

The Mediating Effect of Kaizen between Total Quality Management (TQM) and Business Performance

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Abstract. Every customer preference is different but yet important. The global market is shifting rapidly, organizations are needed to continuously identify new opportunity to obtain competitive advantages. Literature suggested that manufacturing companies are needed to differentiate themselves through emphasize on quality and continuous improvement in product and services as a crucial part to secure and success in the future. The Total Quality Management (TQM) practices has developed a strong bearing on growth and competitiveness in market. Therefore, a proper continuous improvement (Kaizen) practice is needed to eliminate waste and value added in production to remain competitiveness and retained the potential customer. However, based on the previous study it had indicated an inconsistent result between TQM and BP. Besides that, researcher also less emphasized on mediator in previous work. Therefore, the purpose of this paper is to recommend the relationship between TQM and business performance with a mediator's effect of Kaizen. This proposed model attempt to create knowledge to both academician and company players to acquire a better understanding among the TQM and Kaizen practices. Consequently, the Structural Equation Modelling (SEM) techniques is applying to identify and evaluate the relationship among TQM, Kaizen, and business performance in developing a new TQM model.

1. Introduction

The globalized market is changed rapidly by putting new expectation or demand on organizations. In order for an organization to stay competitive, firms require to invent itself in their products' quality in order to obtain business excellence. Therefore, Total Quality Management (TQM) plays a vital role in the contemporary management development.

However, there are lacked of exploring the mediator in the research. Successful TQM could be achieved when a company is focusing in continuous improvement as one of the fundamental dimension [1, 2, 3]. One of the best known practices of continuous improvement which promotes creative thinking is Kaizen. Customers are usually concerned on the product quality, cost and delivery time. Companies are needed to introduce a quality system that increase and improve both productivity and quality continuously [4]. Hence, there are needs of mediator to promote the best methods to improve the products' quality that will lead to better competitive advantage in the marketplace [5]. Furthermore, this research attempts to insights the relationship between TQM and business performance by determining the effects of Kaizen as mediator. To determine the proposed mediator



effect, a Structural Equation Modelling (SEM) techniques is used to analyze the collected data from Malaysia's E&E industries.

2. Literature Review

2.1. Total Quality Management

The increased levels of quality itself unable to fulfil the customer requirements [6]. The factor of complementary customer needs, is through costs reduction. Therefore, the way to increase quality and reduce cost is to implement TQM practices [7]. Total Quality Management is generally refers to the business process and management practices [8]. These practices are concerning to improve the effectiveness and efficiency of organizational, and responsible to achieve customer needs through quality product & services [9]. Furthermore, TQM practices will also involve with employees in all levels in continuous process improvement activity by using top down and bottom up approach [10]. Especially, during the prior quality implementation stage, some of the workers experienced anxiety and lack of confidence to learn new subject [11]. Management has the responsibility to put the effort in skill development in order to motivate employees to involve in activities improvement through rewarding system [12]. Therefore, organization is necessity to shift from traditional one-way communication to two-way communication to improve the relationship between senior management and low level employees [13].

A part from that, there are several term in TQM including continuous enlightening process, understand customer expectation, minimize rework, encouraging employee's involvement, redesign procedure, build a reliable relationship with suppliers, measure the outcomes and direct to benchmarking. These guidelines are widely used to implement TQM by most of the organization [14]. These standard models were also a benchmark to assist business to improve TQM implementation and assessment of the business performance [15]. Thus, organizations are able to make numerous advantages such as developed desire outcomes, cost minimization, increase the employees and customers satisfaction and increasing the financial performance [16]. Somehow, TQM practices are more costly than Kaizen [10]. However, TQM implementation involving complex process. The function of TQM practices is an interdependent system, are needed the combination with others to generate competitive advantage [9]. A supportive environment for TQM is essential such as supportive management, structure and culture to move toward the competitiveness [17].

2.2. Kaizen

In 1980s, the Japanese industry had significant growth since their adoption of kaizen as their management strategies. Kaizen concept had been marked as the key elements for Japanese industry to compete successfully [3]. Generally, Kaizen origin is from two Japanese word means, change for better or gradual or continuous improvement [13, 18]. Kaizen was introduced as a creative and new operating strategy to enhance twenty-first century companies' competitiveness [19]. The key objective of Kaizen is to associate with work culture to obtain a never-ending improvement in both quality and productivity efficiency [20]. As a result, Kaizen is one of the important practices in addition to the culture of Japanese [18].

Besides that, Kaizen practices mainly focus on the improvement at no or little expense and without expensive equipment or sophisticated techniques [18]. The initiate improvement is from the belief that every firm has the equivalent opportunity to improve and change [21]. People act as the "engine" for continuous improvement. He encourages that employees participation can generate more idea and recommendation for small improvement on a regular basic duties [22]. This is due to Kaizen struggle for betterment and focus on continuous improvement through our personal life and daily duties [10]. Therefore, Kaizen practices require the participation of all employees to identify the inefficiencies at all level in the firms, thus, to take appropriate corrective action for continuous improvement [21].

Furthermore, Kaizen does not emphasize on intensive and large capital improvement but it focused on the investment that could creatively solve the problems [21]. Kaizen practices can assist firms to minimize worker motion, cost, defect and improve operator skills by developing a working culture that encourages workers to aware the key goals of business and the process of Kaizen required to mapped out and evaluate it. Firms need to ensure the product and services is provided at economic value to their customer [20]. On-going continual improvement, adds up to a major benefit. Therefore, the benefit of Kaizen can be observed and result in long term improvement [21].

3. Methodology

This paper reviews the range of extensive literature that related to TQM. The used of database references were based on ProQuest, Emerald, Science Direct, Scopus, Springer, Taylor & Francis, Elsevier, IEEE and Google Scholar. The keywords were the practices or implementation of TQM and Kaizen. Some others related papers were also used to review the references listed in literature. The process of review is study and identify the research design in TQM model.

4. Research Hypotheses

4.1. *The Relationship between TQM and Business Performance*

Some of the researcher found that TQM implementation significant related to business performance [23, 24, 25]. From time to time, global businesses are interested with the TQM implementation due to its practical and universal technique that can be implemented across the countries, industries and firms [26]. Researchers support the implementation of TQM can aid to improve the organizational performance as well as the competitive advantage [27]. However, some of the researchers argued that the implementation of TQM is partially significant to business performance [9, 28, 29]. Some of the companies without supportive environment (such quality culture, appropriate leadership and supportive infrastructure) [17]. Therefore, TQM are required implementation of new business management and working culture that are involving the participation of all employees and resources allocation of the organization [30]. Besides that, there are few empirical evidences regarding to the companies in some developing countries were started to implement the TQM practice [31]. Thus, there are needs to determine the relationship between TQM and business performance. Based on the discussion, therefore hypothesis is suggested at below:-

H₁: TQM practices is positively correlated with business performance

4.2. *The Relationship between TQM and Kaizen*

Based on the previous scholars, TQM is significantly correlated with Kaizen [3, 10]. Based on Deming's 14 points regard TQM, he had mentioned the importance of constant improvement that required continuous improvement of methodology such as Kaizen. These features of TQM is to focus on customer satisfaction by improving quality, services, process and working culture [10]. In order to ensure workers are returning to their regular task and improving the process quality within their areas. In a meantime, Kaizen is focus on small increment continuous improvement by improving the quality, process and organization performance. Kaizen also known as continuous improvement that acts as essential element in TQM practice [32]. As a result, TQM is focused on building up quality organization and Kaizen as a methodology that focus on existing processes improvement [32]. Consequently, TQM implementation is a way of continuous improvement [33]. This principle contributed to continuous improvement and waste reduction in order to achieve customers' satisfaction [34]. An organization therefore required a senior management to promote continuous improvement and provide training to the employees [23]. Therefore, the challenges of Kaizen is to assist workers to internalize their work along with creativity and focus on institutionalizing the process of productivity [20]. However, many studies found inconsistent and different outcome concerning the linkage between TQM and business performance [15, 31, 33, 35, 36, 37, 38]. There are no typical practices to identify

the broken process and put incentive to continuously improve it. Based on the discussion, therefore hypothesis is suggested at below:-

H_{2a}: TQM practices is positively correlated with Kaizen

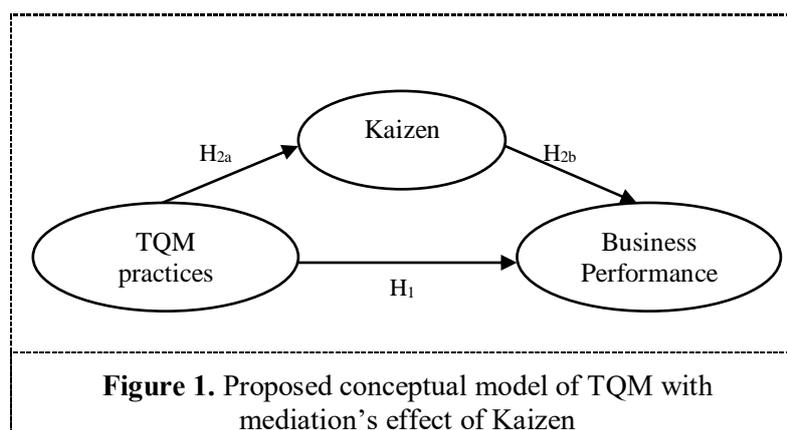
4.3. The Relationship between Kaizen and Business Performance

Kaizen is significantly correlated with the business performance [13, 18, 20, 39]. Kaizen also known as continuous improvement in term of quality, cost and performance [39]. The style and nature of Kaizen would be different in working environment [40]. A better environment can be achieved through continuous improvement in communication. Therefore, this can lead to enhancement of performance in Kaizen activities [40]. Besides that, Kaizen approaches is a valuable tool that could increase productivity, thus, to obtain competitive advantage and to improve the business performance in global market [41]. The benefits of implementing Kaizen practices is to improve areas such as increase workers performance (such motivate employee and encourage employees involved in continuous improvement, and empowerment), improve business performance (such reduce productive threshold, delivery on time, waste, breakdowns, setup time, service and product cost) and improve workers' working life quality to ensure all in standardization and discipline manner [21, 42]. Thus, to survive in the needs of contemporary societal. Despite the developing or developed countries, the strategy for improvement activities such as Kaizen and quality programs can be more successful in a larger firm compared to smaller firms [43]. In order to gain competitive advantages, firms are needed to continuously evaluate and question their capabilities and competency and how to generate more value within their firm [40]. Based on the discussion, therefore hypothesis is suggested at below:-

H_{2b}: Kaizen practices is positively correlated with business performance

5. Development of Conceptual Framework

The research conceptual model is present in Figure 1. The model has been developed based on literature review on Kaizen between TQM and Business performance. Kaizen as a supporting practices for TQM associated to business performance. A structural equation modelling (SEM) techniques are employed to examine the relationships between various model latent.



6. Conclusion

The purpose of this model is to determine how Malaysia's E&E industry gain their competitive advantages through mediator effect of Kaizen between TQM and BP. Based on previous study, the relationship resulted between TQM and BP indicated inconsistent. Therefore, there are needs to identify the mediator for the relationship between TQM and BP. Thus, the main objective in this study is to integrate and identify Kaizen as a mediator between TQM and business performance as a conceptual framework. There are three hypotheses regarding the relations among the variables that have been specified. The conceptual framework has been proposed for future work to provide researchers an insight of the importance in TQM-Kaizen and to promote a competitive growth of business in competitive market in the future.

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