



## Role of Leadership and Top Management: A TQM Strategy

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### Abstract

*The purpose of this paper is to find out the roles to be played by leadership and top management to achieve the desired goals in the manufacturing companies. It is a brief literature survey to find out the gaps in the literature on leadership and top management roles. This paper attempts to study how the leadership affects the various aspects in the organizational improvement and what are the roles to be played by the leaders and top management to achieve the manufacturing excellence strategy among the industries? This study is also going to find out the various leadership flexibilities to adapt at different point of time in different manufacturing stages and their effectiveness. In this study, the force analysis circle of TQM leadership style is described, it consists of different enablers and barriers acting on the manufacturing system, which are mostly affecting the organizational performance. TQM Leadership style and top management support helps in managing these enablers and barriers affectively. It is observed that the leadership and top management commitment effectiveness in successful implementation of TQM strategy. This paper can help the industrialist to concentrate on leadership and top management commitment. The industrialist of SME's or the suppliers who are supplying small parts and components to the large companies can utilize this leadership effectiveness studies to improve their leadership performance by practicing the leadership strategy. Customer satisfaction studies also helps the industries to best practice this strategies to improve their customer satisfaction levels by bench marking certain leadership qualities. This survey suggested the different roles of leadership and top management to be played at different stages in the manufacturing system, customer satisfaction and successful implementation of TQM strategy.*

**Keywords:** Total Quality Management, Leadership, Top Management Commitment, Customer Satisfaction, Leadership Flexibility

### Introduction

#### Leadership

Leadership plays gigantic role in forming quality policies, training the employees, developing supervisors, managers and strives to effective implementation of TQM strategy in any organization. TQM supportive style of leadership empowers the employees to involve in decision making process along with the management to take effective decisions to improve the manufacturing process quality

continuously. The participative, supportive and cooperative style of leadership style directs the employees to do the things right at first time and make them aware of customer needs and customers satisfaction. The commitment of management is vital to success of all continuous improvement strategies (Henderson and Evans 2000; Klefsjo et al;2001). Any process of organizational performance is depends on the effective leadership. In most of the research papers leadership has been identified as the most important critical success factor (CSF)(mean score between 3.62 to



4.57: Ali Mohammad Mosadegh Rad (2006); Danial I.Prajago(2006); F.Vouzaz and A.G.Psychogies(2007); Yvonne Lagrosen and Stefan Lagrosen(2006)). Therefore most of the industries are concentrating on leadership development to successful implementation of TQM strategy. According to Subhash Kakkar and A.S. Narang (2007), leadership is important and essential during every phase of the implementation process, particularly having systems tools and techniques at the shop floor. Monica Sharma and Rambabu Kodali(2008) states that the top management leadership is the first step for successful implementation of TQM strategies. According to John Humpraves (2004) leadership enhances the abilities to motivate and inspire others. It means the leadership (inherent character of individual) enhances your (own) ability to motivate and inspire others in doing quality of work. He also stated that leaders can employ to build trust and confidence, create shared context and vision with followers, and move them from communication to action. Leaders act as supportive boundary for the manufacturing excellence.

**Top management leadership is the first step for successful implementation of TQM strategies.**

In the literature it was observed that the top management commitment and leadership has been taken as synonyms. It means the Top management leadership or Leadership of top management can be utilized synonymously. In large scale industries Top management commitment and Leadership role are emphasized separately. But in SME's, Top management leadership is expresses as one entity. In SME's generally small organization structure will be there, in this situations one can mention only Top management leadership. Top management commitments works towards

organizational goals, competitive strategies, customer satisfaction and supplier development. But leadership works towards, forming quality policies, training employees, involving the employees in decision making process, culture development, change management and internal customer satisfaction. Leadership also strives to implement the various quality measuring tools and techniques in the manufacturing system, such as statistical quality control (SQC), statistical process control (SPC), coordinate measuring machines (CMM's) and Six Sigma etc; to achieve manufacturing excellence.

The difference of traditional leadership style and TQM effective leadership style has been explained in the Table 1:

**Research Gaps Observed in the Literature**

- i) The gaps observed in the literature are lack of effective leadership practices in industries specifically Indian industries.
- ii) The gaps observed in the literature are lack of effective top management support for implementation of TQM and other emerging technologies for improving the quality of products and customer satisfaction.
- iii) The gaps observed in the literature are lack of suitable technique for leadership improvement practices

After finding the research gaps, we have used a technique called force analysis circle for effective leadership in this paper.

Table 1: Traditional Leadership vs. TQM Effective Leadership Style

Sl.No.	Traditional Leadership and Effectiveness	TQM and Effective Leadership
1.	It is authoritative, commanding type and fixes the individual targets of production and follow up the process till reaches the targets.	It is supportive, motivating and works towards customer satisfaction targets, such as:Cost reduction, quality improvement, quality of service etc;
2.	It works towards planned targeted production.	It works towards the clear vision and mission of the organization.
3.	It does not have the vision of company policies.	It is the participative leadership style, in which all the employees works towards.Problem identification and solvingDecision making process and teamwork.
4.	It works towards individualized shop floor targets to be achieved.	It improves all the employees performance through training and skill development in new technologies.
5.	Cost vision and quality vision are secondary.	Each individual employee working in TQM environment produce the products according to their immediate customer requirements, so that the final product should satisfy the external customers.
6.	Here the production targets, sales targets are most important.	TQM environment leadership strives to develop the middle management leadership to effective utilization of resources, train the employees in quality improvement techniques, quality measuring techniques etc;
7.	Here all employees works towards their individual tasks.	Here all employees works towards the organizational goals.
8.	Working environment is not flexible	Working environment is flexible

### Force Analysis Circle of TQM and Effective Leadership

This force analysis circle says that there is a circle, inside the circle there are number of arrows which are the strongest *enablers* (forces) of leadership to improve the quality and performance of the organization and make the things to happen towards positive side. Outside circle also there are numbers of *barriers* (forces) of arrows, which acts towards not to happen the thing in positive directions. These are called barriers or bottlenecks, which stops the growth of the circle or growth of the organization. So the leaders effectively, practice the internal points to improve the organizational performance. The Figure1 shows the idea about the force analysis circle. Leadership has the chance of improving the quality of organizational performance by best practicing the TQM enablers (inside the circle) such as:

*Top management commitment is essential for TQM effectiveness.*

#### TQM Enablers

1. Top management commitment
2. Customer supplier relationships
3. Systematic approach
4. Supervision and training
5. Team work
6. Information and communication
7. Manufacturing process improvement
8. Customer Satisfaction
9. Bench marking and performance measurement
10. Knowledge management
11. Change culture to zero defect
12. Total cost reduction

There are other effects outside the circle are called barriers which influence the organizational performance negatively if not controlled or managed properly. These are:

#### Barriers

1. Global competition
2. Increased competition
3. Resistance to change
4. Changing markets
5. Changing customer needs
6. Modern technology
7. Increased growth of industrialization

The **enablers** (forces inside the circle) are discussed further to know the effectiveness on the manufacturing excellence and TQM.

#### Top Management Commitment

Improvement of organizational performance is a concept of continuous improvement that happens to be also TQM strategy. Manufacturing business environment has

increasingly became competitive so, it is imperative on the part of manufacturer and have to up-date their technology and knowledge. TQM is an approach to improve the competitiveness, effectiveness, efficiency, productivity and flexibility of a whole organization. The top management commitment is one of the critical success factors, which influences the organizational performance by systematically practicing the continuous improvement processes.

The purpose of this paper is how to improve the inbound and outbound logistical performance of the manufacturing supply chain

by best practicing of leadership and top management commitment. Different frameworks have been designed for different logistical operations. Ultimate goal of the effective and intelligent practice of logistics management is to satisfy the customers. Any organizations final goal is to fulfill the needs of the customers. Here in this paper authors stated that top management commitment and leadership plays vital role in improving the manufacturing performance, customer satisfaction and successful implementation of TQM strategies.

Top management commitment is essential for TQM effectiveness (Bandopadyay and Sprague, 2003). Top management plays an important role for improving competitiveness, productivity, quality and customer satisfaction etc. All the above processes are being achieved by planning, organizing, understanding each and every aspect of business and involving each individual at each stage. Top management must accept the responsibility of commitment towards a quality policy that deals with the organization for better quality performance. Leadership qualities and commitment towards quality plays a crucial role in creating and changing the culture of the organization. This paper attempts to identify issues related to leadership quality of top management commitment and its importance. It further highlights leadership role in successful implementation of TQM in any organization.

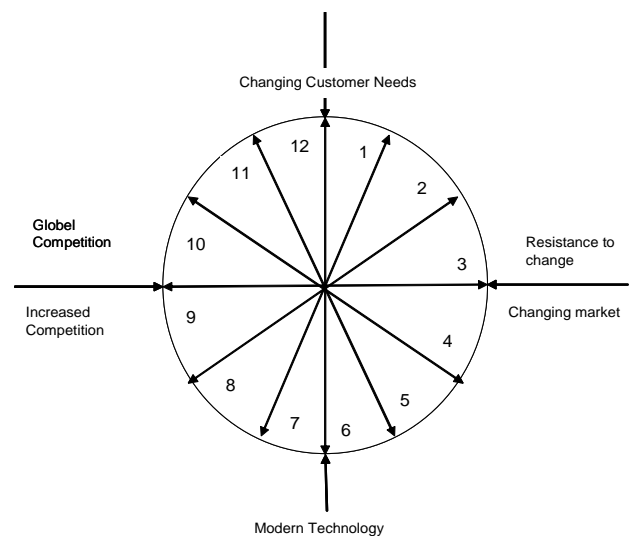


Figure 1: Force Analysis Circle of TQM Leadership Style

## Customer Supplier Relationships

TQM strategy strongly supports the philosophy of customer supplier relationships. Strong customer supplier relationships are long lasting and weak relationships are arms-length. To get the supply of the incoming materials with accepted quality and in time, the companies should maintain the strong relationship with suppliers. *Monica Sharma and Rambabu Kodali (2008)* states that long term relationships with suppliers needs to be established. Here the leadership plays vital role in forming the relationships with suppliers. Leaders assess the supplier's performance by conducting meetings with the supplier's management teams. Another way of forming the relationships with suppliers is by sharing the information transparently, mutual coordination, cooperation and importance of parts and components the suppliers are supplying to the companies. If the suppliers are supplying A & B class items, then there is a need of strong and long term relationships. If the suppliers are supplying 'C' class items, then there is a need of arms length relationship. For TQM environment strong relationships are essential and it is possible by directive and supportive leadership of partners. Strong customer supplier relationship is a force or strength of the leadership to improve the quality of incoming materials. Leadership works towards strong relationships by training the suppliers, providing quality manuals, involving suppliers in the product development process and releasing the funds in advance with trust on suppliers.

*Teamwork is a great opportunity for the people with different back ground work together to achieve the common goals.*

## Leadership and Systematic Approach

Systematic approach is nothing but solving the identified problems with a sequence of steps and techniques to be practiced. Systematic approach is also applied for new product development, establishing new industry, erection and maintenance of machinery etc. Systematic approach for new product development has the following steps :

- i) Define the task: New product development
- ii) Collection of data : Customer feedback, customer survey, Delphi method
- iii) Analyzing the data : Pareto Analysis
- iv) Selection of product : Name the product
- v) Collaborative design : Involving suppliers
- vi) Quality function deployment : To ensure the product quality

Here the flexible leadership works better, because for internal information requirement, such as collection of data, analyzing data etc; the directive and authoritative leadership may be suitable. For collaborative design, QFD etc; the supportive and TQM leadership style is suitable. Systematic approach is also useful for successful implementation of TQM strategy among the automobile industries. In the literature studies, it is observed that systematic approach has been utilized for problem solving

purpose and continuous quality improvement purpose. The leaders who are having the knowledge on systematic approach have gained their importance, by applying their knowledge for machinery maintenance continuously or for implementation of total productive maintenance (TPM) strategy.

## Supervision and Training

Supervision is the process of systematic planning, scheduling, controlling of resources, such as men, materials, money and machinery etc;. Supervision also strives to control the processes to work within the limits. Most of industrialist feels that supervision or supervisor is responsible for a shifts production targets, quality of produced parts or components, maintenance of machinery, procurement of materials, etc. Supervision is the process of having information on company vision, mission and goals, works towards achieving the goals by systematically implementing the

quality techniques and producing the goods according to the customer requirements. A particular department supervisor must have the knowledge about their internal customer needs, external customer needs, supplier data, tools requirement data, component drawing knowledge, machinery operations knowledge, quality and specification requirements, people management skills, and finally he must have the knowledge of optimum allocation of resources to maximize the output and efficiency of the machinery and operators.

Therefore the training is very essential for supervisory development; supervisor must be trained in all the above criteria to be a good supervisor or leader. The supervisors must have the best leadership qualities to improve the manufacturing efficiency, improve the quality of products and incoming materials. Supervisors are called lower level leaders, who accept the responsibility of particular production department or particular service department as whole and sole in charge.

## Team Work and Team Building

Team is the process of forming teams to solve the problems, perform a particular task, project completion, achieve desired goals, learning desired skills and quality improvement etc. Team work is a great opportunity for the people with different back ground work together to achieve the common goals. According to *Gopal K. Kanji and Mike Asher (1996)*, team work enables the group of people to work as a task force, looking at cross functional problems, or as an action teams, solving local problems, in order to identify and adapt new ways of doing things. Team work identifies the problems in a systematic manner and finds the solution with excellent outcome. Team works are essential for all the organizations for work flexibly, cooperatively and develop mutual trust among members. Here the flexible leadership works very well to form the various teams to perform the different tasks and quality

improvement programmes at all the levels. *Subhash Kakkar and A.S. Narang (2007)*, suggested that the process improvement teams, cross functional teams, natural work teams, and self directed/self managed work teams are encouraged. Leadership must concentrate on team work and initiate to form cross functional teams at all levels throughout the organization. Leadership must identify the specific areas such as continuous improvement, cost reduction, safety, total productive maintenance (TPM) etc. and form the teams accordingly and flexibly. Team works also used for development of zero defects and zero maintenance policies. The outcome of these zero maintenance system is zero maintenance batteries is an example.

### Information and Communication

Information may be verbal or written. Information is required to perform certain tasks, works, targets and goals. Information is an important factor of the communication. Without any information, what will you communicate to others? Data of information is collected, sorted, analyzed and prepared to communicate as required by individual departments. Constructive information, it may be quality policy, organization vision and mission, quality specification and standards, quality circles, quality improvement teams, TQM implementation etc; are to be written and communicated to each individual in the industries effectively. It is the responsibility of senior management leadership to communicate information to top management and their commitment effectiveness and the junior level managers, other employees about their responsibilities and duties to be performed qualitatively to successfully implement the TQM strategy and its impact on the organizational performance, financial improvements etc;. Leaders should be in a position to write the constructive information, collect the information from the various sources, manage the information and produced the required information according to the needs of each individual or individual department or the company. It is nothing but flexible information needed for individual requirements. Leaders should behave in a flexible manner to communicate the information effectively.

### Manufacturing Process Improvement

Effective leadership and commitment (*Lagrosen and Lagrosen 2005*) will improve the efficiency of the manufacturing process improvement, such as productivity improvement, plans, prepares the strategies of the vision and mission statements, communicate the information to all employees. It involves all the employees in quality improvement programmes, continuous improvement programmes to achieve the TQM strategies. Continuous process improvement is one of the CSF of the TQM. Developing cross functional teams to identify continuous improvement procedures in manufacturing process

improvements such as machining processes, processes layouts, materials handling and storing systems, problem solving and maintenance procedures etc; Top management commitment in maintaining all the processes under control by means of various quality management tools and techniques are very much required for TQM success.

Top management should make a plan to train the employees of manufacturing in various quality management techniques such as SPC, SQC, data collection and analysis etc. Therefore the processes will be under control all the time. Effective leadership towards achieving internal customer satisfaction is one of the CSF of TQM. All employee involvement and training will help them to understand their immediate customer needs. The responsibility of top management is to develop and maintain the cordial relationships among coworkers and cross functional departments. Each employee must know about their immediate customer requirement, so that the fitness for use quality requirements will be achieved. Conducting quality circle meetings to achieve the zero defect concept, ultimate product quality and services right at first time.

### Customer Satisfaction/Customer Focus

Here the crucial and critical role the top management has to play to achieve the competitive edge by satisfying their customers. Strong leadership with planned goals, to achieve the excellence in customer satisfaction is an objective of TQM. Top management with a good leadership qualities and commitment, must understand the customer needs, set the standards of quality as per customer requirements and equip the employees to achieve quality for customer satisfaction.

A good leader can identify the needs of the customer with various methodologies and tools (*Bo Bergman Bengt Klefsjo, 2006*). One example is focus groups, where the leaders and customers can discuss about the new product. In another example different types of customer interviews will be conducted to understand the expected needs of the customer. Leadership is the key for success of customer focused product development.

### Benchmarking and Performance Measurement

Benchmarking is nothing but setting standards throughout the industry operations, starting from human resources, administration, production, quality, tools, materials, to maintenance by comparing with the competitors operations. Benchmarking helps to gain the competitive edge. Benchmarking takes place every year in the competitive industries. Some of the companies use benchmarking whenever the need arises. Benchmarking process is continuous improvement of products, processes, technology, quality, systems etc; takes place. By benchmarking process industries should achieve manufacturing excellence,

excellent human resources, excellent supplies and overall performance of the organization. By benchmarking process, the performance of the industries is measured and compared with best practicing competitors to achieve the industrial excellence. Benchmarking is a quality award winning strategy. It will establish targets, priorities, and operations leading to competitive advantage (*John Oakland, 2000*). Benchmarking provides the idea of measurement helps to focus on the mission and identify measures or targets for key business processes (*Gopal K. Kanji and Mike Asher 1996*). Benchmarking process is successfully implemented only by best leadership qualities and top management commitment. By flexible benchmarking (benchmarking on quality, and service, benchmarking on cost etc.

(*G. Karuppasami and R. Gandhinathan, 2006*)) ultimate standards or targets can be developed and practiced. Flexible benchmarking model can be developed by comparing the similar industries best practices and standards. Flexibility helps in adapting best practices departmentally.

### Knowledge Management

Knowledge management is nothing but use of relevant data, reliable data, reliable information, intelligence and knowledge for correct and suitable purpose in the input, output model of manufacturing process. In

*Knowledge Management should be integrated with manufacturing processes to improve the effectiveness of TQM.*

the production and operation management, the input, output, processes, and feedback model uses knowledge management as an intelligent tool to improve the effectiveness of the manufacturing processes. Knowledge management is a conceptual tool and mostly utilized by the effective and efficient leaders. Knowledge management (KM) should be integrated with manufacturing processes to improve the effectiveness of TQM. KM comprises, information, quality of information, reliable information, information analysis, information availability, use of information and intelligent information. KM can be compared with production management input, output system. Input information as raw materials information, customer needs, drawings information, manpower requirement information, tools and machinery information should be managed effectively to get the output information as production information, quality of product information, quality of service information etc. Use of KM is in the way of increasing trend in the industries and institutions. Still the KM is in developing stage, only few people in the senior management leadership positions in the industries and institutions are recognized KM as competitive tool in effective implementation of TQM.

### Change Culture to Zero Defects

It is the quality improvement process at all the stages in manufacturing. It is the process of reducing the defects in product manufacturing, in a phased manner to zero. For example a final component or part is produced for a month

about 30000 nos. and the defects found is 100 nos in a month. From next month the zero defect policy is implemented and various quality improvement measures (SQC, SPC, Six Sigma etc.) have been taken place to reduce the defects to 80 nos. Likewise within a five month period the defects per lot should be reduced to zero. This is known as zero defect policy. It is achieved by best practicing the change culture programmes, such as training, motivation, involvement of employee in the decision making process, taking the suggestions from the employees, team approach, quality circle development and finally continuous quality improvement programmes. Leadership should initiate process of zero defects policy from the raw materials stage to final production, so that the overall production processes should be under control.

### Total Cost Reduction through Effective Leadership

Top management leadership of TQM process initiates the total cost reduction process in the industries to eliminate the unwanted costs. It is the responsibility of TQM leadership to identify unwanted costs associated in the manufacturing supply chain. TQM objective is to minimize the total costs, avoid unwanted costs, and reduce the cost of product as compared to the competitor costs. There are

various costs associated in manufacturing a product. It may be procurement costs, cost of materials, cost of quality, cost of labor, cost of machining etc; are the actual costs. Within

these costs, there are unwanted costs also occurred, for example:

Cost of quality = Appraisal cost + Failure costs + Prevention costs + Analysing costs + Quality cost programmes

$$C_q = C_a + C_f + C_p + C_{ac} + C_{qcp}$$

Reduction of any costs in these, the cost of quality can be reduced. Leaders should take interest and initiate the quality costs reduction programmes by forming task force teams, cross functional teams, practice systematic approach tool to identify and eliminate the unwanted quality costs. Cost of quality is measuring tool used to monitor the effectiveness of the TQM process (*B.S. Dillon, 2002*). There is more scope of TQM leadership to practice the enablers to gain the competitive advantage as well as improve the manufacturing excellence.

### Further Discussion on Force Field Circle

The **barriers** (forces outside the circle) are discussed further to know the negative effect.

In this force analysis studies, the barriers to the growth of the circle or organizational performance are to be analyzed. There is an immense competition in the industries; sometimes it faces the global competition. To overcome these competitions, the leadership should prepare the criteria, quality policies; development of trained employees, development of customer requirements, and thinking of

what other factors will overcome these competition. The high responsibility lies with senior management leadership to find out the competitors standards, competitors markets and develop the competitive strategies to overcome the competition. Another force is the modern technology, which affects moderately, the TQM leadership should think to adapt new technologies, whenever it is required, otherwise it affects adversely. Due to the changing life style of the people, the customer requirements are changing day by day, the industries should accustom to flexibility in customer requirements. Changing markets also adversely affects the industrial growth, fast changing market status should be studied frequently to know the facts about market and make the products according to the changing market demand. Finally the adapting of new technologies, new market needs, practicing competitiveness should be accepted by the employees. But at any point of time for new technology or innovation or anything new wants to implement, there is a need of training and motivation of the employees to changing competitive scenario. Otherwise the employees will not accept the changes due to fear of loss of jobs, this known as resistance to change. All these barriers adversely affect the organizational performance.

Leaders should best practice the enablers to implement the TQM strategy successfully. Simultaneously the leaders should also prepare the TQM strategies to tackle the outside forces or barriers. With this discussion this paper moves towards for conclusions.

## Conclusion

This paper describes the roles and responsibilities of leadership and top management commitment to improve the various leadership performances in the manufacturing supply chain. It explains about the capabilities of TQM leadership style over the conventional leadership style. Excellent leadership and top management commitment plays gigantic role in successful implementation of TQM strategy in any industry. This paper also provided the difference between leadership style and top management commitment. This paper concentrated more on best practices of flexible leadership and top management commitment to improve the overall performance of the individual industries.

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