

**A Study On Employees' Perception Of Total Quality Management In  
BHEL Ancillary Units In Tiruchirappalli District**

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**Abstract**

Total Quality is a description of the culture, attitude and organization of a company that strives to provide customers with products and services that satisfy their needs. The culture requires quality in all aspects of the company's operations, with processes being done right for the first time to eradicate defects waste from operations. Quality is a mantra for successful business firm. Globalisation has played an essential role to business world to offer quality products and services; otherwise there is no scope of future business operations. Manufacturing firms needs to implement quality circles and quality improvement techniques to their firms in order to maintain the quality products to the consumers. Here the researcher tries to analyses the how total quality management system helps to improve the quality products to their suppliers. The present study was selected 10 ancillary units functioning surrounded by BHEL Industry. There were selected 5 engineers and 5 senior technicians from the selected ancillary units. So the sample size was confined as 100 prospective respondents. The convenient sampling technique was used to select the respondents. It is suggested the management to conduct a cost analysis or poor performance process to determine the financial impact of these costs on the bottom line. Conduct a world-class business system review of all of the business units to understand the level of improvements needed in each unit.

**Keywords:** Total Quality Management, Commitment, organizational performances and so on.

## Introduction

Total quality management (TQM) is an organisational broad management philosophy of constantly civilizing the quality of the products/services/processes by focusing on the customers' needs and expectations to enhance customer satisfaction and firm performance. Total Quality Management is a method by which management and employees can become involved in the continuous improvement of the production of goods and services. It is a combination of quality and management tools aimed at increasing the business and reducing losses due to wasteful practices.

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## Total Quality Management

ISO defined TQM as "A management approach of an organization centered on quality, based on participation of all its members and aiming at long term benefits to all members of the organization and society."

TQM is "a system of continuous improvement employing participative management and centered on the needs of customers" (**Jurow and Barnard, 1993**).

TQM has evolved primarily because of the changes in the global economy and also because of demand in market forces. Now a day's TQM becomes a major or we can say essential feature of our working methodology though the quality control is being practiced in most of the industries throughout the globe from years. Earlier firms and industries practices traditional and outdated methods by which they are unable to meet the required parameter or quality which in actual they desire to achieve. Also, readily changing technology and customer expectations have already affected organizations worldwide which have promoted the need for taking a new look at quality management.

According to **Moghaddam and Moballeghi (2007)**, TQM is the application of a number of activities with perfect synergy. The various important elements of TQM are:

- Customer-driven quality;
- Top management leadership and commitment;
- Continuous improvement;
- Fast response;
- Actions based on facts
- Employee participation; and
- A TQM culture

TQM focuses on the routine involvement and participation of every individual in any organization in the systematic improvement of quality and it involves each member and group within own part of organization. It also provides the methodology to work and to constantly improve the performance at any level and in every activity by creating positive continuous improvement of the environment based on team work, trust and respect examining the process through which the work gets done in an organized, consistent manner, by applying quantitative method and analytical techniques and expending knowledge and expertise in process improvement. Therefore, Total Quality Management is a procedure to enhance the performance with trust, teamwork and to get the work done in an efficient way by applying techniques.

## **Benefits of TQM**

Customer satisfaction oriented benefits (**Hackman and Wageman, 1995**) of TQM are;

1. Improvement in product quality
2. Improvement in product design
3. Improvement in production flow
4. Improvement in employee morale and quality consciousness
5. Improvement in product service
6. Improvement in market place acceptance

**Economic improvement oriented benefits of TQM are,**

1. Reduction in operating costs
2. Reduction in operating losses
3. Reduction in field service costs
4. Reduction in liability exposure

## **Review of Literature**

Esin Sadikoglu and Hilal Olcay (2014) investigated impacts of TQM practices on various performance measures as the well as the reasons and the barriers of the TQM practices of

firms in Turkey. The researcher used a cross-sectional survey methodology in this study, and the unit of the sample was at the plant level. The sample was selected from the member firms to Turkish Quality Association and the firms located in the Kocaeli-Gebze Organized Industrial Zone. The researcher obtained 242 usable questionnaires, with a satisfactory response rate of 48.4 percent. The researcher conducted exploratory factor analysis and multiple regression analysis.

This study has shown that different TQM practices significantly affect different performance outcomes. Results revealed that primary obstacles that the firms in Turkey face they were lack of employee involvement, awareness and commitment of the employees, inappropriate firm structure, and lack of the resources. It is recommended that firms should continue implement TQM with all variables to improve performance. Firms should improve employees' involvement/commitment/awareness to TQM, enhance firm structure, and provide resources to overcome the barriers that prevent effective implementation of TQM practices<sup>1</sup>.

**Ola Ibrahim (2013)** encourages Researchers to address many topics related to Total Quality management and Continuous improvements. Each has his own approach. Each reveals findings and results. This paper is a comparative analysis of some of the researchers' approaches concerning Total quality Management Applications, Models, principles and aims<sup>2</sup>.

CemalZehir ed.al (2012) investigates whether TQM activities affect quality and/or innovative performance and also defining the effective components on these performance types. Accordingly, we investigated literature to develop hypotheses and in order to test the research model, data were collected through a survey in Marmara Region, and then statistically significant and positive relationship among TQM activities, quality and innovation performance was found<sup>3</sup>.

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<sup>1</sup> Esin Sadikoglu and Hilal Olcay (2014) "The Effects of Total Quality Management Practices on Performance and the Reasons of and the Barriers to TQM Practices in Turkey", Hindawi Publishing Corporation Advances in Decision Sciences, Volume 2014, available at: <http://downloads.hindawi.com/archive/2014/537605.pdf>

<sup>2</sup> Ola Ibrahim (2013) "Total Quality management (TQM) and Continuous Improvement as Addressed by Researchers" International Journal of Scientific and Research Publications, Volume 3, Issue 10, pp. 1-4

<sup>3</sup> CemalZehir ed.al (2012) "Total Quality Management Practices' Effects on Quality Performance and Innovative Performance", Procedia - Social and Behavioral Sciences, Volume 41, 2012, Pages 273-280

**Statement of the problem**

Every organisation whether profit oriented or non-profit oriented and manufacturing firm or service providers' needs to have Total Quality Management delivery through their products and services. Quality is a mantra for successful business firm. Globalisation has played an essential role to business world to offer quality products and services; otherwise there is no scope of future business operations. Manufacturing firms needs to implement quality circles and quality improvement techniques to their firms in order to maintain the quality products to the consumers. Here the researcher tries to analyses the how total quality management system helps to improve the quality products to their suppliers.

**Objectives of the study**

The following objectives were framed for the present study

- 1) To study the employees perception about total quality management practiced by the BHEL ancillary units
- 2) To know the factors determines total quality management practices in the manufacturing concern;
- 3) To offer to improve effectiveness of total quality management practices in their organization.

**Methodology**

Research methodology is a blueprint how the study will be conduct and justification given to the selected prospective respondents and data collected from well structured tool like questionnaire or survey scheduled. The present study was selected 10 ancillary units functioning surrounded by BHEL Industry. There were selected 5 engineers and 5 senior technicians from the selected ancillary units. So the sample size was confined as 100 prospective respondents. The convenient sampling technique was used to select the respondents.

The primary data were collected through well structured questionnaire and secondary data were collected through website, journals, and books and so on.

**Analyses and Interpretation**

**Ranking of factors determines the Total Quality Management**

| Sl. No. | Determines Factors                       | Mean | Median | Standard Deviation | Mean Rank |
|---------|--|------|--------|--------------------|-----------|
| 1       | Planning initiative                      | 2.40 | 2.00   | 3.021              | 7         |
| 2       | Leadership management style              | 2.95 | 3.00   | 2.763              | 10        |
| 3       | Training and development                 | 2.73 | 3.00   | 2.815              | 9         |
| 4       | Employee Empowerment commitment          | 0.39 | 1.00   | 3.097              | 1         |
| 5       | Supplier Quality Management              | 1.88 | 2.00   | 2.928              | 5         |
| 6       | Incentives and Recognition system        | 1.03 | 2.00   | 2.810              | 2         |
| 7       | Process Monitoring and Control           | 1.08 | 2.00   | 2.918              | 3         |
| 8       | Health and safety measure                | 1.33 | 3.00   | 2.865              | 6         |
| 9       | Work environment                         | 2.64 | 3.00   | 2.938              | 8         |
| 10      | Performance appraisal and target setting | 3.37 | 3.00   | 3.034              | 11        |
| 11      | Process flow management                  | 1.14 | 2.00   | 3.945              | 4         |

**Source: primary data**

**Linear Regression Test**

| Model Summary                  |                   |          |                   |                            |
|--------------------------------|-------------------|----------|-------------------|----------------------------|
| Model                          | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1                              | .034 <sup>a</sup> | .001     | -.020             | 8.26659                    |
| a. Predictors: (Constant), Age |                   |          |                   |                            |

| ANOVA <sup>a</sup>                              |            |                |    |             |      |                   |
|---|------------|----------------|----|-------------|------|-------------------|
| Model   |            | Sum of Squares | Df | Mean Square | F    | Sig.              |
| 1   | Regression | 3.848          | 1  | 3.848       | .056 | .813 <sup>b</sup> |
|   | Residual   | 3280.152       | 48 | 68.336      |      |                   |
|   | Total      | 3284.000       | 49 |             |      |                   |
| a. Dependent Variable: total quality management |            |                |    |             |      |                   |
| b. Predictors: (Constant), Age                  |            |                |    |             |      |                   |

| Coefficients <sup>a</sup>                       |            |                             |            |                           |        |      |
|---|------------|-----------------------------|------------|---------------------------|--------|------|
| Model   |            | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig. |
|   |            | B                           | Std. Error | Beta                      |        |      |
| 1   | (Constant) | 42.281                      | 2.480      |                           | 17.048 | .000 |
|   | Age        | .224                        | .943       | .034                      | .237   | .813 |
| a. Dependent Variable: total quality management |            |                             |            |                           |        |      |

**Research Hypothesis**

There is a significant relationship between Age of the respondents and their overall perception of Total Quality Management

**Null Hypothesis**

There is no significant relationship between Age of the respondents and their overall perception of Total Quality Management

**Tools used**

Linear Regression test was used in the above tale

**Findings**

The above table shows that there is no significant relationship between Age of the respondents and their overall perception of Total Quality Management. Hence the calculated value is greater than the table value. So that research hypothesis is rejected and null hypothesis is accepted.

**Suggestions**

Most of the employees appear to be lacking theoretical knowledge on the usefulness of concepts in Total Quality Management implementation. Hence, the management may develop certain ways and means of strategically linking the level of knowledge and skill in the management strategy of Total Quality Management.

It is suggested the management to conduct a cost analysis or poor performance process to determine the financial impact of these costs on the bottom line. Conduct a world-class business system review of all of the business units to understand the level of improvements needed in each unit.

The researcher suggested to the management may conduct a customer loyalty assessment to determine what they like or dislike about the products and service and identify the areas of strength and uncover possible problems in the organizations performance.

**Conclusion**

The post globalization period in India had brought in several opportunities and improvements in Indian organizations. Technological development and economic competitiveness had greater impact on managerial dimension and directions in this era. There were many organizations both manufacturing and service sectors that died of not being able to adapt to the changes. Top management plays a vital role in the successful implementation of techniques and models such as TQM. Further top management as its responsibility prepares a number of models and techniques through its functions such as objectives, policy communication, leadership etc. To enjoy the benefits of TQM as a consequence of this people in the operative level will implement the models and guidelines for effective results of TQM. It has been an established fact that TQM philosophy and practice bring in systematic, integrated, consistent, organizational perspective involving everyone and everything.

**References:**

- 1) Esin Sadikoglu and Hilal Olcay (2014) “The Effects of Total Quality Management Practices on Performance and the Reasons of and the Barriers to TQM Practices in Turkey” , Hindawi Publishing Corporation Advances in Decision Sciences, Volume 2014, available at: <http://downloads.hindawi.com/archive/2014/537605.pdf>
- 2) Ola Ibrahim (2013) “Total Quality management (TQM) and Continuous Improvement as Addressed by Researchers” International Journal of Scientific and Research Publications, Volume 3, Issue 10, pp. 1-4
- 3) CemalZehir ed.al (2012) “Total Quality Management Practices’ Effects on Quality Performance and Innovative Performance”, Procedia - Social and Behavioral Sciences, Volume 41, 2012, Pages 273-280
- 4) Alveeson, M. and Deetz, S. (2000). *Doing Critical Management Research*. London: Sage Publications.
- 5) Anderson, M. (2004) *TQM in Higher Education: The Australian and Swedish Experience*. Department of Management Working Paper Series IS SN1 327-521 6.
- 6) Bartoletti, R. J. (2000) *An Assessment of Total Quality Management on a K—4 School: A Case Study*. ETD Collection for Fordham University. Paper AAI9975338.
- 7) Bugdol, M. (2008). Quality Management in Local Administration. [Online]. Available from: [www.warsawvoice.pl](http://www.warsawvoice.pl) (Accessed: 9 June 2018).