CHAPTER III
REVIEW AND CONCEPTS

3.1 Introduction

Total quality management has become a pervasive management philosophy finding its way to all sectors of today’s business society. In this chapter an attempt has been made to present an overview of literature. The existing literature has been classified into three categories, namely (i) Critical Success Factors in Total Quality Management, (ii) Implementation of total quality management practices and (iii) total quality management and organisational performance. This section also presents the research gap and gives definitions for the terms used in this study.

3.2 Critical Success Factors in Total Quality Management

Sanjay L.Ahire, Matthew A.Waller, Damodar Y.Golhar (1995) made an attempt to test the firms which adapt total quality management and the non-total quality management firms. Ten constructs of total quality management implementation were developed, namely top management commitment, customer focus, supplier quality management, design quality management, benchmarking, statistical process control usage, internal quality information usage, employee involvement, employee training and employee empowerment. The study was focused on motor vehicle parts and accessories and responses were received from 359 firms. One tailed t-test was used. It was found that the rigorous execution of total quality management elements resulted in better performance. The study had suggested that the best operational results of quality improvement can be achieved only through dedicated and long-term formal total quality management implementation.
Shari MoM Yusof (1995) studied the implementation of total quality management on four automotive SMEs. Case study research strategy was used for understanding organisational problems. A case study protocol and interview schedule was constructed. It contained three sections. The first section concentrated on general information about the company such as type of products produced, number of employees, and the year in which quality initiative started. The second section covered the extent of implementation. The aim of the third section was to investigate the various quality results and the final part was a description of the conceptual frame work. The case study gave an insight into various quality initiatives used by the total quality management companies. This acted as a base for developing a framework.

Improving competitiveness is now imperative for small and large business alike. The adoption of total quality management practices can help SMEs to manage the transfer from incubation to maturity. Golhar, Damodar, Y. (1996) conducted a study on quality management in large and small firms to study the total quality management principles with organisational size. The objective of this study was to investigate whether large firms yield higher quality products than small total quality management firms. The study was focused on motor vehicle parts and accessories industry. Responses were collected from 200 large and 288 small firms. The study found that there was a difference in total quality management implementation between large and small enterprises. The study suggested different quality strategies that produce high quality products. It was also suggested that inclusion of different industrial types could make the results more suitable for all manufacturing enterprises.
Majority of the studies discuss the applicability of total quality management concepts in large organisations. There are significant structural differences between SMEs and large organisations, which will have an impact on the planning and implementation of the total quality management concepts. Lee (1996) conducted a study on quality management practices by small manufacturers in Korea and investigated the characteristic difference between total quality management firms and non total quality management firms in the Korean small machine tool manufacturing industry. The objective of this study was to evaluate the relationship of total quality management with firm size, facility, age, ownership, manufacturing environment, the use of advanced production management techniques, and manufacturing performance priority. Questionnaires were sent to firms which had employed less than 300 workers. 149 responses were received. It was found that there was a significant difference between total quality management and non total quality management firms. The firms that adopt total quality management, which are likely to be more closely affiliated with foreign firms, do more business in international markets than non total quality management firms. The study suggested that additional research is required across industry classification to fully understand and implement total quality management concepts in small enterprises.

SMEs encounter unique advantages and disadvantages with respect to implementation of total quality management. The study conducted by Dalu and Deshmukh (2001) focused on SWOT analysis of SME in Vidarbha region of Maharashtra. The study analysed various factors under strength, weakness,
opportunity and threats. The study covered 47 sick SMEs out of 70. Structured questionnaire survey and open interviews were used as techniques for data collection. It used a SWOT analysis with reference to environmental issues: a '+' or '-' or 0 was scored for benefit, adverse effect or no effect respectively. The analysis revealed the extent to which the environmental changes led to opportunities and threats. In the light of this need for quality initiatives was felt. Only 32 per cent of the SMEs from the sample used ISO 9000 certification as an approach managing quality and total quality management approach was not used at all. They brought out some of the common problems like non-availability of trained workers, low level of quality awareness, lack of work culture. The study recommended training on quality awareness, use of total quality management tools and adoption of continuous improvement. The study suggested further research in quality initiative of SME was necessary for SMEs to face new challenges.

Some concern, however, has been raised as to whether this quality discussion was applicable to small manufacturers. Cuuck Ryan, Richard H.Deane and Ned P.Ellington (2001) have done an empirical research on quality management practices in SMEs manufacturing firms and quality management training in SMEs. A random sample of 1000 firms was taken from 8000 businesses identified in a directory of manufacturers. The study attempted to link training and performance based on type of ownership. The nine quality management training items, namely leadership, communication, customer service, data collection and analysis, problem solving, statistical process
control, facilitation, team building and holistic quality management training were evaluated. Return on sales was selected as the performance measure. Regression was utilised to investigate relationships between training dimensions and the return on sales. The study found that quality management training in the form of critical factors has a significant impact on the performance of small and medium sized firms. It also stressed that failure rate of family owned business is due to lack of training and practice of quality management. Further study was recommended on this area considering industrial type and varying size.

Total quality management implementation requires a radical and fundamental change in every aspect of business. It is probably more difficult for SMEs management to recognise the need for change. Eng Q.E and Sha’ri Yusof (2003) investigated the level of practice on total quality management elements to find out the most critical factors perceived by the SMEs. Questionnaires were sent to 248 companies in the electrical and electronics sector in Malaysia, which resulted in a response rate of 24.2 per cent. It was found that there was a significant difference between the total quality management practices of large and small companies. Management leadership, continuous improvement system and education and training proved to be rated among the top priorities for successful implementation by large companies, compared with SMEs. However, supplier quality management was found the least implemented criteria by both large and small companies. This indicated that a much greater emphasis must be given to supplier management in future quality improvement programmes. The study has highlighted the importance of
total quality management adoption in SMEs to meet future challenges in realising the vision of world-class organisations. Further studies could be made focusing on other types of industry in Malaysia, such as automotive, metal-based, and food processing to allow for a more comprehensive total quality management framework of SMEs.

Francis Chittenden Panikkos Poutziouris Syeda-Masooda Mukhtar (1998), Chara Daniel Prajogo, Alan Brown (2004) have done a study on examining the relationship between total quality management and organisational performance in Australian industries that have formal total quality management programme and without total quality management programme. The sample was selected across Australia from both manufacturing and non manufacturing firms. Data were obtained through a random survey. The studies were attempted on the following research issues, namely the difference between total quality management firms and non total quality management firms with respect to quality management practices; and performance and the nature of the relationship and their significance. The study found that total quality management firms outperform non total quality management firms in most of the key elements of total quality management practices and performance. The study covered 60 per cent of SMEs and inferred that the value of total quality management programme was realised more in large scale than in SMEs. The study suggests future research on the importance of total quality management practices and its significance in quality improvement.
The quality of SME is of paramount concern to everyone. Because of fierce global competition, many SMEs are trying to improve their performance. The study conducted by Stephen C. Jones, Tami L. Knotts, and Karen L. Brown (2005), on selected quality practices of small manufacturers of Canada assessed 1690 small manufacturing enterprises that had applied to become suppliers for the national mass merchandising market. The study focused on the firm orientation toward a quality management philosophy. The survey instrument contained 34 questions, which was developed by asking buyers to submit their requirements. The responses were compared with current research and with responses from academics from various disciplines to define criteria. The SMEs were distributed throughout the United States and Canada. The success of the firms in this study meant getting their products forwarded for their buyers’ review. A chi-square procedure was performed on the data. Results indicated that forwarded products had a higher degree of conformity with the buyer’s criteria in each of the quality management areas. The study suggested future researches to identify quality weakness and help SMEs adapt to market expectations. Responsiveness to customer needs and timeliness of response were found to be the main ingredients of competitiveness.

Total quality management and market orientation’s impact on SMEs was investigated by Mehmet D. Emirbag, Lenny Koh, Ekrem Tatoglu, Selim Zaim (2006). A sample of 141 SMEs operating in the Turkish textile industry was studied. The results revealed that the market orientation had a positive impact on total quality management but it had no significant impact on organisational performance. The study found that there was a positive and
significant relationship between total quality management implementation and organisational performance. The study concluded that market orientation could be effective through a mediating role of total quality management.

Renu Luthra, Vaishampayan and Dheeraj Misra (2006) have done a study on profitability and size: a study of small-scale industries in Uttar Pradesh. The objective of this study was to assess the importance of certain structural variables for determining the profitability of firms in small-scale business. 17 firms which had been financed by small industries development bank of India were selected for the study. It was found that the hypothesised relationship between size and profitability could not be proved. It concluded that even under the changed scenario, the small business firms had a bright future as the large ones.

Total quality management has grown to become an established field of research. The need for an improved understanding of the critical factors for successful implementation is becoming more important. Several studies have sought to synthesis the vast quality management literature and have identified the key quality management practices. Various empirical studies have been published about the critical success factors of total quality management. Different studies produced different sets of critical factors.

3.3 Implementation of Total Quality Management Practices

Robin Mann and Dennis Kehoe (1995) investigated the characteristics of an organisation that influenced total quality management implementation. Structured interviews were undertaken at 21 leading total quality management organisations. It was found that there was a complex relationship between
organisational factors and quality activities. Quality critical organisational characteristics were used to describe a characteristic that influenced the effectiveness of a quality activity such as level of education of employees, the organisations style, organisation structure, number of employees, shared values and type of employees. The findings have shown that there was a complex relationship between organisational factors and quality activities. It was suggested that organisation should be aware of factors which were critical to quality activities success and be ready to change their approach to the changing circumstances. Future research was suggested on exploring change and the level of quality deployment. The study did not include market size, type of product and certification.

Thiagarajan and Zairi (1999) conducted a study on total quality management implementation. The main purpose of the study was to construct a total quality management implementation framework that can guide in the selection and formulation of total quality management implementation approach in Malaysian organisations. The framework was constructed based on the questionnaire findings from 81 organisations and 16 case study analyses. The framework attempted to bridge the gap between the existing theories and the approaches required for increasing total quality management effectiveness. The study had proposed a framework for total quality management implementation. It was aimed at providing a stepwise guideline for total quality management implementation. It was suggested that the use of this framework would provide useful advice in the critical first two to three years of total quality management implementation.
Frances M. Hill and Shirley-Ann Hazlett and Sarah Meegan (1999) investigated the transition from ISO 9000 to total quality management in the context of organisational learning. Critical factors influencing transition were identified. 682 ISO registered companies were selected for the study. Key factors were incorporated into an assessment framework and the quality transition framework, based on the organisational development pyramid. The study result revealed that ISO 9000 provided first step towards total quality management.

Mahour Mellat Prasat, Stephanie G. Adams, and Erick C. Jones, Subba Rao and Raghu Nathan (2000) did a study on comparing quality management practices between United States and Mexico. The survey instrument used was based on Malcolm Baldridge national quality award (MBNQA) criteria. The study indicated that quality management practices are universal and context-free. The study suggested the need to focus on behavioral aspects such as human resource management, strategic planning and quality.

Lisa Walters (2001) studied the implications of situational leadership. This study was conducted to determine the effect of leadership style on implementing quality system. Two plants were selected based on their degree of compliance to internal quality system standards. Senior managers were selected from each of this group. They were asked to complete the questionnaires designed to measure leadership style and organisational readiness. The results of the study revealed that CEOs flexibility in response to existing organisational readiness had an effect on the accomplishment of
quality objectives. The study also stressed that a leader must become cognizant of and proficient in situational leadership to maximise the organisation’s ability.

Christopher Roethlein, Paul Mangiameli and Maling Ebrahimpour (2002) conducted a study to determine quality management practices through indepth interviews. Multiple case study analysis and empirical survey were used. Twelve categories consisting 89 quality management practices were determined. The categories were top management support, customer, employee rewards, and process flow management, statistical control, and information technology, supplier relationship, responding entity with customer, work attitudes and product design process. A national level survey was sent to 3375 managers in different manufacturing companies and 634 filled forms were received. The study suggested that a more appropriate scale could have been used instead of ‘not applicable to highly applicable’.

Bharat A. Jain and Filiz Tabak (2002) conducted an exploratory analysis of quality management practices in Emerging Economies. The authors developed an instrument with high validity and reliability to assess quality management initiatives in the organisations in India. The authors attempted to study the relationship between managerial hierarchy, organisational form, quality performance, and managerial perceptions of quality practices. 150 questionnaires were provided to executives from many different organisations attending executive education programmes at a leading business school outside New Delhi. Only one questionnaire per organisation was provided. Fifty
completed questionnaires were received. In addition 200 questionnaires were mailed to a random sample of medium and large scale manufacturing and service firms located throughout India. 54 responses were received. Factor Analysis was used for testing validity. The relationship between total quality management practices and quality performance was explored through path analysis. The study revealed that the human resource aspect constituted critical success factor. The results indicated that perceptions of top managers and private sector managers on quality initiatives were more favorable than middle or junior managers and public sector managers respectively. The relationship between quality perceptions and performance varied at organisational form and managerial level. The study suggested that future researches could focus on organisational factors such as age, size and the effective implementation of total quality management practices.

Teng Heng Chan, Hesan A. Quazi (2002) conducted a comparative study on quality management practices in selected Asian countries from 1996 to 2000. The study sought to identify some of the factors behind these problems. Data were collected under controlled conditions using standardised pre-tested questionnaire. A total of 92 organisations were listed as involved in total quality management and were contacted for interview. Nine countries covered in this study were Bangladesh, Brunei, India, Indonesia, Malaysia, Philippines, Singapore, South Korea and Thailand. It was found that implementation of quality management practices were easier in a country where the industries were more developed and economy was stronger and healthier. In addition, the availability of training grant and tax incentives to
There are challenges in implementation of total quality management practices. Rose Sebastianelli and Nabil Tamini (2003) conducted a study on understanding the obstacles to total quality management success. This study addressed obstacles associated with total quality management implementation. A national sample of Quality Control and Quality Managers was randomly selected from the membership listing of the American Society for Quality (ASQ). A total of 188 Quality professionals, out of a sample of 872, returned completed questionnaire. Regression analysis was used to influence of total quality management obstacles on outcome. The most significant obstacles to total quality management success are inadequate resources, inadequate human resource development, mismanagement and lack of planning. A future research is suggested at establishing relationship between observable outcomes and underlying obstacles.

Neela Rathika (2004) did a case study on Sundaram Clayton-winning the Deming Prize. The study examined the quality initiatives taken up by the leading Indian air-brakes manufacturer, Sundaram Clayton, to win world’s highest award for quality. Deming prize parameters like top management frame works, human resource management, effective utilisation of information, and scientific methods were adopted in the company. It was found that success of total quality management implementation depended on the involvement of
everyone right from the CEO to the workers at the lowest levels in the organisations. The case study did not analyse the impact of award initiative on organisational performance.

Fotis Vouzas (2004) studied HR utilisation and quality improvement. The objective of the study was to investigate current status of the quality improvement efforts in selected Greek industrial organisations and HR elements related to these efforts. The study sample consisted of ten selected wide range of ISO certified industrial organisations based on judgment. The survey was carried out through in-depth interviews. It was found that majority of the organisations followed quality assurance system through ISO 9000 series of certification. It was found that the HR role and cultural change was not considered in TQ efforts. The study suggested different approach to involve HR managers in the process to increase the effectiveness.

Javier Garcia - Bernal Ana Gargallo-castel, Gema pastor-Augustin and Marisia Ramirez Aleson (2004), focused on the importance of complementarities among the elements of the European Foundation for Quality Management (EFQM) excellence model which permitted continuous improvements and adequately reflected changes in the business environment. Its key criteria were leadership, people, policy and strategy, partnerships and resources processes, people results, customer results, society results and key performance results. The study was conducted in the manufacturing sector. Cluster analysis was used to group the firms depending on their level of implementation of the EFQM model. The study resulted in the classification of firms based on their different levels of implementation. In attempt was made to
link implementation with results. The results revealed that adopting a quality system did not always lead to positive effects on the results. The sample size was less and a future study was suggested including more number of firms from various industries.

Jakko Kujala and Paul Lillrank, (2004) studied total quality management as a cultural phenomenon. In this study total quality management was defined as the complete implementation of quality management principles and practices as defined in quality management criteria. Cultural framework was applied in this study. It was suggested that total quality management managers need to understand the existing organisational culture and its compatibility with quality culture.

Micaela Martinez Costa and Angel Rafael Martinez Lorente (2004) did a work on ISO 9000-1994 and total quality management implementation. Case study methodology was used. The authors chose multiple case studies instead of single one to increase reliability. Fourteen companies among the biggest manufacturing companies in Spain were selected to increase external validity and reliability. The case study protocol included two questionnaires for interview with the quality managers and non-quality managers. The study classified companies based on their degree of implementation of a total quality system. The study found that only 3 out of 14 companies had implemented total quality management. Leadership and employee participation were found to be the most important factor for getting better results. The study recommended future research on the ISO 9000 -2000 as it was closer to total quality management.
Sushma Kulkarni studied the total quality management in Indian engineering industries (2005). The objective of the study was to find the factors for initiating total quality management in the industries and to study the implementation aspect of total quality management in selected industries in terms of training, top management support, employee involvement, quality culture and supplier involvement. Confederation of Indian Industry (CII) was contacted for getting the list of organisations and primary data was collected from 102 respondents. The study was analysed using co-efficient of correlation and chi-square test. It was found that major factors responsible for total quality management were customer satisfaction and continuous improvement. It was suggested that total quality management should be accepted at all levels. The study did not critically analyse the impact of total quality management on organisational performance.

George Issac, Chandrasekaran Rajendran, and Anantharaman, (2005) studied the significance of quality certification: the case of the software industry in India. They assessed the relationship between quality certification and quality management practices in software industries. Questionnaire survey was adopted for the study. A set of critical factors were identified and tested. The reliability data were collected from six major software development cities in India and the companies were selected from NASSCOM member organisations. The data was collected from 324 respondents from 100 development centers that included software quality managers and software development team members with more than two years of experience. The study
found that there was no relationship between certified and non-certified firms with respect to majority of factors, namely organisational culture, performance, quality management, employee attitude, quality measures, employee empowerment, continuous improvement, communication and risk management. However, it helped them to improve customer focus, leadership and better infrastructure. The study argued that certification helped firms to improve organisational performance. The study did not examine causal relationship among total quality management practices.

Keng boon Ooi, Nooh Abu Bakar, Veeri Arumugam, Lorraine Vellapan and Alex Kim Yin Loke (2005) studied employees perception of total quality management practices and its impact on job satisfaction within a large Malaysian Outsourced Semiconductor Assembly and Test (OSATR) organisation. The interview schedule was distributed to all the staff within the organisation. The study sample consisted of 230 employees. It was found that teamwork, organisation culture and customer focus were positively associated with employees satisfaction. The proposed model suggested implementing these factors for effective total quality management.

Naceur Jabnoun and Khalefa Sedrani (2005) studied the total quality management practices and the extent of the implementation of quality dimensions. The study investigated total quality management practices, corporate culture, and performance in UAE manufacturing firm. The questionnaire used in this method consists of four parts, namely demographic profile, total quality management practices, cultural measurement and
performance improvement. The study used the list of members of the Dubai quality group as its sampling frame. Out of 300 questionnaires distributed among general managers, quality managers, operation managers, and other functional managers, 81 responses were received. The study revealed that the total quality management dimensions such as customer focus, continuous improvement and organisation culture contributed to reduced customer complaints, increased product reliability and profitability. It was also found that customer focus and continuous improvement and its interaction with the culture dimension of competitiveness contributed to increased market share. A future research was suggested on using financial performance figures and quality indicators.

M.Tawfik Mady (2009) conducted an empirical investigation of associated constructs in two Kuwaiti industries. An exploratory study was conducted to survey quality management practices in two industrial sectors. A questionnaire was administered with the help of the Kuwaiti Public Authority for Industry (PAFI) to a stratified sample of 105 Kuwaiti plants. Confirmatory factor analysis and internal consistency tests were used to verify scales validity and reliability. The two independent samples t-test and analysis of variance were utilised to investigate the statistical effects of the type of industry and the plant size respectively. The results revealed four reliable and valid constructs: customer focus, total quality management human practices, process quality resource, and quality measurements. While the type of industry showed no significant effect on the level of implementation of the four quality
management constructs, the plant size was a determinant factor of the implementation of customer focus and process quality practices. The need for governmental support, especially for small plants, in quality management implementation was reinforced and suggested.

3.4 Total Quality Management and Organisational Performance

In the emerging struggle for survival, the upgradation of quality system in line with international standards has assumed a greater significance than ever before. Several studies were carried out to study the effect of certification and total quality management on performance. The literature presents examples of positive effects as well as no effects from it.

Rodney Mcadam and Michel McKeown (1999) analysed the impact of ISO 9000 and total quality management on small businesses in Northern Ireland. The study was conducted to explore the impact of quality on small business. The research showed that small businesses in Northern Ireland have achieved benefits from both ISO 9000 and total quality management. It was found that the majority of the firms surveyed aimed at ISO had no aspirations to pursue total quality management. There was lack of quantification of these benefits, including customer satisfaction. It was concluded that total quality management was more beneficial than ISO 9000. The study did not attempt at establishing a relationship between total quality management and organisational performance.

The study integrated the critical success factors of total quality management practices, namely, strategic, tactical and operational factors, with
operational and organisational performances as related drivers of the effectiveness and success of total quality management practices in the SMEs. Very few studies have been performed to investigate and understand this issue.

Shams-ur Rahman (2001) conducted a study on comparing organisational performance of 250 Australian SMEs with and without ISO 9000 certification. The objective of the research was to study the impact of total quality management and ISO 9000 on organisational performance. The framework was structured with seven criteria namely, leadership, strategic planning, information & analysis, people customer focus, processes, products & services and organisational performance. The survey instrument with 36 items was developed based on Australian business excellence model. A questionnaire was mailed to the top management of each firm. A total of about 49 firms had responded. Factor analysis was used to assess the validity of total quality management practices. It revealed that except for process control, there was no significant difference between the impact of total quality management practices on organisational performance for firms with and without ISO 9000 certification. This study did not consider the effect of size and industrial type on organisational performance.

An empirical research was conducted by Hongyi Sun (2001) in Norway. It was focused on comparing quality management practices in the manufacturing and service industries. The questionnaire was designed according to the Malcolm Baldrige National quality award model. Questionnaires were sent out to 900 Norwegian Quality Association members.
All the contact persons were quality managers in these companies and received responses from 363 members. This included both public and private companies. The study revealed that manufacturing companies were more advanced in information analysis and quality assurance. Service industries exceeded manufacturing industries in customer consideration. It was found that most of the components were not significantly correlated to the improvement of business performance in service companies. The study suggests further research on contribution of ISO 9000 certification towards cost reduction, profit and improvement in quality management practices. In order to develop total quality management based ISO: 9000 firms should understand the effect of soft factors and hard factors on organisational performance.

Katerina D.Gotzamani and George D.Tsiotras (2001) carried out a study on ISO 9000 standards contribution towards total quality management. The study was focused on true motives towards ISO 9000 certification for 85 large Greek companies. The researchers have attempted to test the basic research hypothesis framing namely ‘can ISO standards provide a good first step towards total quality management?’ It was found that ISO offers a significant improvement in a company's performance in all total quality management elements. The study suggested that the companies should focus on the 'soft' elements of total quality management like leadership employee participation, empowerment and customer relations. It was also reported that business performance was heavily influenced by the soft elements of total quality management rather than the hard ones. The benefits and disadvantages
experienced by the small firms that had registered were also tested. The study emphasised that ISO 9000 should be adapted so that more small firms could enjoy the advantages of registration. It was suggested that future research should be focused on impact of ISO on small firms.

Ismail Sila and Ebrahimpour (2003) conducted a study to analyse and compare 76 empirically validated total quality management factors and their impact on various performance measures across countries. Articles published between 1989 and 2000 were used for the analysis. 347 survey based total quality management studies conducted in various countries were identified and articles were examined. The most commonly extracted factors across 76 country studies and the 23 categories of countries listed were top management commitment, and leadership, customer focus, information and analysis, training, supplier management, strategic planning, employee involvement, human resource management, process management, team work, product and service design, process control, bench marking, continuous improvement, employee empowerment, quality assurance, social responsibility and employee satisfaction. It was argued that the criticality of the factors should not be judged based on the extent of its adoption or validity in that country but by its contribution to the performance of the companies surveyed in that country. It is recommended that future research should be focused on the criticalness of total quality management factors and its effects on organisational performance. Causal relationship among variable could only be possible with laundry focus.
Daniel Prajogo, Alan Brown (2004), studied the relationship between total quality management practices and quality performance and the role of formal total quality management programmes: an Australian empirical study. A comparison was made between organisations that had adopted formal total quality management programmes and organisations without formal total quality management programmes. 14 companies were selected and quality managers were asked about their experiences with both ISO 9000-1994 implementation and total quality management. Only three out 14 companies had implemented total quality management and they had improvements in performance as a result. It was found that the most important dimensions of total quality management for getting better results were leadership, and employee participation. This study revealed that companies that had applied total quality management have fewer improvements in performance with ISO 9000. It was concluded that soft variables such as human resource management, customer focus, and leadership were responsible for the improvement in results derived from total quality management implementation. The study did not focus on size of an organisation and critical success factors.

Dana M. Johnson (2004) completed an empirical study of QS-9000 organisational variables. The objective was to study the impact of organisational dimensions and organisational performance. A database with more than 6200 US based QS-9000 registered locations were used on randomly selected 1000 firms. 153 returned their surveys, principal component analysis. Regression technique was done to study the relationship between operational
and business performance. The results showed that organisational dimensions had an impact on operational and business measures after completing QS 9000. The study did not consider total quality management components and its influence on organisational performance. Similarly organisational size was not included in the research.

Choong Y. Lee (2004) conducted a study on perception and development of total quality management in small manufacturers: an exploratory study in China. This study investigated the present status of total quality management and its development among Chinese small manufacturers and to assess its impact on organisational performance. The study included different types of industries, in terms of product, size, and market. Questionnaires were mailed to 500 small manufacturing firms in China. Of which 112 responded. It was found that total quality management was perceived as a cost saving tool through inventory reduction. This study revealed that the major source of total quality management knowledge was from affiliated foreign partners. The result also showed that total quality management enhanced Chinese small firms’ organisational performance in all the areas examined such as production performance, quality, sales and profit. It was suggested that an organisation be established for the Chinese small manufacturing industry to share total quality management implementation experiences in order to enhance their total quality management programme and to revolve implementation problem. The study did not analyse the relationship between organisational performance and total quality management practices.
Ushadevi (2005) studied the impact of total quality management on business performance in Indian manufacturing companies. Mailed survey technique was used among ISO certified companies practicing total quality management for the last five years. Stepwise regression and path analysis were used to study the relationship between total quality management components and business performance. It was found that the total quality management practice and its impact on business performance in respondent companies were not worked up to its optimum capacity on account of lack of confidence in the system, operational problems and lack of regular review of total quality management process by consultants. The study did not consider the size and certification of firms.

Winston G.Lewis, Kit Fai pun, Terrence R.M..Lalla (2006) studied the hard and soft criteria of total quality management in small and medium sized enterprises. The study covered four ISO 9001 certified small and medium-sized enterprises in Trinidad and Tobago. A framework of total quality management with three levels of criteria, sub criteria was used to determine the effectiveness of total quality management implementation in SMEs. It was found that the soft criteria were implemented less than hard criteria in SMEs. It suggested future research in this area involving more number of SMEs.

Ali Bayati, Allaahirdi Taghavi (2007) studied the impacts of acquiring ISO certification on the performance of SMEs in Tehran. The study concludes that ISO certification had improved the performance of SMEs. This would act as a basis for the application of performance assessment and improvement model. Future study on implementation of total quality management practices of certified and non-certified SMEs would help SMEs in self assessment.
The implementation of total quality management also has positive impact on organisational performance. Javier Garcia - Bemal and Ana Gargallo - Castel, Gema Pastor-Agustin, Marisia Ramirez - Aleson (2008) found the importance of complementarities among the elements of the European framework for quality management excellence model in order to obtain better results. The data was collected from 34 manufacturing firms. The assessment criteria were leadership, strategic planning, customer and market focus, measurement, human resource focus, process management, and business results. It was found that the firms with higher level of quality in all the criteria of the EFQM model obtained better results. Cluster analysis was used to group the firms depending on their level of implementation.

Fred Appiahfencing, Gordana Pesakaruic, Pesia Amaria (2008), studied the relationship between quality management practices and performance of SMEs in Ghana. The study adopted the MBNQA variables of leadership, strategic planning, human resource, customer focus, information and analysis, process management and quality and operational results as tools of quality management practices. Seven hypotheses were postulated to examine the relationship of each of the MBNQA variables with the five SME performance indicators of profitability, customer satisfaction, sales growth, employee morale, and market share. A survey comprising 80 questions was administered to a sample of 200 small firms employing fewer than 50 workers and covering all sectors in Ghana. Statistical analyses were conducted using SPSS to calculate descriptive statistics, reliability analysis, correlation and regression.
Qin Su, Zhao Li, Su-Xian Zhang, Yuan-Yuan Liu, Ji-Xiang Dang (2008) studied the total quality management performance. This study attempted to examine the way quality management practices (QMPs), Impact quality outcome, R&D process, and business performance, using investigation data from Chinese firms. A two-round questionnaire survey was conducted to 196 manufacturing and service firms in West China. Hypotheses were verified using a structural equation model with LISREL software. The results suggested that quality management practices did not have a positive impact on firms’ business performance directly, but had an indirect impact on business performance mediated by quality performance and R&D performance.

Ali Uyar (2008) conducted the study on quality performance measurement practices in the Turkish top 500 manufacturing companies. The study evaluated both financial and non-financial aspects of quality performance measures in Turkish manufacturing companies. The methodology of the study was a postal questionnaire survey. The survey was conducted with the top 500 industrial enterprises in Turkey specified by the Istanbul Chamber of Industry (ICI) in the year 2005. These firms were selected and ranked by ICI according to production-based sales. Two major findings of the study were: Turkish manufacturing companies utilised non-financial measures more frequently than financial measures and Turkish managers perceived non-financial measures more effective than financial measures. The sample was restricted to the top 500 industrial enterprises in Turkey. As the data in this study were collected from the manufacturing companies, the findings could not be generalised to other sectors. The study was unique in reflecting the general practices and perceptions of manufacturing companies on quality performance measures across Turkey.
Muhammad Madi Bin Abdullah, Jegak Uli, Juran Jose Tari (2008) have investigated the influence of soft factors on quality improvement and performance and also examined the link between quality improvement and organisational performance. Data was collected from Managers 255 in electrical and electronics firms in Malaysia. Regression and correlation analysis were used to analyse the relationships between soft factors, quality improvement and organisational performance. The following factors such as management commitment, customer focus, employee involvement, training and education were found to have significant influence on quality improvement. Organisational performance was influenced by soft factors such as management commitment, customer focus and employee involvement. The study also revealed that the firm performance increased when the organisations implemented more quality practices. This study urged managers to prioritise the implementation of soft factors to achieve higher performance.

It was found that there was a significant relationship between the quality management variables and firm performance. It also found support for the argument that quality management practices improve organisational performance in both large and small business and in any part of the world. These findings have added to the body of knowledge that quality management practices improve organisational performance. Contrary to some studies conducted recently in Ghana to investigate the relationship between sophisticated planning and performance that did not find any significant relationship, this study reported a significant positive relationship.
Salaheldin Ismail Salaheldin (2009) conducted a study on “Critical Success Factors for TQM Implementation and their Impact on Performance of SMEs”. The purpose of this study was to identify the critical success factors of TQM implementation, to evaluate their impact on the primary measures as expressed by the operational performance and the secondary measures as expressed by the organisational performance, and to find out the effect of the operational performance on the organisational performance of small and medium-sized enterprises (SMEs) in the Qatari industrial sector using the structured equation modeling (SEM) approach. A questionnaire was designed and distributed to 297 SMEs in the Qatari industrial sector. Of the 297 questionnaires posted, a total of 139 were returned and were used to test the theoretical model. In particular, hypotheses were developed to evaluate the impact of TQM implementation on the operational and organisational performance of the SMEs.

The empirical analysis demonstrated several key findings and data analysis revealed that there was a substantial positive effect of the TQM implementation on both the operational and organisational performance. The findings confirm the significant relationship between operational and organisational performances of the SMEs. Overall, the results showed the central role of the strategic factors in the successful implementation of the TQM programmes within the SMEs.

The research was subject to the normal limitations of survey research. The study used perceptual data provided by the production managers or the quality managers which may not provide clear measures of performance.
However, this can be overcome using multiple methods to collect data in future studies. Interestingly, the findings here may be generalisable outside Qatar, i.e. a similar country to Qatar such as the GCC countries.

Qatari SMEs should consider TQM as an innovative tool for improving operational and organisational performance in today's dynamic manufacturing environment. The findings supported the notion that the TQM critical success factors (CSFs) should be implemented holistically rather than on a piecemeal basis to get the full potential of the TQM. Moreover, the study emphasised the need to link operational performance to achieve the success of TQM implementation. The study integrates critical success factors of TQM practices, i.e. strategic, tactical and operational factors, with operational and organisational performances as related drivers of the effectiveness and success of TQM practices in the SMEs.

Vinod Kumar, Franck Choisne, Danuta de Grosbois, Uma Kumar (2009) investigated the impact of total quality management (TQM) implementation on different dimensions of company performance. The study investigates Canadian finalists (winners and certificates of merit) in the Total Quality category of the Canada Awards for Business Excellence. Data were collected either through in-depth personal interviews or by mail/telephone using the questionnaire and then analysed. The data analysis confirmed the hypothesised positive impact of TQM on all investigated dimensions of company performance, i.e. employee relations (improved employee participation and morale), operating procedures (improved products and services quality, process...
and productivity, and reduced errors/defects), customer satisfaction (reduced number of customer complaints), and financial results (increased profitability). Research limitations and implications brought out the fact that the small sample size limited the scope of statistical analysis. Also, the results of this study were only valid for TQM adopters and gave an indication of what performance could be achieved by companies that undertook a successful TQM programme. The study provided useful insights into the performance improvement that could be achieved through TQM. The study provided evidence on how different dimensions of performance were affected by TQM and gave insights into how long it took to obtain these benefits.

3.5 Research Gap

Literature review enumerated above reveals that vast majority of research dealt from the perspective of quality management practice and its relationship with organisational performance. Different studies have covered various aspects of total quality management practices and their impact on business performance. Most of the studies found a significant link between total quality management implementation and business performance. However, gaps have been found in the area of total quality management importance and implementation. Almost many of the studies have been conducted outside India. Hence, there was a need to focus on Indian companies. The research gap was also found in the area of applicability of total quality management practices in SMEs. Further, the studies have suggested future research in total quality management considering industrial type and size. The review has also
suggested a future study in determining the impact of soft factors and hard factors of TQM practices in organisational performance. Hence, the researcher has focused on total quality management in small and medium enterprises in India particularly in Tamil Nadu.

3.6 Concepts

Concept definitions provided by Shridhara Bhat (2004) and Besterfield Dale H (2005) are given hereunder;

3.6.1. **Attitude:** Evaluative statements or judgements concerning objects, people or events.

3.6.2. **Bench Marking**: Bench marking is defined as “measuring our performance against that of best-in-class companies, determining how the best-in-class achieve those performance levels and using the information as a basis for our own company’s targets, strategies and implementation.

3.6.3. **Best Practices**: Approaches that produce exceptional results are usually innovative in terms of the use of technology or human resources and are recognised by customers or industry experts.

3.6.4. **Continuous Improvement**: Product and Process improvement through application of suggestions and ideas of team members.

3.6.5. **Corporate Plan**: A document that provides guidance for people who work in the department and information for stakeholders through its high level statement.

3.6.6. **Customer Preference**: The way in which consumers in a free market choose to divide their total expenditure in purchasing goods.
3.6.7. *Customer Satisfaction:* the extent to which a product’s perceived performance matches buyer’s expectations.

3.6.8. *Defects:* frailty or shortcoming that prevents an item from being complete, desirable, effective, safe or fail in its purpose.

3.6.9. *Delight Needs:* More than just feeling great about a product or service.

3.6.10. *Employee Commitment And Attitude:* The psychological bond of an employee to an organisation.

3.6.11. *Empowerment:* Empowerment means giving people authority to make decision based on what they feel is right, have control over their work, take risks and learn from mistakes.

3.6.12. *Explicit Needs:* Specific wants or desires specified by the customer factors of TQM.

3.6.13. *Flatter Organisation:* Management with few organisation levels.

3.6.14. *Hard Factors:* Tools or techniques oriented TQM practices are referred as hard factors.

3.6.15. *Information Feedback:* The return of the received data to the source usually for the purpose of checking the accuracy of transmission by comparison with the original data.

3.6.16. *Inventory:* Inventory is a stock of material used to satisfy customer demand or support the production of goods or services.

3.6.17. *Joint Venture:* A joint venture is an entity formed between two or more parties to undertake economic activity together. The parties agree to create a new entity by both contributing equity, and they then share in the revenues, expenses, and control of the enterprise.
3.6.18. **Line:** Line are those that have direct impact on the accomplishment of the objectives of the enterprise.

3.6.19. **Mission:** The mission of a firm defines its reason for existence.

3.6.20. **Multi National Corporation:** A corporation that has its facilities and other assets in at least one other foreign country.

3.6.21. **Motivation:** The art of creating conditions that allow everyone of us to get our work done at and peak level of efficiency.

3.6.22. **Operational Plan:** A list of procedures to be followed in making changes to their outflows for the specific purpose or to achieve certain objectives.

3.6.23. **Organisation Culture:** The entire organisation must become energised to doing what is necessary to design products and services to meet customer’s expectations. Mechanism must be in place to continuously improve every fact of the organisation towards the objective of building ever increasing levels of customer satisfaction.

3.6.24. **Organisational Performance:** Organisational performance comprises the actual output or results of an organisation as measured against its intended outputs.

3.6.25. **Proactive:** Action and result oriented behavior, instead of the one that waits for things to happen and then tries to react to them.

3.6.26. **Production Control:** It is responsible for determining production volumes and scheduling the machines and labour directly responsible for transformation process.

3.6.27. **Quality Charts:** Control chart used in evaluating the stability of a process in terms of a quality score.
3.6.28. **Quality Circle**: A Quality circle is a small group of employees who meet regularly with a facilitator to solve work-related problems in their work area. The group may have 6 to 8 members with a leader and they meet once a week after their working hours.

3.6.29. **Quality Goals**: A quality goal is aimed at quality output. A goal is specific, is usually quantified and is to be met with a specific period of time.

3.6.30. **Quality Planning**: Activities to ensure that total quality is introduced in an effective manner.

3.6.31. **Quality Policy**: It is guidelines for the action to be taken in order to reach the quality goals.

3.6.32. **Quality**: It is defined as fitness for use (Juran, 1974), conformation to requirements (Crosby, 1984). Quality of Conformation is launched with how the manufactured product conforms to the original requirements.

3.6.33. **Soft Factors**: People oriented practices of TQM are referred to as soft factors.

3.6.34. **Staff**: Staff is those that help the line persons work most effectively in accomplishing the objectives.

3.6.35. **Strategic Plan**: The process of determining company’s long-term goals and then identifying the best approach for achieving those goals.

3.6.36. **Strategic Planning**: It is a structured process for defining the broad mission and strategic goals for the company and then determining the means to be used to reach these goals.
3.6.37. **Strategy.** Strategies are key actions towards achieving the goals.

3.6.38. **Suggestion System:** It is on a management for the submission, evaluation and implementation of an employee’s idea to save costs, increase quality or to improve the elements of work such as safety. Companies reward employees for implemented suggestions.

3.6.39. **Suppliers'.** An individual who supplies goods or services to a customer specification.

3.6.40. **Team:** A small number of people with complimentary skills, who are committed to a common purpose and set of performance goals, and an approach for which they hold themselves mutually accountable.

3.6.41. **Top Management Commitment And Involvement:** Top management gets involved and stays involved from selling business strategies based on using product of activity as a weapon to capture global market share to rewarding employees for achieving excellence in product quality.

3.6.42. **TQM:** Total Quality Management is an approach to improving the effectiveness and flexibility of business as a whole. It is essentially a way of organising and involving the whole organisation, every department, every activity, every single person at every level”. It is a philosophy that involves every one in an organisation in a continual effort to improve quality and achieve customer satisfaction.
3.6.43. *Training*. Training is defined as the organised procedure by which people learn knowledge and/or skills for a definite purpose.

3.6.44. *Vision*: Vision describes where the organisation is headed. It is a statement of the future that would not happen by itself.

### 3.7 Conclusion

Literature review enumerated above reveals that the vast majority of research dealt from the perspective of quality management practices and its relationship with organisational performance. The researcher found the gap existing in the literature on TQM analysis in small and medium enterprises. Hence, there is a need to focus on TQM implementation, and relationship between TQM and business results in Indian context. The study intends to contribute TQM importance and implementation in SMEs and its impact on organisational performance. The present study also aims at suggesting ways to improve implementation of TQM and enhance competitiveness of SMEs in a highly dynamic environment.