A STUDY AND ANALYSIS OF THE RESULTS ATTAINED AFTER THE IMPLIMENTATION OF TQM IN A SUPPLIER FIRM

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Abstract: Quality improvement and reduction of cycle time has become a survival issue for the industries in this century. Companies that have adopted quality improvement and management programmes have experienced an overall improvement in their corporate performance in terms of better employee relation and retention, higher productivity, greater customer satisfaction, increased market share and improved profitability. Each company may have their own practices and a unique environment and problems, but there are common features in their quality management systems. These features include focus on meeting customer' s needs, the empowerment of employees for continuous process and product improvement, a flexible and responsive corporate culture, decision making and profitable partnerships with the suppliers. Study was conducted on a small/medium scale industry which was a spare part supplier to the bigger firms mainly the power plants by implementing TQM partly for its betterment in the year 2013 while one of the authors was working on a project. Various parameters were compared before and after the partial TQM implementation. The firm concerned was not in a position for the full implementation of TQM because of some financial and technical constraints. Overall the results were obtained to be positive and as per the spirit of the philosophy of TQM.

Keywords: Total Quality Management (TQM), Customer Satisfaction, Process Improvement, Opportunities for Improvement (OFI).

1. Introduction and Literature review: TQM is a total organizational approach for meeting customer needs and expectations that involves all managers and employees in using quantitative methods to improve continuously the organization' s processes, products and services [1]. Since 1980, TQM has become one of the most widely used tools by the managers [2]. Good quality management is essential for improving manufacturing competitiveness and many modern companies in the West have recognized the need to change their way of thinking about quality and how that can improve their business performance. TQM has received considerable global attention both from researchers as well as from practitioners [3]. Many studies have identified human resource management as one of the critical factors of TQM [4]. Both marketing and TQM are complementary philosophies and marketing has the responsibility to determine the voice of customers by soliciting, collecting and analyzing the customers' needs, while TQM place the customer satisfaction at its very heart [5]. The length or duration of TQM implementation has a significant impact on the companies' financial performance and long-term adopters are found to outperform short-term adopters [6]. The survey of Small and Medium sized Enterprises (SMEs) managing unpredictable and volatile demand investigated the effects of quality management systems on business performance and highlighted a number of difficulties including cost constraints, and lack of training and productivity improvements and reported benefits in team working, quality awareness and customer satisfaction [7]. Such studies have the potential to contribute in providing feedback to the decision makers to manage and improve the TQM programs to better meet the requirements of the organization [8].

2. Proposed Method: Survey was used as a tool for data collection. Data collection is very important as it is required to represent and identify the problem and the achievement of the organization. After data collection, analysis was done in order to find out the difference in outcomes before and after the implementation of TQM. Following steps were taken to achieve the best possible observations from the survey: a) Identification of key result parameters in order to examine the Strengths and Opportunities for Improvement (OFIs) in Customer Satisfaction, Business profit and Process Improvement. b) Identify the areas where performance has been below targets and which directly affects the efficiency and profitability of the industry.

3. Result and Findings: After the collection of data over an appropriate period of time and its thorough analysis, following were the findings with respect to the selected parameters as shown in the Tables below:

a) Increase in Production volume:

Financial Year	2008-09	2009-10	2010-11	2011-12	2012-13
Production Volume (in units)	20,402	22,050	23,200	25,305	29,542

The rate of increase in the production volume was highest in the financial year 2012-13 just after the TQM implementation (16.74%) which is much higher than the average percentage increase in the last three financial years (7.45% = Average of 8.07%, 5.21% and 9.07% which are the rates of increase of last three consecutive financial years).

b) Turnover per Employee:

Financial Year	2008-09	2009-10	2010-11	2011-12	2012-13
Turnover per employee (in rupees-lacs)	17.25	18.32	19.41	20.65	23.52

The rate of increase in the turnover per employee was highest in the financial year 2012-13 just after the TQM implementation (13.89%) which is much higher than the average percentage increase in the last three financial years (6.17% = Average of 6.20%, 5.94% and 6.38% which are the rates of increase of last three consecutive financial years).

c) Outsourcing Performance:

Financial Year	2008-09	2009-10	2010-11	2011-12	2012-13
Outsourcing Performance (ratio of completion and	0.72	0.75	0.81	0.90	0.98

target)					

The highest Outsourcing performance was achieved in the financial year 2012-13 just after the TQM implementation (0.98) which means that almost all the targets were accomplished with a little slack remaining and it is much higher than the average of the last four financial years (0.79 = Average of 0.72, 0.75, 0.81 and 0.90 which are the outsourcing performances of last four consecutive financial years).

d) Specific Energy Consumption:

Financial Year	2008-09	2009-10	2010-11	2011-12	2012-13
Specific Energy Consumption (in kW-hr/product)	131.2	129.45	120.1	105.57	90.21

The rate of specific energy consumption was lowest in the financial year 2012-13 just after the TQM implementation (90.21kW-hr/product) which is much lower than the average of the last four financial years (121.58 = Average of 131.2, 129.45, 120.1 and 105.57 which are the Specific Energy Consumptions of last four consecutive financial years).

e) Waste Reduction:

Financial Year	2008-09	2009-10	2010-11	2011-12	2012-13
Waste Reduction (in % per ton of raw material)	2.3	3.1	3.6	3.9	6.7

The rate of waste reduction was highest in the financial year 2012-13 just after the TQM implementation (6.7%) which is much higher than the average of the last four financial years (3.22% = Average of 2.3%, 3.1%, 3.6% and 3.9% which are the waste reduction percentages of last four consecutive financial years).

4. Conclusion: The study was conducted at one of the spare part manufacturing company in the India. TQM philosophy of continuous improvement is of great importance in manufacturing industry. The greatest advantage of implementing the TQM approach is that it encourages disciplined and detailed thinking over tangible and intangible aspects in terms of profit, customer satisfaction, working environment and employee satisfaction, waste reduction, energy consumption etc. To attain Quality improvement, Total Quality Management tools must be fully and effectively structured to cover all the aspects that affect the quality and satisfy the demands of new market.

5. Limitations and Future Research: Techniques and tools of the Total Quality Management have great importance in this era because of changing markets due to globalization and privatization. In India markets are now open for everyone and with this competition has increased to a large extent. The major limitation of this project work was that it was carried out in a smaller firm where full implementation of TQM was not possible and moreover its scope was limited to a certain geographical location. Future research can be carried out with more economically sound firms spread over many locations.

References:

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