

Research Paper

**The study of Effect of Total Quality Management on Customer Performance (Case study: the industrial group of Entekhab)
Mohsen Rahimi Dastjerdi¹, Seyed Ali Mousavi^{*2}, Mohsen Salehi³**

¹Faculty Member of the Department of Accounting, Sama Technical and Vocational Training College, Islamic Azad University ,Isfahan(Khorasgan) Branch,Isfahan ,Iran.

²M.SC Business Management ,Islamic Azad University ,Mobarakeh Branch, Mobarakeh, Iran

³M.SC Business Management ,Islamic Azad University , Naragh Branch, Naragh, Iran.

Available online at: www.IJSMD.Com

Received 11th Jan 2015, Revised 26th February 2015, Accepted 06th April 2015

Abstract

Given the important role that total quality management systems play in achieving competitive advantage for companies against competitors, most of the time this appears to be done on the customer performance. This research that was conducted at the industrial group of Entekhab in Isfahan, going to evaluate the impact of Total Quality Management on customer performance from the perspective of senior managers. Statistical population of study were 140 senior managers (CEO, finance, sales and marketing, production) that were examined totally due to the limitation of statistical population. To collect data, a questionnaire with 37 questions was used which includes demographic data and key specialized questions for evaluating hypotheses and its validity was confirmed by experts and specialists and its reliability was obtained 87% through Cronbach's alpha index. 116 questionnaires of 140 distributed questionnaires were returned (a return rate of 83%).Data was analyzed by SPSS and AMOS Software. The study hypotheses were confirmed based on the results of the study. So, Total Quality Management has a significant impact on customer performance.

Key words:total quality management, performance evaluation, customer performance, industry group of Entekhab.

Introduction

Current age is period of rapid and unpredictable changes and management problems is such complex and intertwined that is not easy to identify a problem. In this regard, a new type of management as TQM has been accepted to improve the ability of an organization. This type of management wants to change management approach, tries to create responsibility, authority and power of decision in all classes and sections and wants to create significant motivation in employees. But the organization problem is not focused only on their management. It can be said that the most critical heart of any organization is their customers which are an integral part of organization and their satisfaction leads to increased financial and competitive power of organization. Total Quality Management is customer satisfaction achievement and continual improvement of sustainable development. Therefore, identifying the main variables of customer satisfaction is the key for successful performance of TQM, Thus, all companies are trying to be the best and employ strategies to achieve their quality objectives (Nikzad & Tayebi, 2013). Development of TQM is a competitive advantage that makes the company more efficient and innovative. The main objective of TQM is develop a plan to achieve customer satisfaction (Jafari et al, 2005).Compliance with TQM permanently, companies can maintain their competitive advantage in the long term by adaptation with customer needs (Dale,1998). TQM is defined as well as continuous quality improvement in processes, products and services. This practice must be fully done by managers throughout the organization. The goal of these efforts is to increase customer satisfaction, increase quality, reduce costs or limit some of the costs to put society in a sustainable development path (Nikzad & Tayebi, 2013)

Literature

Many researches have been done about TQM and customer performance Therefore, these researches and the key factors referred to in these researches are described as follows:

Total Quality Management

First base of quality management was established in Japan by Edwards Deming, an American scientist in the years after World War II. Deming implication was initially based on statistical techniques of quality control that was presented by Walder Shewhart who worked under him at Bell Laboratories in New York. After World War, Attention was moved from quality to the production and its result was a reduction in the use of statistical control methods. After the War, Deming saw many Japanese people were suffering and based on the interest to them, began his education in the field of statistical control methods in that country and help Japanese to produce more and better products (Daft, 2000, p54). In 1960, the first bodies of quality control were created to improve the quality. Japanese workers also learned simple techniques so that they could use these techniques in the process of continuous improvement to enhance the quality and efficiency. Later, TQM was revived elsewhere in the world, especially in the United States and then Western Europe. Abdul Malek & Kanji expressed benefits of TQM in higher education as follows: The competition in customer satisfaction(audience), government priority, improvement in employee morale, improve the effectiveness and efficiency of processes and applications, continuous improvement, stimulate team spirit, reduced costs, increase the number of useful programs, create a culture for promoting employees, increase services, solve side problems and overcome barriers, accountability to the public, better funding, replace a positive culture (cooperation and positive work ethic), better change management, improve management, improve the work environment, increase interest of teachers and others to the work (Faghihi,2000)

* Correspondent Author :Seyed Ali Mousavi (ebrahimi_hadis30@yahoo.com)

Manuscript No: IJSMD-KINA-2015-5266

The main idea of TQM is creating the basis for continuous improvement and productivity. The concept of improvement in TQM is that every person in the organization must continually seek ways to improve the quality of the work, system and its product. TQM is a philosophy of management that includes all institutional activities, needs and expectations of customers, the community and the organization's goals (Crosby, 1979). Today, with the passage of time, TQM has a prominent place in the advanced industrial world and has met with the significant reception and many innovations in continuous improvement have been based on the philosophy of TQM. The nature of work has meaning and validity with TQM. In general, it can be said, TQM can also be used as a basis for other improvement approaches.

Various principles are presented for TQM that organizations choose to implement them according to their conditions and environment. Deming's fourteen principles of TQM are: 1. Creating a continuous determination and willingness to constantly improve our products and services by planning 2. Adoption and implementation of the new philosophy by senior managers and employees 3. Ending the product inspection and replacing it with quality in process 4. Ordering items and materials from one source only, regardless of the low prices 5. Establish job training for managers and employees 6. Establishing a new method of leadership "consider what is the problem rather than who is at fault" 7. Fearless in organizations 8. To remove distance and barriers between different units 9. Refrain from chanting, preaching, and goal setting for employees 10. Remove the quantitative targets for employees and managers 11. To remove the barriers that prevents

employees to proud from their work 12. Encouraging employees to improve their knowledge and culture and promote the culture of self-study and self-improvement, 13. Make clear Management's commitment for quality and productivity and above principles and mobilize people for change (Mehrban, 2006, p. 38).

Customer performance

studies about customer are quite clear, however, a special investigation has not been adequately established to use customer satisfaction as a tool for strategic performance. Bandy (2003) has provided one of the most comprehensive approaches to emphasize the need to customer satisfaction and has introduced "Collaborative service model" that including the relationship between strategic management and customer performance through these five stages:

1. Understanding customer needs
2. Setting service standards
3. Participation by leading
4. Providing service
5. Maintaining service culture

Customer performance should be a mutual process such as facilities management provider that offers a service for customer and customer show his satisfaction of service. Despite the fact that the second element of this process can't be achieved in the facilities management, there isn't any appropriate system to increase it. This called organization-customer communication distance (Pitt et al) that communication gap of organization-customer has shown in Figure 2-3.

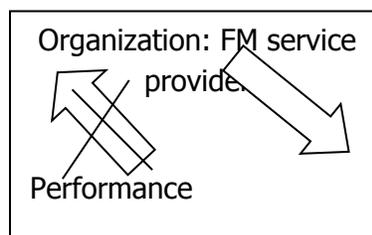


Figure 1- communication gap of organization-customer Source: (Pitt & Toker, 2009, p.3)

Customer performance measurement system provides a continuous improvement process and allows both customer and facilities management provider to share knowledge and access to information about customer performance and help to the provider organizations to apply strategically customer performance measurement data (Pitt & Toker, 2009). With increased competition, there is a concern about customer satisfaction and efficiency in short-term and long-term. Long-term advantage can be achieved in customer relationship management by focusing on customer retention that has been achieved by effective management of customer relationships. Thus, competitive pressures cause the company to not only take a customer-focused strategy, but also apply customer performance criteria (Pitt & Toker, 2009). Therefore, companies are expected to use the customer-focused strategy to maintain their competitive advantage. Using financial measures is not only short term for them but also is inappropriate to understand

the customer performance. Therefore, it is necessary for customer performance measures to limit the customer relationships and distinguish valuable customers. For distinguishing customers, companies must identify their customers and distinguish them, interact with them and customize their services. Customer relationship management enables companies, by distinguishing customer rather than product, to focus on strategic customers who increase the value and benefit. It is necessary for companies that focus on newer but useful customers to apply customer performance measures to measure and evaluate and control performance. customers measure who influence performance are percentage of repeat customers, customer survey rate, percentage of market share, percentage of existing customers growth, new customers number, total sales for new customers, the usefulness of customer and customer lifetime value (Kaplan & Norton, 1996).

Research hypotheses

The main hypothesis

Total Quality Management has a significant impact on the customer performance in the industrial group of Entekhab

Secondary hypothesis:

1. The supplier relationships has a significant impact on the providing valuable product for customer.
2. Bench marking has a significant impact on the providing valuable product for customer.
3. Quality measurement has a significant impact on the providing valuable product for customer.
4. Process improvement has a significant impact on the providing valuable product for customer.
5. Supplier relationship has a significant impact on the quick response to the customer.
6. Benchmarking has a significant impact on the quick response to customer.

7. Quality measurement has a significant impact on the quick response to the customer.
8. Process improvement has a significant impact on the quick response to the customer.

Theoretical framework

According to the results of previous studies and proposed hypotheses, conceptual model is presented based on the 9 hypotheses. Based on this model, TQM includes four dimensions that are supplier relationships, process improvement, quality measurement and bench marking and customer performance includes two dimension that are providing valuable product for customer and quick response to the customer.

According to the literature, conceptual model is as follows.

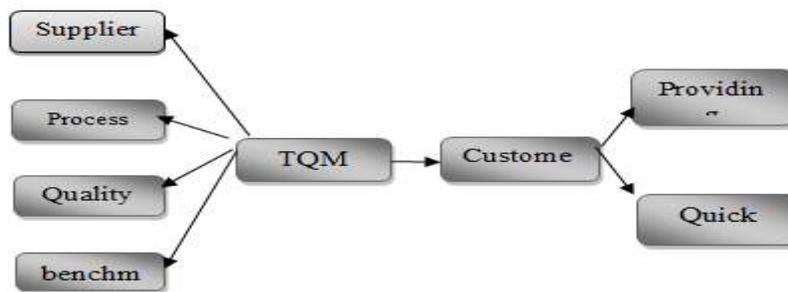


Figure 2- conceptual model

Methods

Scientific research are divided into three categories based on the study goals: Basic research, applied research and research and development (Bazargan et al., 2006). This study also aims to "explore the impact of TQM on the customer performance (Case Study: Industrial Group of Entekhab)" and is an applied research and in terms of data collection and analysis method is a descriptive and non-experimental study that researcher tried to ask a real question and answer it during the research process.

Methods and tools for data collection

library resources, articles, required books and other World Wide information has been used to collect information in the field of theoretical basis and research literature and a questionnaire has been used to collect and analyze data . Questionnaire is divided into three sections. The first part of the

questionnaire including abrief description of the questionnaire to create more clarity for respondents, The second part of the questionnaire including personal information that has seven items, including gender, age, marital status, level of education, type of employment, years of service and the administrative position of respondents. The third section contains questions related to the impact of Total Quality Management on the customer performance improvement. The third section of the questionnaire is designed to be closed. Likert scale was used to answer the third section questions, meaning that for each item 5 options has been used.

Validity and reliability

The validity was confirmed by faculty and PhD students and reliability was calculated 0.87 through Cronbach's alpha according to Table 1.

Table 1- Cronbach's alpha of questionnaire

Cronbach's alpha	Question No	variable
0.86	5-1	Supplier relationship
0.89	15-6	Process improvement
0.88	22-16	Quality measurement
0.80	25-23	benchmarking
0.86		TQM
0.87	31-26	Providing valuable product for customer
0.89	37-32	Quick response to customer
0.88		Customer performance
0.87		total

Statistical population, sample and sampling method

Statistical population of study were 140 senior managers (CEO, finance, sales and marketing, production) of Entekhab industrial group and census method has been used because of the small sample size and 116 respondent answered the questionnaire.

The main model study

After testing the measurement models we should test main structural equation model of research. This model is as below in which the Hidden and Non-hidden variables (internal and external) with free parameters of the model are displayed.

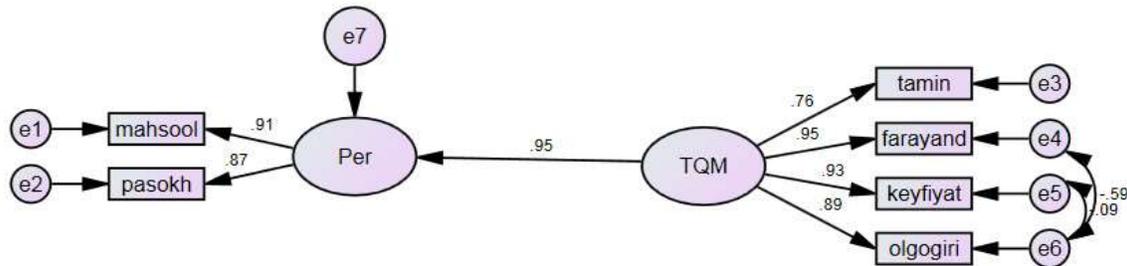


Figure 3- the coefficients of the main study model

Punctuality of relationships between the components of the model and the path coefficients has been shown in the table (2).

Table 2- path coefficients of main study model

result	punctuality P	Critical rate C.R.	Standard error S.E.	Standard coefficient	hypothesis	
confirmed	***	10.176	0.113	0.950	main	Customer performance<---TQM

*** Indicates that the P value is less than 0.001

Research secondary model testing

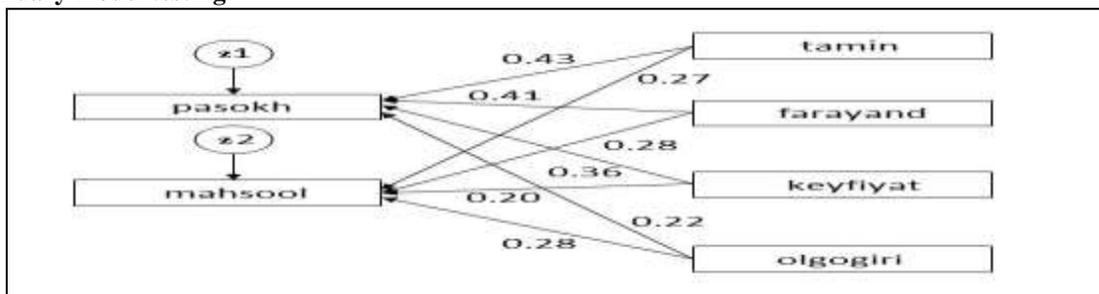


Figure 4- path coefficients of secondary study model

Punctuality of relationships between secondary model components and path coefficients has shown in Table (3).

Table 3- path coefficients of secondary study model

result	punctuality P	Critical rate C.R.	Standard error S.E.	Standard coefficient	Secondary hypothesis	
confirmed	***	3.934	0.132	0.427	H1	Providing product <---suppl
confirmed	0.002	3.072	0.075	0.266	H5	Response to customer<--- ship
confirmed	***	4.790	0.066	0.412	H2	Providing product <---process
confirmed	0.002	3.046	0.086	0.277	H6	Response to customer<---rocess
confirmed	***	4.383	0.077	0.362	H3	Providing product <--- quality
confirmed	0.027	2.211	0.055	0.196	H7	Response to customer <---
confirmed	0.016	2.401	0.037	0.217	H4	Providing product <---ng
confirmed	0.003	2.969	0.090	0.275	H8	Response to customer <---g

*** Indicates that the P value is less than 0.001

The Results of the Research Hypotheses Analysis

Main research hypothesis: TQM has a significant impact on the customer performance in the industrial group of Entekhab.

The results of the study show that Total Quality Management has a significant and positive impact on the customer with the coefficient of 0.950. Therefore it can be concluded that the implementation of TQM in the organization will lead to improved customer performance.

Secondary Research Hypotheses: Supplier relationships have a significant impact on the providing valuable products for customer in the companies of Entekhab industrial group. The results of table show that supplier relationships have a positive and significant impact on the providing valuable products for customer with the coefficient of 0.427.

Benchmarking has a significant impact on the providing valuable products for customer in the companies of Entekhab industrial group. The results of table show that benchmarking has a positive and significant impact on the providing valuable products for customer with the coefficient of 0.217.

Quality measurement has a significant impact on the providing valuable products for customer in the companies of Entekhab industrial group. The results of table show that quality measurement has a positive and significant impact on the providing valuable products for customer with the coefficient of 0.362.

Quality improvement has a significant impact on the providing valuable products for customer in the companies of Entekhab industrial group. The results of table show that quality improvement has a positive and significant impact on the providing valuable products for customer with the coefficient of 0.412.

Supplier relationship has a significant impact on the quick response to customer in the companies of Entekhab industrial group. The results of table show that supplier relationship has a positive and significant impact on the quick response to customer with the coefficient of 0.226.

Benchmarking has a significant impact on the quick response to customer in the companies of Entekhab industrial group. The results of table show that benchmarking has a positive and significant impact on the quick response to customer with the coefficient of 0.275.

Quality measurement has a significant impact on the quick response to customer in the companies of Entekhab industrial group. The results of table show that quality measurement has a positive and significant impact on the quick response to customer with the coefficient of 0.197.

Process improvement has a significant impact on the quick response to customer in the companies of Entekhab industrial group. The results of table show that process improvement has a positive and significant impact on the quick response to customer with the coefficient of 0.227.

Conclusion

Results show that there is significant relationship between TQM and its component including supplier relationships, process improvement, quality measurement, bench marking and customer performance and its component including providing valuable product for customer and quick response to customer.

As noted, this study has important implications for the organization to improve customer performance in future and its results indicate that there is a significant relationship between TQM and customer performance. TQM is philosophy of continuous improvement that can provide scientific tools and techniques to satisfy current and future needs, wants and expectations of educational institution. Today, with the passage of time, TQM has a prominent place in the advanced industrial world and has met with the significant reception and many innovations in continuous improvement have been based on the philosophy of TQM. TQM has prevented from harmful splurge, inappropriate use of resources and the creation of many mistakes in the process, and has provided the necessary confidence in the field of production according to customer demand.

In general it can be said, TQM can also be used as a basis for other improvement approaches. The selection of suitable suppliers to reduce cost and increase competitiveness, benchmarking from successful companies that may lead to the process improvement and company's exceptional performance, and high levels of customer service to achieve competitive advantage and also focus on activities to improve the organization performance are the other variables of TQM which will lead to improved customer performance.

Resources:

- Bandy, N.M.(2003), setting service standards: a structured approach to developing outstanding customer service for the facility manager, journal of facilities management, vol.1, no.4, pp 322-336
- Bazargan,A, Sarmad,Z, Hejazi,E (2006) "Research Methods in the Behavioral Sciences", Tehran, Agah publications.
- Crosby, p. b. (1979). Quality is free: the art of making quality certain. New York : mc graw-hill.
- Dale, Barry G. (1998), "Total quality management: ori-gins and evolution of term", The TQM magazine, Vol.10,No. 5.
- Daft, R.L. (2000), Management, fifth Edition, Harcourt college publisher.
- Faghihi,A (2000) "Total quality management: an empirical aspects, theoretical and practical, knowledge management", twelfth year, No. 44, pp 28-61).
- Jafari,M,Shahriyari, H, Shirazimanesh,M, Fahimi, A (2005) "The strategic and cultural tools of Total Quality Management", Cultural Services Institute of Rasa, Third Edition.
- Kaplan, R. S and Norton (1996), using the balanced scorecard as a strategic management system, harward bussines Reviwe, January-february, 75-.88
- Mehraban,R (2005) "Total quality management" Mashhad, p.38
- Nikzad.M , Tayebi,M (2013) "The impact of total quality management on the customer satisfaction with the aim of achieving sustainable development", the city's economy, No. XIII, pp 100-106.
- Pitt, M & Tucker. M, (2009), Development of a customer performance measurement system for a facilities management, liverpool johnmoores university.