

# THE PRACTICES OF TQM AMONG MS : ISO 9000 CERTIFIED COMPANY

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**Abstract.** TQM is still considered problematic in many organizations due to bad strategy implementation and unsystematic process, insufficient understanding about TQM and the driven factors to its success were not in place. Thus, the objective of this study is to identify the most important factor for the implementation of TQM. 7 factors and 32 measurement items were developed from literature review and a survey was conducted among a sample of ISO 9000 certified companies. Descriptive test and reliability test were adopted in data analysis. The survey instrument was validated as highly reliable. The results found that Process Management is the most important factor among ISO 9000 certified companies. It also reflected that certified firms must develop their people orientation and make continuous improvement to achieve a higher extent in TQM. The result also showed the different perception on importance of factor based on different background of a company. The result's finding is expected to offer new insights into the understanding of TQM and its success factor and as a guideline to assist the companies to implement a successful TQM program.

**Key Words:** ISO 9000 certified firm, Total Quality Management (TQM)

## 1. Introduction

In this era of globalization, with intensive competition, it is very tough for an organization to survive. Customers' needs become increasingly difficult to meet. They demand for faster response, better value for money, products or services, more product varieties, and expect lower prices, reliable delivery, and product integrity.

This phenomenon had awoken many companies to become aware of the need to prioritize quality as the competitive marketing strategy in global market. Total quality management (TQM) is therefore has become a management philosophy and a way of a company's life that helps in managing organizations to improve its overall effectiveness and performance towards achieving world-class status for the past two decades [1, 15]

Successful implementation of TQM brings wide benefits and contributions to a company. The ultimate contributions include cultivating attitude of right first time, achieving zero defects, acquiring effective and efficient business solutions, attaining business excellence, delighting customers and suppliers and many more. [2]. The TQM implementation journey is tough and full of challenges. It requires a full understanding of each activity and involves each individual at every level. It needs a cultural and organizational change to achieve continuing and continual improvement of quality.

A number of studies revealed that a large percentage of companies found their TQM efforts failed to live up to their expectations [3, 4]. According to Hansson and Klefsjo [5] many of the failures of TQM are related to bad implementation strategies and unsystematic processes. Lau and Anderson [6] suggested that too many US companies failed at TQM implementation because these companies implemented "partial" (rather than

total) quality management. TQM programs have failed because the success factors were not in place. [7]. In Malaysia, TQM implementation is still problematic for many organizations. [8]. Many organizations do not fully understand what TQM is all about and the factors that drive to TQM success. Hilma [8] found that the core problem of the TQM implementation in Malaysian automotive suppliers was lack of management leadership and commitment to TQM. Screenivasan, et al. [26] indicated that there were many employees who did not have enough idea in the functioning of TQM and they were also found to be lack of incentives to consistently provide quality goods and services [9]. Because of the wide variation in TQM results, identification of factor in TQM implementation is important in order to develop TQM to its full extent. Therefore, the purpose of this study is to identify the most important factors in implementing Total Quality Management among the ISO 9000 certified companies.

This study aims to contribute to beginner companies that are trying to implement TQM in their business. It also helps companies to know their current status in implementing TQM. With better understanding on these issues, it could be a guideline to assist the companies to implement a successful TQM. A review of literature is presented in the next section. This is followed by methodology. Findings are presented and discussed.

## **2. Literature Review**

### **2.1 TQM and the practice in Malaysia.**

Total quality is a much broader concept that includes not just the result aspects but also the quality of people and the quality of processes. The definition of Total Quality Management has been given by many quality gurus, practitioners and academicians. Dale & Cooper [10] defined TQM as the mutual co-operation of everyone in an organization and associated business processes to produce products and services which meet the needs and expectations of customers. It is both a philosophy and a set of guiding principles for managing an organization, based on a fundamental belief in the need for continuous and company-wide improvement. Successful TQM implementation can only come from radically changing of the culture in the organization and transformation in the organization's processes, strategic priorities, and beliefs among others. [11].

In Malaysia, the 1990s witnessed the intensification of interest in quality management activities in literally every sector of its economy. [12]. However, when compared to the more developed countries such as Japan and US where total quality activities have long been practiced, TQM is a new concept introduced in Malaysia [8].

According to Dr.Zainal & Dr.Zuraidah [13], TQM was more prevalent in larger organizations, especially in the electrical and electronics sectors. Many of the companies implemented quality activities like 5S, problem-solving techniques, and statistical sampling before adopting quality systems. For the SME, the previous researches revealed that there is still infancy of TQM implementation [14, 15, 8].

Various studies have been carried out to identify the factors for a successful TQM program, mainly from three different areas: contribution from quality leaders, formal evaluation model and empirical research. Tamimi [16] developed 8 factors and 32 elements based on Deming's 14 points and these instrument were tested among 178 manufacturing firms and services firms; Conca, et al. [17] and Tari [18] used EFQM model to develop critical TQM factors, 12 constructs were identified. Motwani [11] used prescriptive, conceptual, judgmental and empirical literature to identify critical constructs of TQM, same as Yusof & Quek [15], Yusof & Aspinwall [27], Zhang, et al [1], Ahire, et al [19] and Antony et al [20]

There is no unanimous view of the key factors of TQM [17], no unique model for a good TQM program [18]. Thus the common core of factor among previous study were identified to avoid wrong judgment and perception bias.

### **2.2 ISO 9000 and TQM**

It was believed that the ISO 9000 implementation is stepping-stone [20], logical and practical step [14] towards TQM journey. Therefore most firms will operate ISO 9000 concurrently with another quality activity, usually TQM [21]. According to Quazi and Padibjo [22], ISO 9000 registration is a useful step towards implementing TQM. ISO 9000 requires that all actions and processes be documented. A

documented quality system as part of a TQM strategy can contribute to TQM by managing the organization's processes in a consistent manner [1]. Therefore, quality system like ISO 9000 is not only compatible with TQM, but they support and complement each other.

### **3. methodology**

#### **3.1 Sampling Method and Procedure**

The list of ISO 9000 certified companies were obtained from the CD of Federation of Malaysia Manufacturers (FMM) Directory 2008. From this sampling frame, the total population of ISO 9000 certified companies in Klang is 65. The sampling method utilized in this survey is purposive sampling. The researcher selects this respondent with the reason that ISO 9000 implementation is stepping-stone [20], logical and practical step [14] towards TQM journey.

#### **3.2 Survey Instrument**

Survey was conducted for a period of nine weeks. Within this period, close-end type questionnaire were distributed and collected from the samples via e-mail or facsimile. Quality representative of companies were requested to answer the questions. In order to get better respondent rate, the researcher called each targeted company to ask for permission to send survey questionnaire and follow up calls were made to implore for their help. At the end of the day, 39 questionnaires were returned.

The questionnaire was developed based on previous studies, mainly from the questionnaire that was developed by Hilma [8] and Zhang, et al. [1]. Out of the 18 different factors developed by the researchers, 7 were found to be outstanding :

- **F1: Management Leadership and Commitment**
- **F2: Supplier Quality Management**
- **F3: Process Management**
- **F4: Continuous Improvement**
- **F5: Customer Focus**
- **F6: Education and Training**
- **F7: Employee Participation**

The questionnaire was divided into two sections. The first section is to investigate the general information of the company that participates in this research. The second part of the questionnaire is to determine the importance of each factors that perceived by the company based on 7 factors and 32 variables that identified. Five point likert scale was used to measure the importance of factors.

The data collected was analyzed by using SPSS software. Reliability test was conducted for measuring the internal consistency of instruments. Descriptive statistic test was used to describe background of respondents and find the most important factors. The mean score of companies with different background was also compared. The rank of the factors is based on mean scores which were computed from the total scores of variables that allocated by each company.

### **4. Research findings**

The purpose of this study is to identify the most important factor of TQM that managers had to implement for successful TQM implementation among the ISO 9000 certified firms. The research found that the mean level of importance for all factors are at high level as the mean score obtained was ranged from lowest 3.9231 to highest 4.5192. The most important factor is Process Management (4.5192), this is followed by the second and third highest factors, Management Leadership and Commitment (4.4679) and Customer Focus (4.4462). On the other hand, the two least important factors among ISO 9000 certificated companies are Continuous Improvement and Employee Participation. The result is shown in Table 4.1.

Table 4.1.: Overall result of Factors

Factor	Description	Mean	Rank
F3	Process Management	4.5192	1
F1	Management Leadership and Commitment	4.4679	2
F5	Customer Focus	4.4462	3
F6	Education and Training	4.2692	4
F2	Supplier Quality Management	4.2615	5
F4	Continuous Improvement	4.0103	6
F7	Employee Participation	3.9231	7

This research was expanded to look deeper into perception on importance of factors among companies with different background based on their company's size, nature of business and status of ownership.

**Large versus SME:** Perception of large and SME companies on the importance of each TQM CSF are similar. However, large companies are more customer focus than SME companies because Customer Focus (4.400) is the highest CSF while SME companies are more emphasized on Process Management with the mean of 4.574. Large companies have more capital and they are more capable in managing their customer relationship. They are actively engaged in exchange of information, know-how and feedback with customers. For SME, they must put greater effort in managing their process management in order to produce high quality output so as to be able to compete with large companies.

**Table 4.2: Perception on Importance of Factors among Large and SME Companies**

Factor	Description	Company Sizes	
		Large	SME
F1	Management Leadership and Commitment	4.292	4.546
F2	Supplier Quality Management	4.050	4.356
F3	Process Management	4.396	4.574
F4	Continuous Improvement	3.800	4.104
F5	Customer Focus	4.400	4.467
F6	Education and Training	4.125	4.333
F7	Employee Participation	3.750	4.000

**Manufacturing versus Services:** It was found that manufacturing companies are process focus (4.581) while service companies are customer focus (4.525) when their mean are compared. The rational reason to explain this is the difference in their business nature. Services companies always need to direct contact or face to face to customers. Hence, customer focus is extremely important for those companies. This result also supported by the study of Wen, et al. [28] who found customer focus is significant and contributes to the enhancement of customer satisfaction within Malaysian services companies.

**Table 4.3.: Comparison of Mean Importance Manufacturing versus Service Companies**

Factor	Description	Nature of Business	
		Manufacturing	Services
F1	Management Leadership and Commitment	4.484	4.406
F2	Supplier Quality Management	4.290	4.150
F3	Process Management	4.581	4.281
F4	Continuous Improvement	4.007	4.025
F5	Customer Focus	4.426	4.525
F6	Education and Training	4.250	4.344
F7	Employee Participation	3.968	3.750

**Local, Joint Venture and Fully Foreign:** The highest mean score of CSF is Process Management among joint venture (4.643) and fully foreign companies (4.700). Different from joint venture and fully foreign companies, the most important CSF in local companies is Management Leadership and Commitment

(4.565). This result is similar with Thiagarajan and Zairi [25], also found that Malaysian-based organization perceived this factor as critical and absolutely essential for successful TQM implementation.

Table 4.4: Comparison of Mean Importance Local, Joint Venture and Fully Foreign Companies

Factor	Description	Company Ownership		
		Local	Joint Venture	Fully Foreign
F1	Management Leadership and Commitment	4.565	4.429	4.000
F2	Supplier Quality Management	4.178	4.600	4.240
F3	Process Management	4.454	4.643	4.700
F4	Continuous Improvement	3.948	4.171	4.120
F5	Customer Focus	4.400	4.514	4.600
F6	Education and Training	4.278	4.321	4.150
F7	Employee Participation	3.859	4.057	4.080

In this research, it was found that teamwork is suggested for other critical success factor. Teamwork is important because as compared to employees who work individually, effective teams tend to have higher morale and productivity, and take pride in the job and the company [23]. Future research may study deeper in this factor. The research also revealed that there is company need for the key measurement in order to monitor their performance in TQM implementation. This indicates that this research is essential and worthwhile to be conducted.

## 5. Discussion and Conclusion

The result from this research is comparable with Tari [18]. It was found that Process Management, Customer Focus and Leadership are also the first three highest factors and the lowest factors are Continuous Improvement and Customer Focus. Hilma [8] and Sohail and Teo [24] have also found similarity with the study. Hilma [8] has the highest TQM CSF in Systems and Processes (Process Management), while Sohail and Teo [24] found that management leadership and customers' satisfactions are among the highest TQM critical success factor.

From the results, it could be concluded that certified firms must develop their people orientation and make continuous improvement to achieve a higher extent in Total Quality Management. Perhaps the knowledge found in this research is useful and contributes to TQM research. The result can be a guideline for beginner companies are practicing TQM program. It also could be self-assessments checklist for the existing TQM firm to evaluate their TQM implementation programs and identify problem areas that should be improved. With these, perhaps more companies are able to attain a successful implementation of Total Quality Management.

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