oakland (1993), states that TQM is an attempt to improve the whole organization’s competitiveness, effectiveness, and structure. Over the past two decades, total quality management (TQM) has become most widely used management acronym and is considered as the buzz word in the management practices. It has been well accepted by managers and quality practitioners as a change management quality approach (Arumugam et al., 2009). It plays a vital role in the development of management practices (Prajogo and Sohal, 2003; Hoang et al., 2006). Many researchers asserted TQM as an approach to improve effectiveness, flexibility, and competitiveness of a business to meet customers ‘requirements (Oakland, 1993). Some people also see it as the source of sustainable competitive advantage for business organizations (Terziovski, 2006). It is also seen as a source of attaining excellence, creating a right first-time attitude, acquiring efficient business solutions, delighting customers and suppliers

etc. (Mohanty and Behera, 1996) and above all TQM can also be seen as a source of enhancing organizational performance through continuous improvement in organization's activities (Claver-Cortes et al., 2008; Teh et al., 2009). In recent decades, the level of awareness towards TQM has increased drastically and has gone to its peak to become a well-established field of research (Arumugam et al., 2008; Yusof and Aspinwall, 1999). In response to these challenges and to facilitate the organizations in achieving higher quality levels, many companies are implementing TQM approach and quality initiatives for achieving sustainable competitive advantage and enhanced company performance. Past studies on the relationships between TQM practices and quality performance have showed significant and positive results (Arumugam et al., 2008; Prajogo and Sohal, 2003). Thus, assessing TQM and its effects on organizational performance is necessary as it provides a theoretical as well as a practical platform to the industry in its efforts to gain sustainable competitive advantage.

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**Table 1: a summary of critical success factors (CSF/s) of TQM**

The Authors	Critical Success Factors (CSF/s) of TQM
Saraph et al. (1989)	<ul style="list-style-type: none"> <li>• Critical success factors of quality management: (1) the role of leadership and quality policies; (2) role of quality department, (3) training; (4) product/ service design; (5) supplier quality management; (6) process management; (7) quality data and reporting; and (8) employee relations.</li> </ul>
Flynn et al. (1994)	<ul style="list-style-type: none"> <li>• The study identified seven quality management practice dimensions: (1) Top management support; (2) quality information; (3) process management; (4) product design; (5) workforce management; (6) supplier involvement; (7); Customer involvement</li> </ul>
Powell (1995)	<ul style="list-style-type: none"> <li>• The successful implementation of TQM depends critically on certain tacit, behavioural, imperfectly imitable features such as top management commitment, effective communications, employee involvement, and less upon such total quality management tools and techniques as training in quality, flexibility in manufacturing, process management, benchmarking, and performance measurements.</li> </ul>
Ahire et al. (1996)	<p>(1) Top management commitment; (2) customer focus; (3) supplier quality management; (4) design quality management; (5) benchmarking; (6) SPC usage; (7) internal quality information usage; (8) employee empowerment; (9) employee involvement; (10) employee training; (11) product quality; (12) supplier performance.</p>

Bayazit (2003)	Critical success factors of TQM include (1) upper management support; (2) employee involvement and commitment; (3) customer focus; (4) quality education and training, (5) teamwork, and (6) use of statistical techniques
Conca et al. (2004)	The successful implementation of TQM depends on (1) leadership; (2) quality planning; (3) employee management; (4) supplier management; (5) customer focus; (6) process management, (7) continuous improvement, and (8) learning
Rad (2005)	CSFs of TQM include (1) top management commitment to quality and involvement; (2) top management stability, strategic quality planning for quality; (3) employee involvement, (3) a team work and quality culture, (4) focus on customers (internal and external), (5) open communications, (6) management by fact to solve problems, (7) continuous improvement, (8) aligning process to improve customer satisfaction, (9) focus on supplier and partners, and(10) monitoring and evaluation of quality.

Karuppusami and Gandhinathan (2006)	<ul style="list-style-type: none"> <li>• The study identified a list of 56 CSFs of TQM based on 37 TQM empirical studies conducted between (1989 -2003).</li> <li>• The first five CSFs were (1) the role of management leadership &amp; quality policy; (2) supplier quality management; (3) process management, (4) customer focus; (5) training; (6) employee relations; (7) product/service design; (8) quality data; (9) role of quality department; (10) HRM and HRD; (11) design and conformance</li> </ul>
Teresa et al. (2006)	<ul style="list-style-type: none"> <li>• The CSFs of TQM identified in their study were (1) top management commitment; (2) adopting philosophy; (3) quality management; (4) benchmarking; (5) process management; (6) product design; (7) employee training; (8) employee empowerment, (9) supplier quality management; (10) customer satisfaction.</li> </ul>
Bartley et al. (2007)	<ul style="list-style-type: none"> <li>• For successful implementation of TQM, an organisation's culture needs to be focused on its customers.</li> <li>• An organisation can move towards a customer-focused culture by listening to customers' view; analysing; understanding; integrating and developing their expectation.</li> <li>• Customer focused strategies, procedures, and processes need to be regularly reviewed and improved</li> </ul>

Chowdhury et al. (2007)	<ul style="list-style-type: none"><li>• The study identified ten CSFs including (1) Top management commitment; (2) supplier quality management; (3) continuous improvement; (4) product innovation; (5) benchmarking; (6) employee involvement; (7) reward and recognition; (8) education and training; (9) customer focus; and (10) product quality.</li></ul>
Abdullah et al. (2008)	<ul style="list-style-type: none"><li>• Critical factors were identified were (1) management commitment; (2) customer focus; (3) employee involvement, (4) training &amp; education, and (5) reward and recognition.</li></ul>
Salaheldin (2009)	<ul style="list-style-type: none"><li>• The study identified 24 CSFs of TQM</li><li>• The CSFs were classified into strategic, tactical, and operational factors.</li><li>• Strategic factors are e.g. factors such as top management commitment, continuous improvement, and benchmarking</li><li>• Tactical factors are e.g. employee training &amp; involvement &amp; empowerment; team building &amp; problem solving, use of IT to collect and analysis data, and supplier quality &amp; relationships.</li><li>• Operational factors are e.g. management of customer relationships; process control, resources conservation &amp; utilisation, and enterprise performance metrics for TQM.</li></ul>



## 2.4 Organizational performance

One of the main elements to achieve an effective organizational management processes is the performance measurement. Performance measurement is very important for the effective management in organization. According to Deming without measuring something, it is impossible to improve it. The performance of one organization can be directly related to its ability to achieve their strategic and financial objectives (Li et al., 2006). The performance of organizations was largely neglected in past research, whereas some other (Katou, 2008) who were discussing the organizational performance with reference to the financial performance only. Stock et al. (2000) were also discussing the organizational performance through measuring both financial and market harmonic performance which includes the return on investment measures (ROI), sales profit and growth and market share progress. One fact must be also mentioned here is that the organizational performance could be measured either depending on operational performance which is referring to the whole performance of one organization that includes financial performance, customer satisfaction and effectiveness of product quality (Brah et al., 2000). Whereas the operational performance of one organization is directly handled with the enhanced delivery performance, flexibility, minimizing costs and errors and enhancing process productivity (Nunnally, 1978).

**Table 2: A summary of the organizational performance literature**

Dimensions of OP	Key performance indicator	Relative literature
Financial performance	(1) Cost of quality; (2) Cash flow; (3) Market share growth; (4) Sales volume/growth/improvement; (5) Export growth; (6) Inventory reduction/turnover (7) Cost improvement; (8) Profit improvement; (9) Overall profitability; (10) Return on investment; (11) Relative market share/ Sales growth/ Profitability/ Return on assets; (12) Engineering change rate in production; (13) Overall financial performance/ competitive position.	(Powell, 1995b); (Terziovski, Samson et al., 1997); (Lee, 2004); (Idris and Zairi, 2006a)); (Yeung, Cheng et al., 2006); (Fuentes, Montes et al., 2006)
Internal or operational performance	(1) Overall quality performance; (2) Reliability (warranty claims cost as a percentage of total sales); (3) Timeliness/delivery; (4) Quality improvement/defects as a percentage of production volume; (5) Productivity; (6) Waste Reduction; (7) Production performance improvement; (8) Order cycle time; (9) Supplier Delivery performance improvement; (10) Flexibility to change volume.	(Powell, 1995b); (Flynn, Schroeder et al., 1995); (Ahire, Waller et al., 1996); (Terziovski, Samson et al., 1997) (Lee, 2004); (Rahman and Bullock, 2005) (Yeung, Cheng et al., 2006); (Fuentes, Montes et al., 2006).

Customer satisfaction	(1) Customer relations/ Satisfaction; (2) Customer complaints/ Reducing customer complaints; (3) Relative customer retention/ Loss of customers; (4) Relative new products' success rate; (5) Customer returns due to bad quality; (6) Product reliability; (7) Level of satisfaction customer; (8) Level of absenteeism	(Flynn, Schroeder et al., 1995); (Terziovski, Samson et al., 1997); (Rahman and Bullock, 2005) (Idris & Zairi, 2006); (Yeung, Cheng et al., 2006); (Fuentes, Montes et al., 2006)
Employee satisfaction	(1) Employee morale; (2) Employee growth; (3) Employee productivity	(Terziovski, Samson et al., 1997); (Rahman and Bullock, 2005)
Learning & Growth	(1) Innovation (percentage of total sales from 'new' products); (2) Innovation (new products); (3) Comparing performance against competitors	(Terziovski, Samson et al., 1997) (Martinez-Costa, Choi et al., 2009) (Powell, 1995b)

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## 2.5.Total Quality Management Practices

**2.5.1. Leadership:** Leadership proceeds as the most important element of TQM. It provides guidance and direction for the entire organization to adopt and implement any quality improvement program. Leaders in a TQM system view the organizations system; support employee development; establish a multipoint communication among the employees, managers, and customers; and use information efficiently and effectively. It is also found in a research that a competent leader would be able to execute the important critical factors of TQM implementation more effectively (Das et. al., 2011, Idris and Ali, 2008; Idris et. al., 2003).Jitpaiboon and Rao (2007) further show that all TQM practices are positively related to internal and external performance and top management support has had the highest impact on performances. In addition, leaders encourage employee participation in decision-making and empower the employees. Top management commitment and participation in TQM practices are the most important factors for the success of TQM practices. Top management acts as the main driver for TQM implementation, creating values, goals and systems to satisfy customer expectations and improve an organization's performance path (Ahire et al., 1996). Managers should demonstrate more leadership than traditional management behaviors to increase employees' awareness of quality activities in TQM adoption and practices. An appropriate style of leadership is considered an organizational capability because this style allows an organization to utilize its resources to achieve the desired end. This is consistent with the definition established by Amit and Schoemaker (1993), which defines capabilities as the capacities to organize resources to affect a preferred result through mixing intangible and tangible resources over time. Explicitly, leadership is the result of combination of tangible and intangible resources such as quality top leaders, knowledge and information to make decisions, and other organizational resources. Elaborating this, top managers are a form of tangible resources, yet their skills, knowledge and experience are intangibles, making leadership a capability as it involves the organizations' top managers with their skills, knowledge and experience. We believe that the transformational type of leadership is suitable for TQM organizations. Originated from the earlier works of Burn (1978), transformational leadership upholds four dimensions (1) idealized influence or charisma, (2) inspirational motivation, (3) individualized consideration, (4) intellectual stimulation. (Bass and Avolio, 1994). A set of practices shown by the transformational leaders to their followers are setting a vision, aligning followers to the vision

through effective communication and motivating followers to achieve the vision (Bass and Avolio,1994). Charismatic leaders make their follower feel secure and comfortable. They are masters of social skills, sensitive to their social environment and are able to adapt quickly to the new organizational climate. Previous studies have found that leadership improves operational performance, inventory management performance, employee performance, innovation performance, social responsibility and customer results, financial performance, and overall firm performance. Based on the literature reviewed, we can conclude that Leadership has strongly significant relationship to the organization performance.

**2.5.2. Knowledge and Process Management.** Effective knowledge management ensures that employees obtain timely reliable, consistent, accurate, and necessary data and information as they need to do their job effectively and efficiently in the organization. Only in this way, the expected benefits from TQM practices can be achieved. Process management emphasizes activities, as opposed to results, through a set of methodological and behavioral activities. It includes preventive and proactive approaches to quality management to reduce variations in the process and improve the quality of the product Knowledge and successful process management practices monitor data on quality to manage processes effectively. In this way, turnover rate of purchased materials and inventory can be improved. Errors or mistakes in the processes can also be figured out and corrected on time. The processes are improved by means of controlling the processes periodically and monitoring data on quality continuously. Effective knowledge and process management design minimize the negative effects on the environment. Furthermore, as the processes become prevention oriented, costs are reduced and profit of the firm increases. Previous studies have found that knowledge, process management, and statistical control/feedback improve operational performance, inventory management performance, Innovation performance, social responsibility, customer results, competitive advantage, financial performance, and overall firm performance. Thus, Knowledge and process management are positively related to performance.

**2.5.3. Training.** Training helps in preparing employees towards managing the TQM ideology in the process of production. Training equips people with the necessary skills and techniques of quality improvement. It is argued to be a powerful building block of business in the achievement of its aims and objectives (Stahl, 1995). Through training, employees are able to identify

improvement opportunities as it is directed at providing necessary skills and knowledge for all employees to be able to contribute to ongoing quality improvement process of production. Stahl (1995) argued that training and development programme should not be seen as a one-time event but a life-long process. TQM organizations should give necessary training to all their employees to improve their proficiencies in their tasks. Effective training in management and improvement in quality bring success for the organization. Employees' effective knowledge and learning capability will provide sustainability of quality management in the organization. Furthermore, learning organizations adapt rapidly to the changes and develop unique behavior, which distinguishes them from other firms and enables them to obtain better results. Quality does not begin in one department or function; it is the responsibility of the whole firm. Training should be given to all employees based on the results of the training needs assessment. With effective training; employees know the industry and the structure of the organization. In addition, effective training will improve employees' loyalty to the organization, motivation, and work performance. If employees are trained on producing reliable and high quality products and/or services, their full participation in the production stage would be more fruitful. Thus, customer satisfaction will increase and customer complaints will reduce. Some studies report that training is positively related to operational performance, inventory management performance, employee performance, and innovation performance, customer results, market and financial performance, and aggregate Performance, while others report negative/insignificant results, Thus, Training is positively related to performance.

**2.5.4. Supplier Quality Management.** Supply chain management in TQM implies reducing and streamlining the supplier base to facilitate managing supplier relationships, developing strategic alliances with suppliers, working with suppliers to ensure that expectations are met, and involving suppliers early in the product development process to take advantage of their capabilities and expertise. Inputs from suppliers constitute the first phase of producing the Products and/or services in an organization. High quality inputs provide high quality products and/or services. Therefore, the suppliers should adopt TQM and be involved in this process. Effective supply management practices enable the suppliers to adopt quality management and deliver reliable and high quality products and/or services timely. Previous studies have found that supplier quality management positively affects operational performance,

inventory management performance, innovation performance, and overall organization performance. Thus, Supplier quality management is significantly related to performance.

**2.5.5. Customer Focus.** TQM organizations focus on serving the external customers. They first should know the customers' expectations and requirements and then should offer the products/services, accordingly. Customer focus is one of the main elements of TQM and performance improvement initiatives. By the aid of successful customer focus efforts, production can be arranged with respect to the customers' needs, expectations, and complaints. This encourages firms to produce high quality and reliable products/ services on time with increased efficiency and productivity. According to Miyagawa and Yoshida (2010), the strategy to focus on customer satisfaction significantly affects quality performance issues such as reducing warranty costs and scrap. Siddiqui and Rahman (2007) suggest that customer orientation and top management support constitute the vital factors in achieving outcomes "like cost cutting on maintenance of applications, increased management control, improved quality of products and services, greater customer satisfaction, enhanced productivity, slashed time consumption on production, optimization of human resource use and flexibility in reaching out to customers".

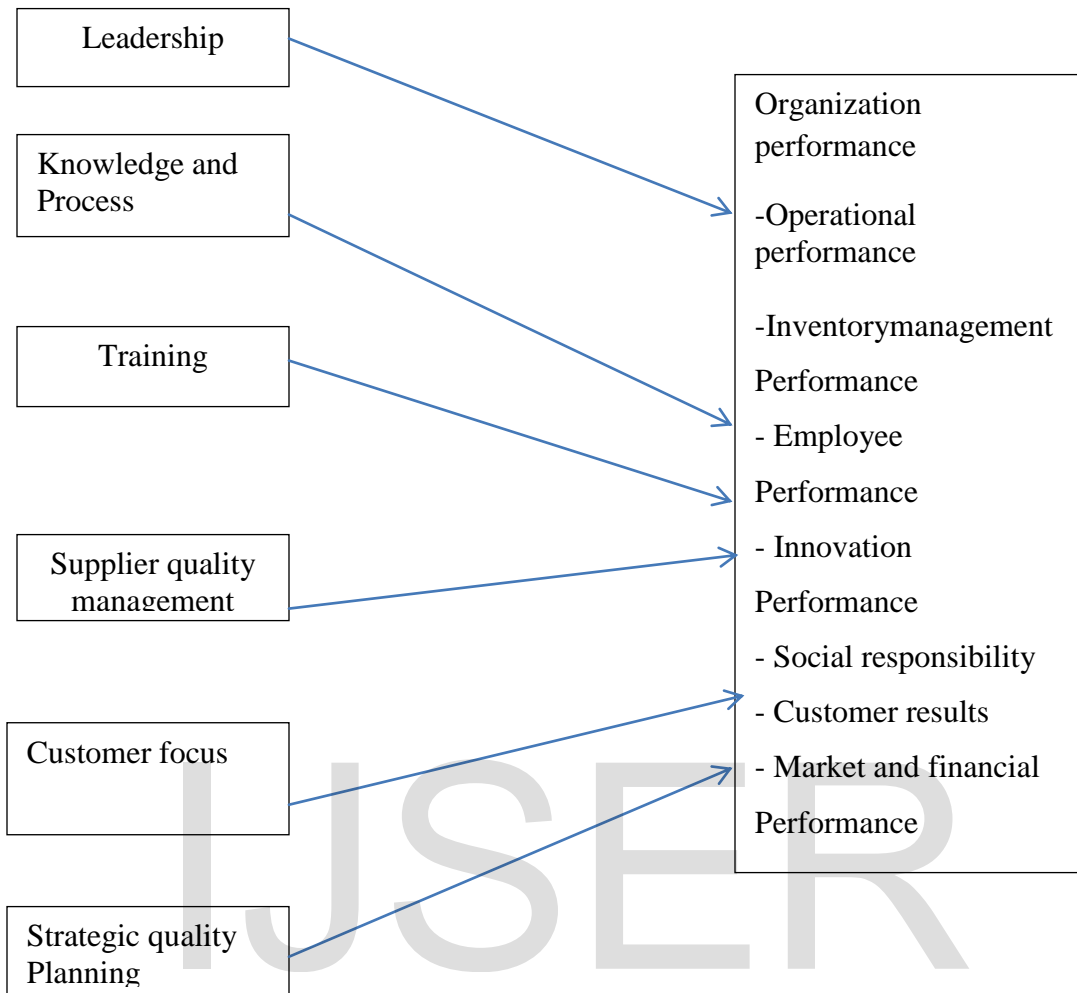
Idris (2000) emphasizes the importance of customer focus in his study of market orientation and TQM. Easton and Jarrell's (1998) study in turn, has come to a discovery that customer focus affects corporate performances. Arawati (2000) treats customer satisfaction as a mediating variable that affects company performance. When customer expectations are met, their satisfaction will be increased, and the organization's sales and the market share will increase. Previous studies have found that customer focus positively affects operational performance, inventory management performance, employee performance, innovation performance, customer satisfaction/results, sales, and aggregate organization performance. Based on the above review, customer focus has a strongly positive relationship to the performance.

**2.5.6. Strategic Quality Planning.** Strategic quality planning includes vision, mission, and values of the organizations. They are formed by taking into account the quality concept. With effective strategic quality planning efforts employees are taken as an input in developing the vision, mission, strategies, and objectives. Strategies and objectives are also a crucial source of organizational capability. Grant (1991) also argues that strategy should be pushed slightly higher than the current limit of the capability to ensure the perfection of those capabilities. Therefore, effective strategies and objectives are also considered an organizational capability. Leaders must

set clear, measurable and achievable objectives so that they will set the right direction for the firm. Once the specific objectives have been set and agreed upon, resources and capabilities can be employed to attain those objectives (David, 1995). The purpose of objectives are to provide direction, aid in evaluation, create synergies, show priorities, focus coordination and provide a basis for effective planning, organizing, motivating and controlling activities (David, 1995). Therefore, objectives are fundamental for organizational accomplishment. Connecting to the objectives, being equipped with strategies is the mechanism to achieve long-term objectives. This facilitates acceptance and support of strategic quality plans by the employees. Successful strategic quality planning efforts also take into account the possible side effects of the plan to the environment prior to the production. This will manifest and improve social responsibility of the firm. Previous studies have found that strategic quality planning is positively associated with operational performance, inventory management performance, society results, customer results, and market performance. However, strategic quality planning is not statistically related to perceived performance in the computer industry. Thus, Strategic quality planning is positively related to performance.

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**Figure 2.1: The relationship between TQM practices and performance measures.**

TQM refers to management methods used to enhance quality and productivity in business organizations. TQM is also a comprehensive management approach that works horizontally across an organization, involving all departments and employees and extending backward and forward to include both suppliers and clients customers. All enterprises and organizations hope to expand and grow in the future. For organizations to successfully achieve their growth objectives products must be well planned and their quality must be ensured to meet up with the needs of consumers. That is, total quality management is an approach to ensure that the product adequately reach the needs of final consumers. It has become well known that poor quality control, poor quality activity and system failure are foe to industries and might lead to loss in competitive advantage and market share. TQM could then be an appropriate solution to remain competitive in an ever-aggressive global market. The problems of manufacturing enterprises all

over the world and have been compounded in recent years due to changes in customer behavior and increased competition from newly established companies and importers, the effects of system failures, poor product design, delivery delays, untrained staff and ignorance of quality. The change in consumer behavior has increased competitive pressure and this has compelled most producers of goods and services to tailor their products to meet the requirement of potential buyers. Thus, most organizations are concerned about how to satisfy or even exceed the expectation of their customers.

## **2.6 Total Quality management and organizational performance**

Measurement of performance is considered as an essential element at all managerial approaches. Cost and quality are the two main measurements of organizational performance which directly affected by the total quality management practices. Sadikoglu (2009) and Brun (2010), both agreed that applying various TQM practices such as training, process management, customer management, etc. influence employees performance which then directly affect the whole organization performance. Gharakhani also indicated that TQM greatly influence the organizational performance especially in their financial performance (Gharakhani et al., 2013). According to the increasing demands to achieve a high quality products and services, organizations have realized the importance of applying total quality management practices to the production processes in order to minimize costs and to create products with high quality characteristics. TQM is recognized as a strategy that considered customers as the main concern, in which it directly aims to provide them with a high quality services and products through adding continuous improvements in the production processes (Harmon & Peterson, 1990). research who directly aimed to define the conflict that existed between the thoughts of senior managers on TQM and middle level manager's visions. Soltani and Wilkinson (2010) found that there exist four main TQM propositions which are affirmation of quality, individual, Firm and the senior managers' functions. The main conclusions that were driven from Soltani and Wilkinson research that TQM is still considered as a new strategy, and the main utilized approach to implement TQM is the quality control approach (Soltani and Wilkinson, 2010). Wen et al. (2009) and Letica (2007) also clarified the impact of TQM practices on the level of customer satisfaction especially in the sector of public services and from the managers' perspective. The focus were planning in strategic way, management of processes and employees, leadership, customer concern, and measuring on both internal and external customers'

satisfaction level for the quality of perceived products and services. This study has indicated that there is a positive relationship between TQM practices, employees focus with satisfaction levels of customers. The research findings also clarified that there is a strong relation between manager commitment and satisfaction of customers. On the other hand, some TQM practices such as planning in a strategic way and management of processes has less effect on satisfaction levels of customers. Lord & Lawrence (2001) clarified that the management of quality process must start at the beginning of the project (the organization founding), and ends after achieving the quality standards. Each organizational member is also responsible to some extent on the organizational improvements. Quality can be defined as the ability of products and services to cover customers' demands and achieve high level of customer satisfaction (Waldman and Gopalakrishnan, 1996). Lakhal et al. (2002); and Talha (2004) indicated that the practices of TQM is directly contributing in enhancing the performance of organizations by minimizing costs, enhancing the performance of staff members, and increasing the degree of customer satisfaction. Although Saizarbitoria (2006) clarified that TQM directly impact the performance of organizations in positive way, but Dooyoung et al. (1998) indicated that in some cases the implementation of TQM cannot achieve the desired organizational goals.

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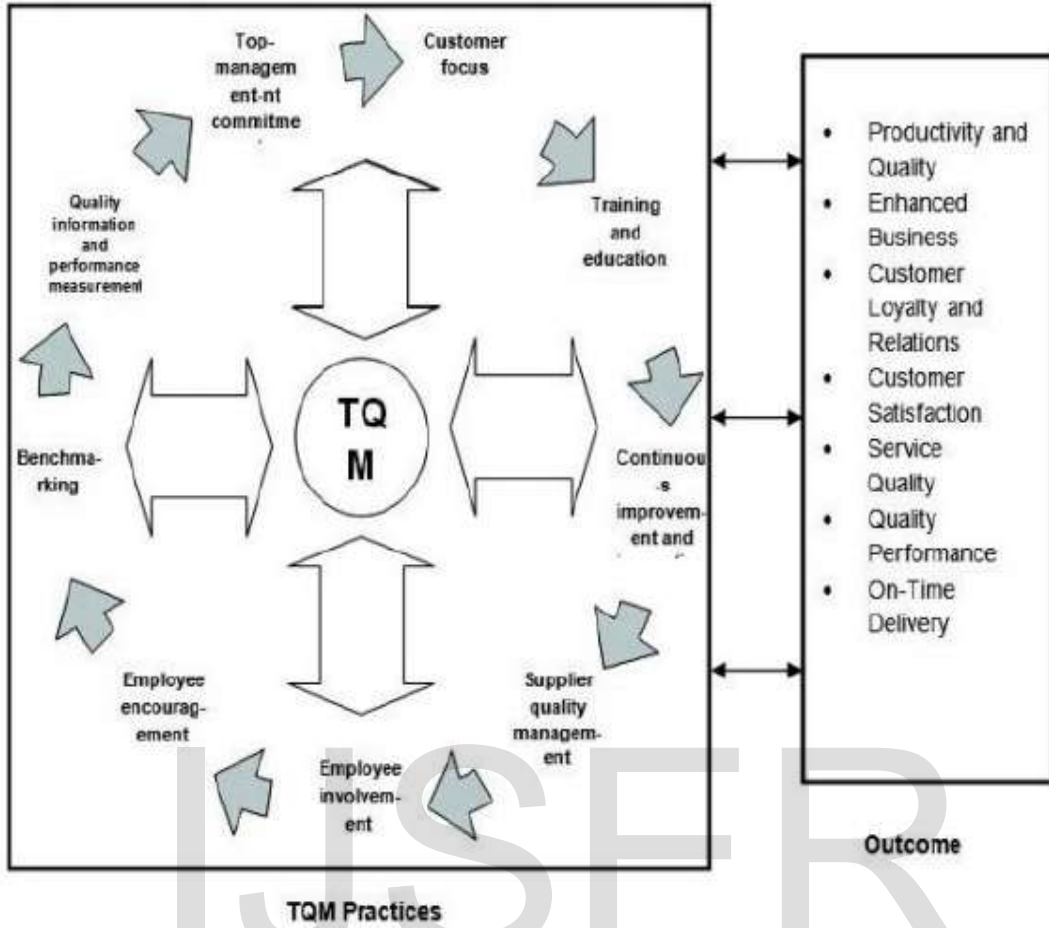


Figure 2.2. Components of TQM model (source: Talib and Rahman, 2010)

### **Chapter 3: Methodology**

This term paper collects more than twenty researcher papers (international journals and thesis works) and reviewed on how different researchers conducted their investigations on the concepts of total quality management and its impacts on organizational performance. There were two variables reviewed, namely: Total Quality Management (TQM) practices, and organizational performance. Total Quality Management (TQM) practices are taken as exogenous variables. While, organizational performance is endogenous variables. Six items were used to measure TQM practices in organizations based on the aspects leadership, Knowledge and Process Management, employee training, customer focus, Supplier Quality Management, and Strategic Quality Planning as the basis for enhancing product quality. Organizational performance was measured based on cost reduction, Operational performance, Inventory management performance, Employee performance, Innovation performance, and social responsibility, Customer results and Market and financial performance. It is also examines the effect of implementing these elements on both accepted Financial and operational performance measurement.

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## Chapter 4: Summary and Discussion

The primary purposes of this study were to investigate the relationships among TQM practices and to identify the effects of TQM practices on organization performance. The investigation shows that there is a positive relationship between TQM practices and organizational performance in manufacturing sectors. so it is essential to utilize these practices effectively in manufacturing companies.

### 4.1 Benefits of TQM implementation

The effective implementation of TQM will increase customer satisfaction with the service offerings (Omachonu and Ross, 1994). Quality enhances customer loyalty through satisfaction; this in turn can generate repeat business and lead to the attraction of new customers through positive word of mouth. The word of mouth communication will help in cost reduction. This Omachonu and Ross (1994), noted will provide competitive edge to the company. The improvement in quality will result in increased market share and profitability.

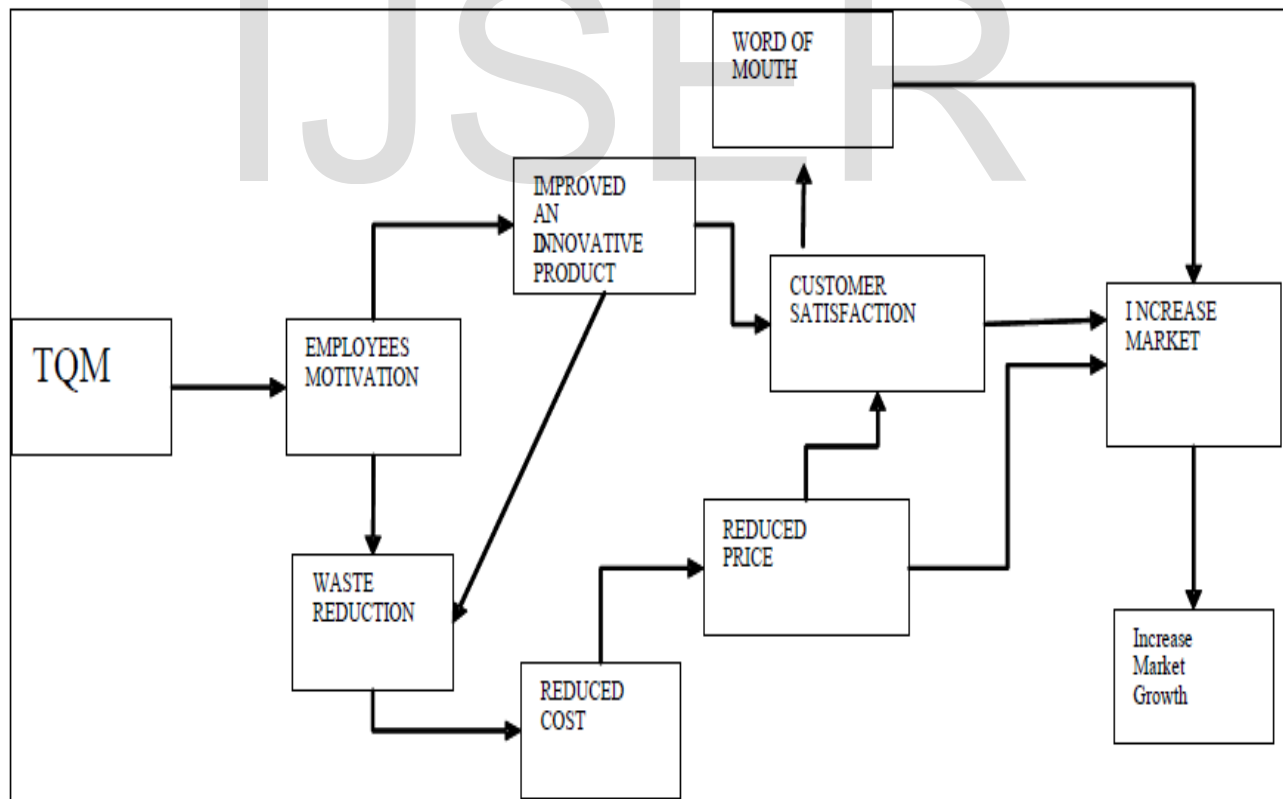


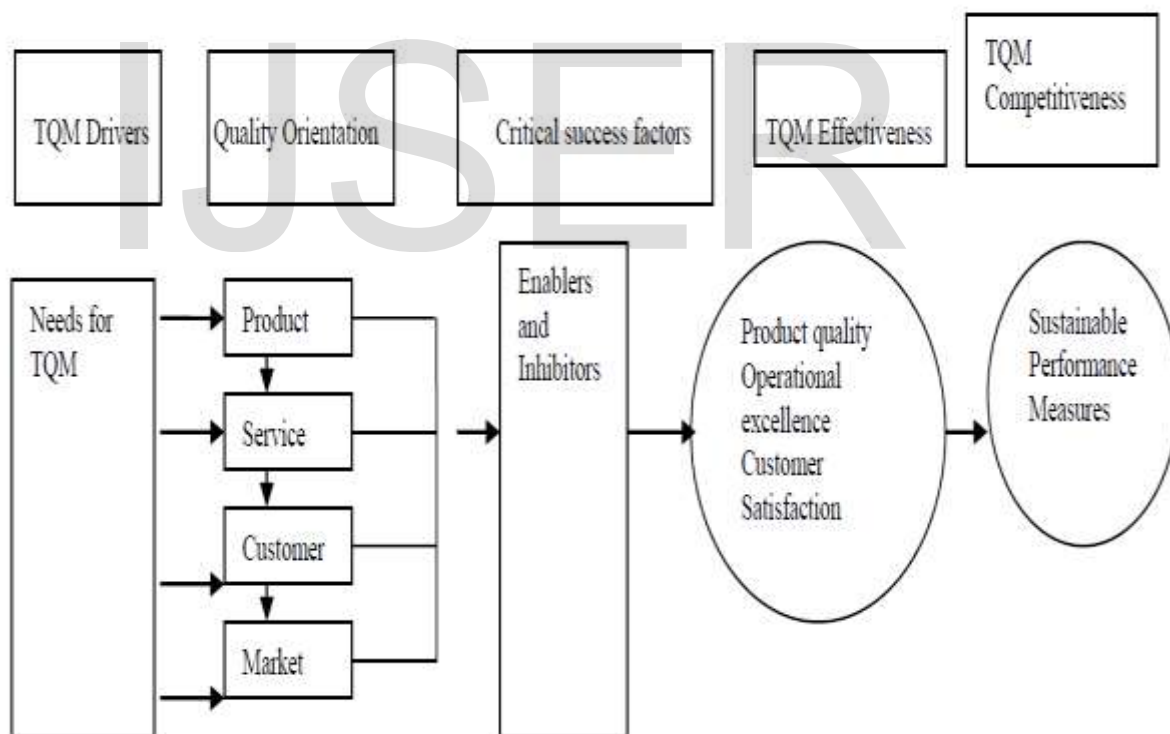
Figure 4.1 an adaptation of the effect of quality management (Omachonu and Ross (1994))

Total quality management is a management philosophy which emphasizes the devolution of authority to the front line staff. It ensures the participation of everyone in the decision making process through activities such as quality cycles and team work. The question is, does this devolution of authority leads to employees' satisfaction or not? Motivations theories indicate that two major forms of motivation exist – the intrinsic and the extrinsic motivation. While some will argue that the best form of motivation is monetary incentive, others argue for self-fulfillment and recognition. The motive behind the intrinsic reward is to provide the employee with some autonomy which empowers him to take decisions that affects his job, thus making him responsible and accountable. This is said to increase the employee's level of job satisfaction (Dimitrades, 2000). The implementation of TQM ensures that every worker in the organization does his work with quality the first time, thus improving the efficiency of operation and avoiding some cost associated with waste. This in turn will offer more value to customers in terms of price and service quality, thus making them satisfied. Implementation of TQM further ensures that organizations change how they perform activities so as to eliminate inefficiency, improve customer satisfaction and achieve the best practice (Porter, 1996). Porter noted that constant improvement in the effectiveness of operation is essential but not a sufficient factor for organization to be profitable. According to Sila (2007), TQM helps in improving the quality of products and also reduces the scrap, rework and the need for buffer stock by establishing a stable production process. He argued that TQM will reduce the cost of production and time of production. Continuous improvement which is a feature of TQM is said to reduce the product cycle time thus improving productivity (Huang and Lin, 2002). Many other TQM practices such as training, information system management, relationship with suppliers etc have a positive impact on operational performance. The efficient management handling of these practices will improve efficiency and no doubt affect the profitability of the firm. According to Sila (2007), TQM can minimize the total cost of production through 'sole sourcing'. The cost in this case is reduced by limiting the number of suppliers used by the firm and providing them with necessary training and technology. The efficient functioning of an operation will then depend on how well the suppliers meet up with the expectations of the organization. This is why the TQM principle emphasizes the totality of quality in all facets which includes the suppliers. TQM endorses the total quality approach in creating customer satisfaction. The total quality approach creates an integrated method of analyzing operation by focusing the processes of production on customer

satisfaction. Thus, it requires that quality be built into all the processes so as to be efficient in the overall operation (Andrle, 1994). Kaynak (2003), suggested that the effectiveness of TQM organizations should be measured by the degree of integration with their supplier bases because supplier quality management is a critical component of TQM. Operational effectiveness is then a function of how well the various units of an organization carry out their functions with quality.

#### 4.2 Sustaining TQM

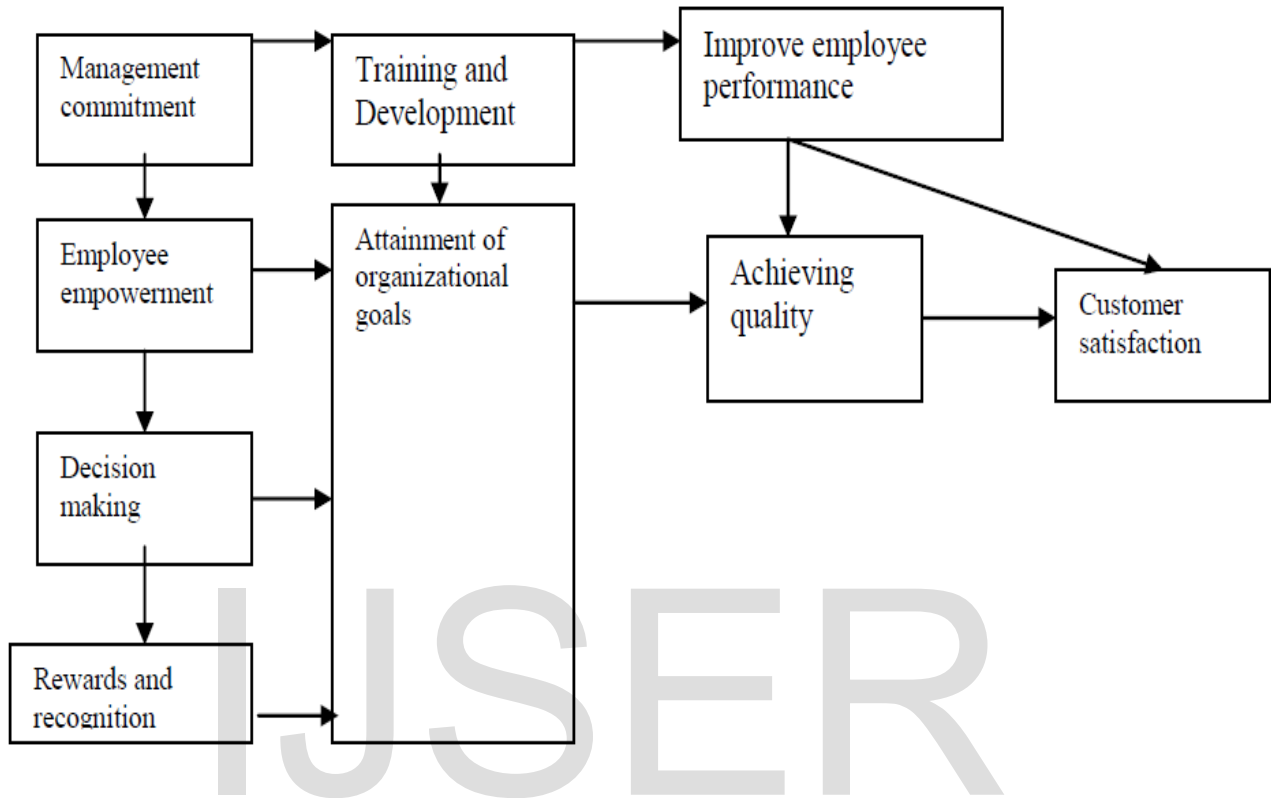
The research carried out in 2006 by Idris and Zairi would help the employers to maintain quality. They have shared that enablers stand for positive energy or force in acquiring quality whereas inhibitors lay obstacles in aiming quality. Employers harsh practices can demotivate the employees and they won't perform well and quality could be damaged. Friendly organization culture can empower employees in achieving the results.



**Figure 4.2 Model of sustainable TQM performance**



Adapted from Sustaining TQM: A Synthesis of Literature and Proposed Research Framework by Idris and Zairi (2006).



**Figure 4.3 Model to attain and retain internal as well as external customers**

**4. 3 Limitations to the implementation of TQM**

Oakland, (1995) identified factors that hinder the implementation of TQM. These include the thought that its implementation can be time consuming, bureaucratic, formalistic, rigid and impersonal. Ugboro and Obeng, (2000) in their research they found out that the half hearted implementation of TQM is a major reason for its failure in most organizations. According to them, organizations are only willing to implement just those aspects of TQM which is supported by existing organizational culture. Their findings revealed that employees did not feel as part of the decision making process and their ability to make contributions to quality improvement were restricted due to the limited authority granted them to carry out their activities. Smith, (2004) explained that quality management programs have failed because they were ‘programs of the month’. According to him, implementing quality throughout an organization is not the result of a

formalized programme but requires a cultural change in the way activities is conducted. Andrie, (1994) on his own assessment, claims that the adoption of incompatible quality approach by organizations results in the failure of TQM implementation, he further stressed that the delegation of quality leadership by managers might lead to the development of TQM bureaucracies that are ineffective like other functional departments. According to Wilkinson et al (1998) the lack of commitment from any particular group within the organization can be a serious barrier in management of quality. Most especially the non-commitment by management to quality management is a major hindrance to the successful implementation of TQM. Asher (1996) observes that there is a need for management to drive the ideology of TQM process in order to encourage employees to follow and also to prove to them about management's commitment to quality. Porter (1996) noted that TQM is essential for an organization's productivity and effectiveness but will not necessarily give an organization competitive advantage over her competitors. TQM does not address strategic business issues like differentiation and positioning strategies. McCabe and Wilkinson (1998) noted that the failure of TQM can be attributed to the inappropriate implementation method adopted by the firms employed and not because of the principles of TQM itself. They believed TQM could be successful if it is adequately planned for and implemented according to plan. Another reason for the failure of TQM is the emphasis given to individual rewards for TQM effort. This negates the recommendation made by Deming (1986), who argued that rewards needs to be tied to team work or department rather than individual. The failure of organizations to implement the rewards to group might lead to internal competition amongst employee and this will have a negative impact on team performance which TQM promotes. High cost of providing quality service is a major hindrance to the implementation of TQM, in organizations.

## **Chapter 5: conclusion, future works and recommendations**

TQM is a philosophy of the organizations to continuously improve their products/services or processes involving all stakeholders in order to satisfy their customers and to improve performance and sustainability. This seminar contributes to the TQM literature by establishing comprehensive research model to examine the relationship among TQM practices and organizational performance in manufacturing organizations throughout the world. The findings state that TQM practices have positive and significant effect toward organizational performance. Leadership improves operational performance, inventory management performance, employee performance, innovation performance, social responsibility and customer results, financial performance, and overall organization performance. Knowledge and process management practices improve inventory management performance, innovation performance, social responsibility, and market and financial performance. Successful training improves operational performance, employee performance, and customer results. It has been found that successful supplier quality management enhances social responsibility. Effective customer focus efforts increase operational performance, customer results, and market and financial performance. Effective strategic quality planning efforts improve employee performance and social responsibility of the organization. It can be concluded that TQM practices improve various performance measures in the organization. All aspects of TQM practices should be effectively managed in an organization because each factor in TQM practices improves different aspects of organization performance. The synergy among the TQM factors brings about exceptional or crucial improvements in the organization performances. Organizations should improve employee involvement/ skill and firm structure and allocate sufficient resources to implement TQM successfully. However, this seminar only review the effects of TQM on organization performance in manufacturing industries, further review can expand scope to different industries or investigate the implementation situation in the companies. Although this study establishes relationship between TQM practices and organizational performance, other factors such as size, organizational culture, innovative capacities and market orientation may also have some impact

on organizational performance. Market orientation, consumer satisfaction, organizational culture and level of innovation seem to be highly relevant to TQM practices implementation and performance for further research on manufacturing companies. Thus, this seminar focused on manufacturing companies. So, the next review also could be carried forward with a focus on service companies in order to obtain more specific results. As recommendations, the role of top management is an important factor in implementing TQM in organization. Therefore, the success or fail of TQM practices implementation in organization is part of top management responsibility. Quality improvement program not only emphasizes the commitment of top management, but also employee involvement, and other TQM practices dimensions. Managers have to be responsible in determining appropriate organization capabilities to support their organizational performance. Besides that, managers should also determine quality policy and develop specific measurable goals to meet customer expectations and improve their organizations performance. In addition to that, employees have to be trained and involved in building of total quality management philosophy; Continuous TQM education should be undertaken at all levels, even for those firms that have already acquired a high degree of awareness of the concept (TQM) and management and organization should be incorporated of organizational products, as this will help to reduce challenges posed by adopting total quality management principle.

## References

1. Cemal Zehira, Öznur Gülen Ertosunb, Songül Zehirc, Büşra Müceldillid a\*, Total Quality Management Practices' Effects on Quality Performance and Innovative Performance, International Conference on Leadership, Technology and Innovation Management
2. Omogbiya O. Shulammitte, 2016 effect of total quality management on the performance of brewery industry in Nigeria: an empirical study of selected breweries in Lagos state, Nigeria, NG-Journal of Social Development,
3. Musran Munizu, 2007 The Impact of Total Quality Management Practices towards Competitive Advantage and Organizational Performance: Case of Fishery Industry in South Sulawesi Province of Indonesia, Pakistan Journal of Commerce and Social Sciences
4. Chin S. Ou, 2006 the effects of total quality management on firm performance: evidence from Taiwan information-related industries
5. Ali Bakhit Jaafreh, 2013 The Effect of Quality Management Practices on Organizational Performance in Jordan: An Empirical Study, International Journal of Financial Research
6. Esin Sadikoglu and Hilal Olcay, 2014 The Effects of Total Quality Management Practices on Performance and the Reasons of and the Barriers to TQM Practices in Turkey
7. Adza-Awude Kenneth, 2012 assessment of total quality management practices on organizational performance at intravenous infusions limited koforidua, A Thesis submitted to the Institute of Distance Learning, Kwame Nkrumah University of Science and Technology in partial fulfillment of the requirement for the degree of Masters of Business Administration
8. Davood Gharakhani<sup>1,\*</sup>, Hossein Rahmati<sup>2</sup>, Mohammad Reza Farrokhi<sup>3</sup>, Arshad Farahmandian<sup>1n</sup>, 2013 Total Quality Management and Organizational Performance, American Journal of Industrial Engineering
9. Adediran Oluwatoyin & Adediran Oluseun, 2008 Total quality management: A Test of the Effect of TQM on Performance and Stakeholder Satisfaction, Thesis proposal for the Master's degree in Business Administration

10. David A. Garvin,1987 Competing on the Eight Dimensionsof Quality,Harvard Business Review
11. Asiya<sup>1</sup>, Syed Aamir Saeed Jafery<sup>2</sup>, JAVED RAFIQ<sup>3</sup> Dr. Hummayoun Naeem<sup>4</sup> Dr. ,2012 improving employees performance through total quality management,International Journal of EconomicsandManagement Sciences
12. Marcel T. Ngambi,2015 The Impact of Total Quality Management on Firm'sOrganizational Performance,American Journal of Management
13. Ahlam Mohammed Alamri, Alaa Moued Alharthi, Dina Khaled Alharthi, Walaa Saleh Alhabashi, Syed Hamid Hasan ,2014 Organization Performance Improvement using TQM,International Journal of Computer Applications
14. Norah Dhafer Al-Qahtani, Sabah Sa'ad Alshehri, Dr. Azrilah Abd.Aziz,2015The impact of Total Quality Management on organizationalperformance,European Journal of Business and Management
15. Fusi Abusa, 2011 TQM implementation and its impact on organizational performance in developing countries: A case study on Libya. A thesis for the award of the degree of Doctor of the Philosophy (PhD)
16. Jonas Hansson,2003 Total quality management ,aspects of implementation and performance: investigations with a focus on small organizations, Doctoral Thesis
17. Fazli Idris,2011total quality management (TQM) and sustainable company performances:examining the relationship in Malaysia firms
18. Haile Yeshanew Baye, Dr. Satya Raju R,2016 The extent of TQM practices in Ethiopian manufacturingfirms: An empirical evaluation: international journal of applied research
19. Md. Yusof Ismail, B.E.(Mech.), M.S.(Ind. Mgmt.),1998Implementation of Quality Managementin the Manufacturing Industry,thesis for the award of the degree ofDoctor of Philosophy