# Analyzing the benefits of implementing TQM tools and techniques in manufacturing industries: A case study

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**Abstract:** TQM is considered to be effective strategy by various researchers for improvement of quality. In the globalized era, changing the product as per the requirement of the customer i.e. providing customized product in minimum span of time have become the mandatory requirement for each and every industry.

**Keywords:** Customer Satisfaction, Quality, Total Quality Management (TQM)

## 1. Introduction

TQM philosophy states the involvement of each and every one i.e. customer, supplier, employer and employee in enhancing the quality of the product. Various researchers like Damanpour (2001), Cho et. al. (2007), Chen (2009), Colurcio (2009), Dvir (2002), EPU (2005), Fornell (1981), Fritsch and Meschede (2001), Fuentes et. al. (2006), Virmani et. al. (2016, 2017, 2018) worked in area of TQM. Taveira et al. (2003) examined hypotheses regarding influence of TQM on work environment and concluded that most TQM elements were significantly related to work environment scales viz. supervisor support, task orientation, task clarity and innovation. Testa et al. (2003) did regression analysis to suggest national and organizational cultural congruence has positive effect on job satisfaction.

## 2. Literature Review

Damanpour (2001), Cho et. al. (2007), Chen (2009), Colurcio (2009), Dvir (2002), EPU (2005, Virmani et. al. (2016, 2017, 2018), the TQM tools identified by various researchers are: Check Sheet, Scatter Diagram, Six sigma, kaizen, Poka-Yoke, Pareto Chart, Acceptance Sampling, Statistical Process Control (SPC), Cause and effect diagram (Ishikava diagram or fish bone diagram), Lean Manufacturing, JIT, Benchmarking.

Arumugam *et al.* (2008) claimed that implementation of TQM concept can significantly increase the quality of product. The same concept was supported by Talib et. al. which apply TQM in service industries. Yang (2006) explained that if customer needs are monitored on periodic basis, TQM can achieve customer satisfaction to maximum possible level. Also, Talib *et al.* (2011) studied and explained that TQM is the

means by which quality of products and services can be surely improved by successful implementation of TQM.

## 3. Benefits of Implementing TQM tools and techniques

The various benefits of implementing TQM are:

a. Increased Productivity
b. Increased Profitability
c. Better Employee morale
d. Increased Customer satisfaction
e. Increased Quality
f. Increased sales
g. Reduced wastages/scrap
h. Better return on investment (ROI)
i. Increased market share

## 4. Conclusion

It has been seen that successful implementation of TQM brings positivity in the manufacturing industry. The results are employee morale improves, better productivity, increased profitability, increased ROI, reduced wastages/ scrap etc. However, there are many barriers of TQM like employee resistance to change, communication gap, lack of motivation, lack of training and education programs, lack of interpersonal skills etc. These barriers should be handled tactfully so that TQM system can be successfully implemented with relative ease.

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