

Investigating the Impact of TQM on Financial, Quality and Innovation Performance

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Abstract

Total Quality Management (TQM) is a customer management philosophy, this strategy centered on the quality. It is also a modern management concept that successful organizations worldwide have adopted. TQM is an application of a number of activities with perfect synergy. These activities include focus on the process, the use of quantitative methods, continuous process improvement, supplier partnership, customer focus, leadership, total employee involvement/team work, training.

Companies in the manufacturing sector carefully and systematically monitor their financial, quality and innovation performances to stand competitive in the marketplace. Our paper aims to investigate the impact of the TQM on financial, quality and innovation performances. It will present a research framework that can be used to investigate the impact of TQM on these entities. This is done by developing a group of arguments and using the literature review that highlights both positive and negative relationship.

Keywords: TQM; Financial performance; Quality Performance; Innovation performance

1. Introduction

TQM is a management paradigm that can be used for the long-term success of a corporation because it focuses on meeting and exceeding ever-changing customer expectations [1] and continuous improvement of the quality and productivity [2]. Like any other processes and systems existing in an organization, TQM is composed of various components; primary and basic elements of them include but not limited to: top managers' commitment, focusing on customer, relationship with suppliers, participation of all staff, staff training, staff empowerment, continuous improvement tools, improving design and process, internal cooperation and open organization.

Financial Performance is the financial ability of an organization in productivity and making profit [3]. Financial results are measured using variables such as stock returns, operating income, sales, and costs; these measures indicate whether the company's strategy, implementation, and execution are contributing to bottom-line improvement. Typical financial goals have to do with profitability.

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Kumar et al. [4] explained the importance of quality performance for company's overall performance. In an attempt to improve quality, numerous approaches to management of quality and continuous improvement have been pursued, most notably and a recommended approach is the concept of TQM.

Innovation attracts more and more attention and is regarded valuable than ever before. McAdam and Armstrong [5] summarized several definitions and pointed out that innovation relates to change and creativity. In order to gain the advantages of first mover, many leading companies are not only good change followers but also good change initiators. Thus, the definition of innovation should involve both responses to change and initiation of change. The relationship between the definition of innovation and innovation performance is how fast, how well ideas are implemented and how much value is created.

Many studies claimed substantial benefits of implementing TQM in terms of financial results, quality performance and innovativeness, which subsequently leads to customer satisfaction ([4], [6]-[9]). This paper discusses the relationship between TQM and its relationship with financial, innovation and quality performances and presents the research framework that extends the work on findings developed by Prajogo and Sohal [10]. This discussion is important for three reasons. First, previous studies have been performed in 1995-2006, thus the gap is remains on whether there is a relationship with mentioned performances and TQM because of the inconsistency in the literature. Second, the study aims to clarify best TQM practices that are more influential on financial, innovation or quality outcomes. Third, within the existing literature, no such a conclusion recommended best TQM practices that lead to achieve financial, quality and innovation performances together in organizations.

2. Literature Review

Many empirical studies have examined relationships between managerial practices, dimensions of quality, and business performance and only few of them investigated the link between TQM and financial performance. Hendricks and Singhal [11] explored the relationship between quality and financial performance by comparing the financial performance (operating income, sales, total assets, return on sales, and return on assets) of firms that have won quality awards, against a control group of non-winners. Their results showed that quality award winners outperformed the control firms on a series of operating-income based measures. Similarly, Easton and Jarrell [12] examined the impact of TQM on the performance of 108 firms that began TQM implementation between 1981 and 1991. Their results showed that the improvement was consistently stronger for firms with more advanced TQM systems. Researchers that directly study the relationship between TQM, financial performance and confirm the positive relationship ([8], [12]-[18]).

Several studies have shown the link between quality management practices and improved performance, using both factual data ([11], [12] and [18]) and perceptual data ([19]-[22]). Although the effects of TQM on various performance types are inconsistent, quality performance generally indicated strong and positive relations [23]. Supporters of TQM suggest that implement it well generate higher-quality products. According to Deming [24], quality is the principal determinant of success in competitive environments. Quality management is increasingly high-profile activities for all kinds of firms and is associated with gaining a competitive advantage [25].

Prajogo and Sohal [10] in their study developed some areas where TQM may have influence on both quality and innovation performance. They built their argument around three TQM principles namely customer focus, continuous improvement, and people management. They found TQM has positive influence on innovation when targeting customer satisfaction. They argue that the positive impact will force organizations to be innovative since they have to seek a better way to meet and exceed customers' requirements. However, Singh and Smith [26] in their research on Australian manufacturing firms concluded that there is no positive relationship in the results of the analysis. Although they asserted that, the relationship between TQM and innovation may exist more in more complexes as they stated the inefficacy of the structural model. Hoang, Igel, and Laosirihongthong [27] studied the relationship between TQM and innovation in service and manufacturing companies in Vietnam. The results showed that TQM has strong positive relationship with the level of newness as well as with of new products or service developed. Their findings showed that TQM has a significant and positive impact on the degree of novelty, and on the number of new services and products exploited and presented to the market. According to the literature review, relationship between TQM and financial, quality and innovation outcomes are still not clear and the multidimensional view on the impact of TQM on organizational performance is interesting to

research further, worthwhile and needs further investigation. Extended research framework can be used to conduct an empirical study, which results may help to clarify the nature of this relationship.

3. Problem Statement

TQM is widely used in many companies as a method to improve the quality in all functions at all levels of the organization. However, there has been little recognition of TQM and its impact on organizational performances and only a few attempts to empirically establish the link between TQM practices and organizational performance. The general view of the studies on the relationship between TQM and financial, quality and innovation performances is still contradictory. It is important to investigate the use of business initiatives like TQM and its association with improvement in financial, quality and innovation fields. Knowledge of the efficacy and synergy of business initiatives is of significant interest to three communities:

- 1) The practitioner community using, promoting, instructing in the use of or contemplating the implementation of initiatives,
- 2) Researchers contributing to the substantial theoretical and limited empirical literature regarding these initiatives, and
- 3) Educators who communicate the commonly believed benefits and instruct in the use of initiatives.

The main purpose of this research is to cross-validate the multidimensional view of TQM in determining financial, quality and innovation outcomes in organizations and to explore the relationship between the performances and best TQM practices further. With this research, a better understanding of the general relationship between TQM, outcomes and the impact of each TQM practice on organization financial, quality and innovation ability is expected. Our research interest also falls on the Malaysia manufacturing companies and its differences with TQM implementation in other countries.

4. Proposed Research Framework

Our research framework is an extension of the framework proposed by Prajogo and Sohal [10], and it is portrayed in Figure 1. We have extended the investigation to include the impact of TQM practices on the financial performance of the firm. In the simplest explanation, organizations must formulate a unique strategy that enables the organization to compete in the market place. As a result, organizations must carefully examine the business environment and the organization culture. Once these two elements that significantly affect the strategy formulation are determined, organization often formulates the correct strategy that enables the organization to accurately use its resources for competition purposes. Of course, the failure or success of the formulated strategy depends on the overall performance of the organization in terms of the tools used for the competition. In our view, most of the organization contests using quality, financial and innovation outcomes. This leads to the fact that our research framework would investigate the impact of practicing TQM on these three tools, which are used for competition purposes. However, as the literature considers 10 elements as dimensions of TQM, the authors are planning to consider the following dimensions - top managers' commitment, focusing on customer, relationship with suppliers, staff empowerment, continuous improvement tools, improving design and process and open organization and how they affect quality performance, financial performance and innovation performance.

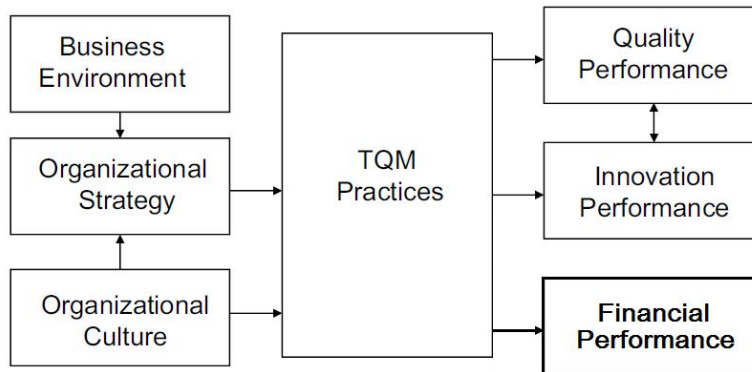


Figure 1 Prajogo and Sohal [10] proposed Research framework

5. Development of the arguments

There are generally four groups of financial ratios by which the financial performance of organization can be studied. These four groups include liquidity ratios, activity ratios, debts ratios and profitability ratios. When studying the impact of TQM on financial performance one of the main questions to be answered is what the elements of TQM influencing these ratios are. Deming [24] was the first who defended the idea of decreasing the number of suppliers and creating long-term relationship with them [28]. Researches indicate that organizations which select their suppliers according to non- liquidity and non- financial criteria and supervise them, gain remarkable improvement in their financial and operational activities [29]. Therefore, relationship with suppliers is the practice that should be implemented first. TQM includes concepts and activities in many fields, thus it is obvious that staff training should be provided as they get formal and specified information about concepts and tools of comprehensive quality in order to act perfectly. This can improve their skills that are useful and valuable both for themselves and for the employers [30, 31]. The three primary concepts of TQM — the cost of quality, total customer satisfaction and organizational learning — also suggest that the benefits of TQM will be moderated by firm characteristics [18]. For example, the cost of quality concept predicts that as conformance quality increases the total cost of quality decreases. Obviously, the higher the initial conformance quality, the smaller the resulting benefit from improvements. Thus, one might expect firms with already tight process controls to see lower benefits from TQM. The concept of total customer satisfaction predicts that higher customer satisfaction should lead to higher retention rates, increased market share, and higher profitability. The concept of organizational learning involves teaching an organization to use the scientific method, to create and utilize specific knowledge, and to change its performance measurement systems. The ability to implement customer responsiveness successfully and organizational learning is likely to vary by firm characteristics.

In order to measure quality performance companies can implement other elements of TQM such as continuous improvement tools: these are specific tools for measurement and controlling deviations in the production process, which manage and control design and production systems to keep and improve the quality in the organization. Improving design and process includes designing and controlling methods of performance, maintenance planning, Zero Defect; and improving the process by analyzing the problem and controlling designing process [32]. Internal cooperation and open organization attribute can improve quality culture by emphasizing on cooperative behavior among members of the organization and encouraging sharing information and assisting partners to complete duties and solving problems. Leonard and Sasser [33] found out that the most effective quality programs are performed when organizations overcome traditional limitations.

Process management is one of the main elements of TQM that also improves the quality of the product in the production stage [34]. The empirical studies show that process management directly and positively affect's product quality. In addition, management leadership contributes to quality performance through accepting quality culture to employees. The

other TQM activity, which has significantly positive relationship with quality performance, is a factual approach to decision making. Many scholars [35, 36] have found that information and quality data analysis is significantly and positively related to quality performance [37]. In contrast, the relationship between continuous improvement and quality performance is not significantly [38].

Prajogo and Sohal [10] developed some areas where TQM may have influence on innovation performance. They built their argument around three TQM principles and found it has positive influence on innovation when targeting customer satisfaction. They argue that the positive impact will force organizations to be innovative since they have to seek a better way to meet and exceed customers' requirements. Other studies also build arguments about the positive relationship between TQM and innovation performance focus on the customer orientation, management leadership and continuous improvement, which are critical to innovation success. Miengo et al [25] classified TQM elements into two large groups and demonstrated the relationship between organic elements of TQM (such as management leadership) and innovation. Therefore, leadership (the organic element of TQM) encourages employees to suggest innovative ideas for solving problems or developing new products. In addition, continuous improvement is also critical to the success of innovation through encouraging the change and creative thinking in organizing works [25]. Sadıkoğlu and Zehir [34] found that all elements of TQM are significantly and positively associated with innovation performance. The empirical study which was done by Hung et al. al. [40] also confirms the positive relationship between TQM and innovation performance in his study.

6. Conclusion

The proposed study hopes to contribute to identification, which practices of TQM should be adapted by company in order achieve the financial, quality and innovation outcomes. Studies have shown that TQM shows a significant and positive predicting power to organizational performance but limitations of researches exist. Results are mixed and contradictory and there is a necessity to identify and explore linkages between specific and defined TQM practices and with financial, quality and innovation performances.

In addition, the results of this study not only will benefit Malaysian companies in implementing TQM practices effectively but also will serve as a guide for other scholars to perform the study in that area. Finally, recommendations and the improvement solution will be discussed in detail in order to produce a useful reference and guidance to the manufacturing companies aiming to achieve organizational performance. The research results can be a main source to improve the existing conceptual model and can lead to overall better performance in the companies as the result of implementing required practices of TQM.

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