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Reflective Review of Relationship between Total Quality Management and Organizational Performance

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Abstract:

In operation management/strategy research field, Total Quality Management (TQM) has been considered as infrastructural strategy. It has become one of the most recognized models for operational excellence besides Lean Operation, Supply Chain Management, and Technology Management. Both manufacturing and service organizations trend to implement this strategy in order to maintain their competitive advantages. The purpose of this study is to develop the conceptual model of TQM implementation. Authors review updated literature on TQM research organized along two main themes: evolution of TQM considering as a set of practice, and its impacts to organizational performance. Two research questions are proposed in order to re-validate TQM constructs: (a) Is the set of practices associated with TQM valid as a whole? (b) What performance measures should be considered to exhibit an effectiveness of its implementation?

1. Introduction

In a competitive market, the demand for quality is emerging as the single most critical factor for companies to survive in the ever-expanding global market place. Quality is vital in determining the economic success of manufacturing companies [1, 2]. World-class manufacturing companies gain competitive edge and greater market share through extraordinary levels of performance by providing a quality product with a competitive price as required by demanding customers.

The concept of Total Quality Management (TQM) has been developed as the result of intense global competition. Companies with international trade and global

competition have paid considerable attention to TQM philosophies, procedures, tools and techniques. A growing number of companies use TQM practices as strategic foundation for generating a competitive advantage [3] and improving organizational performance [4].

2. Literature Review

The importance of TQM in business organizations has increased significantly over the past 20 years. International total quality management aims at understanding total quality management in global context. The concept of international serves as the motivation for developing a global TQM standard for

evaluating TQM practices within countries [5]. The practice of TQM also affects from the national level to the international level [6], which helps organizations to compete internationally and gain a competitive edge in the global market [7].

2.1 TQM Constructs

TQM constructs have been investigated extensively [8]. To generate distinct generic construct, first defined a list of others constructs proposed in a large set of articles. Then, each construct was analyzed whether it was different or similar to the constructs previously analyzed. This process resulted with the eight following constructs: quality leadership, customer focus and satisfaction, quality information and analysis, human resource development, strategic planning management, quality results, and quality assurance. Table 2.1 presents, for each generic construct, a list of similar practices proposed by other authors.

Table 2.1: A constructs proposed by literature

Constructs	Related constructs
Quality leadership (QL)	The role of top management leadership [8], top management support [9], top management commitment [10], management leadership [11], leadership[12]
Customer focus and satisfaction (CFS)	The role of quality department [8], customer involvement [9], customer focus [10], customer orientation [5],
Quality information and analysis (QIA)	Quality data and reporting [8], quality information [9], quality information and availability [10], information and analysis [12]
Human resource development (HRD)	Workforce management [9], employee training [10], education and training [3], support for human resource development [12], human resource management [13]
Strategic planning management (SPM)	Process design management [8], process management [9], design quality management [10], strategic planning process of quality management [13]
Supplier quality management (SQM)	Supplier involvement [9], supplier quality management [10], supplier quality [5,13], supplier management[12]

Quality results (QR)	Product quality [10], internal quality results [5], quality results [13], organizational effectiveness [12]
Quality assurance (QA)	Supplier quality assurance [11], quality assurance of products and service [5]

The list above illustrates the foundation of this study constructs, and has strongly inspired the definition of each construct and will be analyzed further.

2.2 Performance Measures

A review of past empirical studies on organizational performance also indicates that there are variations in measuring performance in organizations [14]. Literature has identified different variables used for measuring organizational performance as shown in Table II. Projogo and Sohal [15] measured organizational performance from quality performance (e.g. reliability, performance, durability and conformance to specification) and innovation performance (e.g. product and process innovation). In this study, organizational performance will be measured in two categories, which is satisfaction level, and business result as suggested by Lin *et al.* [16]. Satisfaction level defined in organizational performance comprise of two items: employee satisfaction, and customer satisfaction. While business results defined in organizational performance comprise four items: productivity, number of successful new product, cost performance, and profitability.

Table 2.2: Performance Measures Proposed by Literature

Author(s)	Measure	Variables
Lin <i>et al.</i> [16]	Organizational performance	<ul style="list-style-type: none"> ● Satisfaction level ● Business result
Projogo and Sohal [15]	Organizational performance	<ul style="list-style-type: none"> ● Quality performance ● Innovation performance
Jun <i>et al.</i> [17]	Human resource performance measure	<ul style="list-style-type: none"> ● Employee satisfaction ● Employee loyalty
Sila [12]	Performance measure	<ul style="list-style-type: none"> ● Organizational effectiveness

		<ul style="list-style-type: none"> • Financial results • Market results
Lakhal <i>et al.</i> [45]	Organizational performance	<ul style="list-style-type: none"> • Financial performance • Operational performance • Product quality

3. Proposed Conceptual Model in Considering TQM as the Set of Practices

Based on comprehensive review of previous study, a conceptual model has been proposed to model the relationship between TQM practices and organizational performance as presented in Fig. 3.1. This proposed model has adapted the conceptual model proposed by Lin *et al.* [16], as their successful model in conducting comparison between two countries. However, some amendments especially on TQM practices constructs have been made.

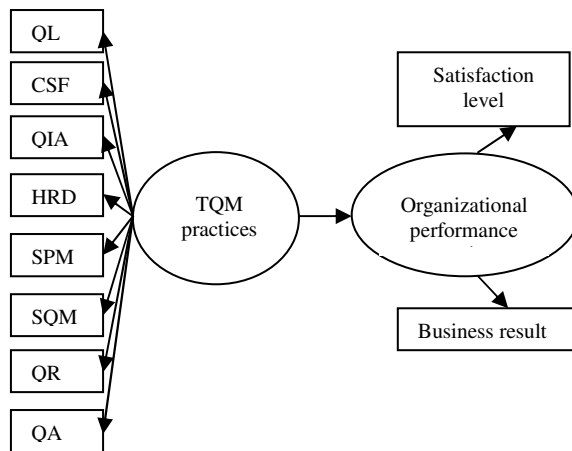


Fig. 3.1: A proposed conceptual of TQM practices

Two performance variables will be used to measure organizational performance, which are the satisfaction level and business result. For the satisfaction level component items, it includes employee satisfaction, customer satisfaction and supplier satisfaction. A finding from Yoo *et al.* [18] indicates that higher levels of employee

empowerment lead to higher level of organizational performance. A case study conducted by McAdam and Bannister [19] suggested that the implementation of TQM in a company contributed to a positive working environment and resulted in reductions in employee absenteeism. Jun *et al.* [17], had found that employee satisfaction have a positive influence on organizational performance.

TQM practices have been shown to enhance organizational performance through customer satisfaction. Edvardsson *et al.* [20] reported the growing body of research on organization performance between products and services on external customer practices. By gaining a better understanding of customer needs and the use of this knowledge to produce a better product, a customer satisfaction has a direct impact on organizational performance [21]. However, Johnson and Nilsson [22] argued that concerning customer satisfaction, no direct customer measures were available. They suggest it is important to incorporate measures from different sources.

The relationship between buyer and supplier is an important factor in organizational performance. The need to improve supplier’s quality and delivery performance while at the same time, reducing the costs of supplied materials and parts has motivated buyers to engage in supplier development activities which is has a direct impact on organizational performance [23]. Empirical studies demonstrate that evaluating supplier performance and providing feedback, result in improved buyer supplier performance [24] and enhanced product/service quality of the buying firm [25].

For the business results component items for organizational effectiveness, which include productivity, number of successful new product, cost performance and profitability. TQM practices also help to improve in reducing scrap, rework and stable the production process. These in turn minimize the production cost and increase productivity [26]. Through continuous improvement, not only errors and defects can be prevented but also product cycle's times can be reduced, thereby improving productivity and organizational performance [27].

According to Buzzel and Gale [28], financial performance or profitability is an important measure of TQM outcomes. This was support with Deming's [29] argument that quality improvement leads to elimination of waste, reduction of cost and will increase profitability. Recent study by Hoang *et al.* [30], noted that TQM has a positive impact on the firm's innovation performance. These findings have important implications at improving company's business performance.

4. Research Hypotheses

Several studies show a relationship between TQM in each of its forms and organizational performance [12,15,16,17]. It has been argued that implementation of TQM practices will enhance business performance [12,16,19,43]. In the Malcolm Baldrige National Quality criteria, it has been shown that improving quality management practices leads to improvement in business result [31]. While, Kaynak [32] reported that TQM lead to quality performance and has been significantly related to financial and market performance. However, Sousa

and Voss [33] in their study came out with two sets of results. First, QM practices have a significant and strong impact on quality (internal process and product) and operational performance. Second, the indirect impact of QM practices on business performance via mediating effect of quality and operational performance, although significant, is weaker, and still leaves a reasonable amount of business performance variance unexplained. Therefore, the following hypothesis will be tested.

H₁: The TQM implementation as a set of practices has a direct, positive effect and leads to better organizational performance.

To understand the relationship of each TQM practices on organizational performance in Malaysian and Thailand automotive industries, the following hypotheses will be used and tested. According to the culture free approach in cross-country comparative study, differences in cultural practices do not affect the practice of TQM in organizations. Thus, these hypotheses have been developed based on the proposed conceptual model and previous research mainly from Parast *et al.* [13].

4.1 Quality leadership

Previous research in TQM practices emphasizes the critical role of leadership in driving overall TQM implementation in the organizations [9]. Raghunathan *et al.* [34] noted that leaders play an important role in how TQM practices are projected in a consistent manner where it affects organizational performance and profitability. Accordingly, it is proposed that:

H₂: Quality leadership for TQM practices is positively correlated with organizational performance.

4.2 Customer focus and satisfaction

Organization must be knowledgeable in customer requirement and responsive customer needs and measure customer satisfaction through TQM implementation [34]. Nilsson *et al.* [35] indicate that customer satisfactions have a greater impact on business results through quality practices. This was support with Lee *et al.* [36] argument that customer satisfaction positively related to process improvement. Therefore:

H₃: Customer focus and satisfaction for TQM practices is positively correlated with organizational performance.

4.3 Quality information and analysis

The study conducted by Woon [37] among Singaporean companies found that the service organizations generally showed a lower level of TQM implementation than the manufacturing organizations in the elements quality information and analysis. Projogo [38] in his study examines that the significant impact of quality information and analysis of TQM on quality performance. This also support by Lee *et al.* [36] showed that from empirical study quality information and analysis have a significant effect on process management. Therefore:

H₄: Quality information and analysis for TQM practices is positively correlated with organizational performance.

4.4 Human resource development

Deros *et al.* [39] noted that human resource development is one of the

critical success factors in benchmarking practice, which will drive in improving business and management process. Sanchez-Rodriguez *et al.* [40] noted that people management were significantly and positively correlated with purchasing operational performance (POP). Accordingly:

H₅: Human resource development for TQM practices is positively correlated with organizational performance.

4.5 Strategic planning management

Curkovic *et al.* [2] in his study show that there is indeed a strong relationship between strategic planning in TQM with environmentally responsible manufacturing. While Feng *et al.* [41] in his comparative study found that there is significant impact on strategic planning in TQM practice with organizational performance, however the impact is the same for both Singaporean and Australian firms. Therefore:

H₆: Strategic planning management for TQM practices is positively correlated with organizational performance.

4.6 Supplier quality management

Effective supplier quality management is facilitated by a corporative relationship with suppliers. Lee [42] addressed that by adoption supplier management in TQM programs can help Chinese small manufacturers to achieve competitive advantages in both domestic and international markets. This argument also supported by Temtine and Solomon [43] study, found that SMEs should be assisted in the use of systematic supplier management programs as this will consequently lead to the consideration of TQM as a means

of achieving competitive advantage in long run. Accordingly:

H₇: Supplier quality management for TQM practices is positively correlated with organizational performance.

4.7 Quality results

In the MBNQA, it has been shown that improving internal quality management practices lead to improvement in internal and external quality result [31]. Adam *et al.* [44] noted that quality improvement positively correlates with financial performance, which is significantly related to business performance. Therefore:

H₈: A quality result for TQM practices is positively correlated with organizational performance.

4.8 Quality assurance

Lin *et al* [16] noted that quality assurance is significantly related with supplier selection strategy where it could improve the management supply chain networks performance. Lakhali *et al.* [45] reported that there is a significant relationship between use of statistical quality techniques and organizational performance. Therefore:

H₉: Quality assurance for TQM practices is positively correlated with organizational performance.

5. Conclusion and Future Research

Many studies have been performed to identify critical success factors for successful implementation TQM practices. However, no previous study had tried to investigate the relationships between TQM practices and organizational performance, especially amongst ASEAN countries.

Comparative study between Malaysia and Thailand automotive industry will be carried out by using the proposed conceptual model.

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