Chapter 5

SUGGESTIONS AND RECOMMENDATIONS

This study was undertaken to evaluate the role of Total Quality Management among the ISO 9000 certified manufacturing organisations in Kerala. From the findings based on primary and secondary data, certain conclusions are drawn out and certain concrete suggestions are made for enhancing the efficient practice of Total Quality Management and to improve the organisational performance of ISO 9000 certified manufacturing organisations in Kerala.

The overall findings were consistent with other researches from different parts of the world that show the importance of the Total Quality Management practice to be proven to help the manufacturing organisations to improve their organisational performance. The study has a significant implication for the development of a theoretical base for application of Total Quality Management in the select ISO 900 certified manufacturing units in Kerala. The Total Quality Management framework derived from the literature is an attempt to provide a frame work and the usefulness of this frame work has been empirically tested using appropriate methodology. One of the main implications of this research is summarised in identifying the role of the significant elements of Total Quality Management on organisational performance. The relevant Total Quality Management elements practiced in the ISO 9000 certified manufacturing organisations in Kerala assessed include; Employee participation, Teamwork, Supplier teaming, Continuous improvement, Unity of Purpose, Top management commitment, Customer focus, Employee education and training, Use of Statistical Process Control tools, Information usage about quality and Value analysis.
5.1 Suggestions and Recommendations

1. The top management has a pivotal role in establishing TQM concepts throughout the organisation. It is suggested that the top management to allocate adequate resources for the implementation and maintenance of quality initiatives and should exhibit their commitment towards quality in all their actions.

2. Empower the employees through decentralisation of decision making and encourage employees to be involved in decision making. When employees present appropriate strategy suggestions or quality initiatives, it is essential that the management committee offer reinforcement and motivation for the employees and thus increase their satisfaction and self-esteem. It is recommended to develop a long term relationship of trust and commitment with the employees by the organisation.

3. Top management should be committed to the application of Total Quality Management. Effective leadership is very essential; leaders should look at the organisation not as individual functions but as unified collective whole. Decision making should be based on facts and data.

4. The manufacturing organisations should support and facilitate quality teams. The quality teams will have multi-faceted benefits to the organisation and for the employees.

5. A quality committee has to be organised to implement and assess the Total Quality Management. Standardised process with a performance measurement system to assess the progress of Total Quality Management practice has to be established

6. Practice of Total Productive Maintenance (TPM) is an important tool for employee empowerment and for improving shop-floor efficiency. It was found that those organisations in Kerala practicing
TPM seem to have employees of different perspective about TPM from the theoretical framework. Some of the employees from the TPM practicing organisations opined that they don’t have enough authority to execute TPM. So practice of TPM with the right conviction and with right authority by the organisational members is highly suggested for the effective implementation of TPM.

7. The top management is not expected to practice an autocratic or bureaucratic leadership style in a TQM environment. A transformational and reengineered style of leadership style is highly sought in a TQM practicing organisation.

8. All the maintenance tasks need not be entrusted to the maintenance department. The operators need to be trained to undertake maintenance tasks by themselves, so that the maintenance department can utilise their resources for planning preventive maintenance. So it is suggested to practice–Jishu Hozen or Autonomous Maintenance.

9. The practice of quality circle is very important in many ways; firstly the workers feel proud of giving suggestions for the improvement of the organisations. Secondly since the workers are always in touch with the work they are the right people to give suggestions regarding the work, thirdly quality circle can improve the morale of the employees. So quality circle is to be very effectively practiced by the organisations in their pursuit of TQM.

10. Providing a healthy environment will not only help the employees to perform better but also will help to ensure the quality of the products. It has been found that many of the ISO 9000 certified organisations are not effectively practicing ergonomics principles. It is suggested to follow the same for improving the organisational productivity.
11. It was found that many of the participating organisations are not practicing 5S principles. 5S is basically a systematic and rational approach to methodological housekeeping built on a sound economic base. It is indeed the first step towards continuous improvement. So the practice of 5S will ensure service efficiencies, better quality system, safer workplace, higher employee morale, efficient workplace layout and better material handling.

12. ISO 9000 certified organisations are expected to follow Plan-Do-Check-Act (PDCA) principles for enabling continuous improvement. So it is suggested to adopt PDCA philosophy for the better practice of TQM.

13. The TQM practicing organisations are expected to have a collaborative culture in which there will be shared vision, high degree of openness, high degree of empowerment. It is recommended to have a collaborative culture in the organisations to practice TQM.

14. Up-gradation of the technology should be done as the value analysis demands, not only on the basis of time, cost, or technological obsolescence. It is highly recommended to upgrade the technology on the basis of value analysis demands.

15. It was found that the responsibility for new product development was entrusted only to the Research and Development department. In a TQM environment it is recommended that the new product development team consists of customers, suppliers the employees from different departments and the R&D team members.

16. It was recommended to ensure the customer feedback information to be taken and this information to be used to facilitate the product improvement on a continuous basis.

17. One of the important concepts to be practiced in the effective implementation of TQM is that of the practice of Quality Function
deployment technique (QFD). The QFD is a TQM tool for assuring the products are designed and manufactured to exceed the customer expectation. It is highly recommended to practice the organisations indentified to practice TQM in the fullest manner.

18. In most of the organisations the internal logistics is constrained with a lot of paperwork in the internal logistics. The practice of KANBAN (Card system) system will simplify the internal logistics system of the organisation. The KANBAN system is an effective communication system within the workplace, which manufacturers and uses its own components. The organisations are suggested to practice KANBAN system for the effective implementation of TQM.

19. The setting up and maintaining of Value Analysis or value engineering department is highly essential to achieve continuous improvement and thereby practicing TQM, so it is strongly recommended to set up a Value Analysis or value engineering Department.

20. Institute continuous training for the employees in the area of quality. Both on-the-job and off-the-job training is to be followed.

21. It is recommend to practice the idea of internal customer concept by making the employees aware of the significance of internal customer concept.

22. A work study team needs to be planned and executed in the organisation. So that the works study team will carefully scan the shop-floor for studying the work. Their suggestions need to be incorporated for the efficient manufacturing organisations.

23. It is recommended to ensure that the workers get the same type of materials all the time.

24. Empowering employees without providing them with the right tools and equipments to do their job makes no much sense. It is
suggested to provide the employees with the tools and equipments necessary to carry out their work. This include the new machines, new material handling equipments or any variety of tools identified by the employees as necessary for increasing the operational efficiency.

25. The application of Statistical Process Control (SPC) tools could eliminate the process variations and ensure product quality. It is highly recommended to train the employees on the use of SPC tools to achieve zero-defects.

26. A transition from the traditional hierarchical to a functional team structure is expected in the organisation is said to practice TQM, so it is suggested to adopt functional team structure for improving organisational effectiveness.

27. Informal programmes outside the working hours, company sponsored tours, and other programmes are to be designed by the HR department for making the employees feel their organisations as a home-away-from-home.

28. Loyalty towards the organisation is an old concept; the present day manufacturing organisations expect whole hearted commitment from everyone in the organisation. The commitment could be obtained through providing team-spirit and togetherness among the employees. It is suggested to provide an environment which could create a culture of oneness in the organisation.

29. In a TQM environment, the traditional superior’s role as a “Boss” style of management need to be changed to a “Coach” or “Facilitators” role. So it is recommended to have the top management commitment for the transition of role.

30. A reward and recognition system has to be setup. This is beneficial as it would encourage employees to participate in the Total Quality
Management. With a change in management evaluation and recognition for high performance, Total Quality Management would be taken more seriously by the employees.

31. A transition from the traditional “least priced bidding” to an enduring and long term relationship with the suppliers is expected in a TQM environment. By practicing “supplier teaming” concept, the vendors will be helpful to improve value to the organisations products and to reduce costs.

32. In the supplier selection process, it is suggested to look for the capabilities of the suppliers in delivering better quality materials as the prime requisite rather than the cost, delivery time, quantity etc.

33. Vendor development may be adopted by the organisations which is said to practice TQM. This could be done by providing technical support to the suppliers, financial assistance to the suppliers, providing suppliers with political business influence, also providing orders without going for a public bidding.

34. Supplier development and supplier teaming can ensure better quality materials at the shop floor and thereby eliminate problems associated with the materials. For this it is recommended to practice the concept of “Supplier Teaming”.

35. Since the major portion of the working capital is tied in the form materials, the practice of Just-In-Time (JIT) is very important, which mainly focuses on zero inventories. It is suggested to practice JIT. For the effective practice of JIT, the organisations need to equip their workers to be multi-skilled and practice supplier-teaming concept.

36. The organisations are suggested to practice selective inventory management techniques like ABC, VED, SDE, MUSIC 3D. Etc. These techniques will help to optimally plan about the materials.
37. Customer expectations are dynamic in nature. Use market analysis, customer satisfaction studies, market segmentation and be responsive to fixing and resolving customer problems and complaints. An organisation must ensure prompt feedback of customer survey results to appropriate functional areas for effective implementation.

38. An interdisciplinary approach to product designs is expected in a TQM organisation. The functions such as production, materials, planning and engineering to be get involved in the early stages of product design, is highly essential. Manufacturing organisations should be aiming to develop new products and improve the existing products and to concentrate on improving the process continuously.

39. Total Quality Management concept’s education and training need to be effectively organised and carried out properly. When training the employees on the Total Quality Management principles, the benefits for the employees and to the organisation are properly communicated and convinced for effective execution of the Total Quality Management principles.

40. In the organisations, there is a strong need to create a new culture, which is fulfilled with the sense of shared values, organisational trust, team work, and all other constituents necessary for the process of implementing continuous improvement.

41. Employees should be supported by top management through a dynamic organisational culture, which would promote harmony and cohesiveness among the employees and thereby maximum commitment could be expected from the employees.

42. For the successful Total Quality Management practice, there must be a strategic plan that identifies the clear organisational goals. This plan involves a long-term endeavour to create and sustain the
new culture, which reflects the systems approach and optimises the organisational performance.

43. Those organisations wish to implement TQM for the first time, it highly suggested going for benchmarking. This could be done by emulating the good TQM practices of the best organisations in the industry or in different industries.

Total Quality Management would succeed, if it is implemented as major organisational change and long term paradigm shift, not a quick fix.

5.2 Scope for Future research

Based on the literature review and findings of this study, the following further streams of field research could be considered.

1. As this research focused on both private and public companies in KSIDC list, the findings are not generalisable to even other sectors in Kerala. Therefore this research prompted the need of further empirical research focusing on specific and varied sectors (e.g. Services sector, or public sector) to identify the application of Total Quality Management principles and organisational performance.

2. Interstate or multinational comparisons could also be done to identify influence of any regional difference or national culture on TQM.

3. In this research all the selected companies were ISO 9000 certified. Research could be done to analyse on the application of Total Quality Management principles in non ISO certified companies, to identify the relationship of the application of Total Quality Management elements and organisational performance and to understand any change exists in the practice of Total Quality Management elements exists between ISO 9000 certified and non ISO 9000 certified organisations.
4. Total Quality Management philosophy itself emphasises on the notion of continuous improvement. This study is carried out only at a designated point in time. For better understanding of the phenomena, further research could set longitudinal studies that would measure Total Quality Management elements, across four five year period, examine the relationship of Total Quality Management and organisational performance and their development over time.

5. This research is focused on the relationship between Total Quality Management and organisational performance of ISO 9000 certified manufacturing organisations. Therefore this research is suggestive for the need for analytical studies examining the nature of relationship between TQM and organisational performance in non ISO 9000 manufacturing organisations.

6. Further study should continue to investigate and refine the linkages between various types of core and infrastructure quality management practices, dimensions of organisational performance.

7. Future studies should link the quality management practices and organisational performance to the competitive advantage.

8. Further analytical studies may be done to clarify the relationship between Total Quality Management and productivity and that of Total Quality Management and financial performance.

9. Future studies should strive to include more objective data particularly financial measures of performance.

10. Measurement of Total Quality Management in the eyes of customers would be valuable in future studies.

5.3 Contribution to the literature

Previous empirical studies examining Total Quality Management have generally been limited to eight or less of the key elements of Total Quality Management. This study contributes to the literature by attempting
to satisfy the clear need for an analytical study that examined recognised twelve elements of Total Quality Management and linking Total Quality Management and organisational performance by using appropriate statistical methods.

This research examined the link between all recognised elements of Total Quality Management and organisational performance in selected ISO 9000 certified manufacturing units in Kerala. Data analysis was based on descriptive statistics (frequencies) and inferential statistics regression analysis and t-test. The research adds to the literature by developing a Total Quality Management frame work.

From the practical perspective this study could be used to find opportunities for improvement to the manufacturing organisation. The managers could recognise those areas of TQM where excellence currently exists and compare with other divisions or business units. This study has made significant contributions in extending the methods and techniques used to determine the relation between the application of Total Quality Management elements and organisational performance.

This research contributed by presenting the critical favourable factors, benefits and barriers of Total Quality Management practice. The research also attempts to identify the obstacles to the practice of Total Quality Management.

The implications of the study may be useful for the manufacturing organisations on their efforts to apply Total Quality Management philosophy and practices and improve the organisational performance.

The researchers can use the findings of the study to conduct similar studies in specific industries with a fairly large sample size in order to verify and extend the results of the present study. Researchers could compare and contrast the extent of TQM practice in different industry populations and develop and test the instruments for the measurement of TQM in various industry populations.
5.4 Conclusion

Through this study the researcher has attempted to identify how the core elements of Total Quality Management practiced in the selected ISO 9000 certified manufacturing organisations in the state of Kerala. This study has revealed close association between ISO 9000 certification and Total Quality Management. The study has clearly established a link between organisational performance and practice of TQM. Through this study, it is understood that there is no significant difference in the practice of TQM in the ISO 9000 certified private and public sector manufacturing organisations in Kerala. The study has concluded that the perception about the practice of TQM among the managers and workers of the ISO 9000 certified manufacturing organisations shows significant difference. Based on the research the researcher has made an attempt to provide suggestions and recommendations for the effective and efficient practice of TQM in the state of Kerala and thrown light to the scope for further research in the area of Total Quality Management.