



(REVIEW ARTICLE)



Literature Review: Implementation of Total Quality Management (TQM) in the organization

Faradisa Ayu Rahmatika *, Arfan Bakhtiar and Purnawan Adi Wicaksono

Department of Management and Industrial Engineering, Faculty of Engineering, Diponegoro University, Semarang, Indonesia.

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Abstract

In a competitive industrial environment, companies need to improve the quality of their products and services. One approach that can be taken to improve product and service quality is by implementing Total Quality Management (TQM). TQM has several practices. TQM practices commonly implemented by companies are leadership, customer focus, improvement and development, and also employee satisfaction. TQM will influence company performance, both in terms of financial performance, employee performance, innovation performance, operational performance and other performances. The aim of this research is to review the literature regarding TQM and performance of organization in various countries and various industrial sectors. The results of a review of 16 literatures mostly show that TQM has a positive relationship with company performance. However, not all TQM practices have a significant influence. Other factors such as company size and company profits also do not show a significant influence on company performance.

Keywords: Industry; Performance; Total Quality Management; Quality

1. Introduction

Every company in a competitive and dynamic business environment must ensure high quality products and services to maintain competitive advantage and meet customer expectations. In the manufacturing industry, maintaining and developing product quality is one of the most important aspects in achieving long-term success. Product quality reflects the level of excellence and confidence a company has in meeting customer expectations and needs [17].

Quality is one of the main competitive strategies used to improve company performance in the global market. Therefore, to increase competitiveness, it is important for companies to focus on the quality of the products and services provided. Business competition causes manufacturing companies to continue to develop quality and quality standards. A method commonly used by many manufacturing companies throughout the world is Total Quality Management [7].

Total Quality Management (TQM) is a management approach that focuses on improving quality and productivity through the involvement of all company members in efforts to achieve product, service and process excellence. TQM is a management philosophy that was introduced at the beginning of the 20th century and has gradually developed into one of the most recognized and adopted management approaches in various industrial sectors throughout the world. Companies that adopt the TQM philosophy are able to generate substantial benefits such as high quality products, satisfied customers, reduced operational costs, improved performance in terms of financial measures, quality and innovation and even increased employee satisfaction [4]

* Corresponding author: Faradisa Ayu Rahmatika

In the development of TQM, it has been proven to be able to have a positive impact on company performance, especially those that are ISO certified. Several studies that have been carried out provide recommendations for integrating TQM and ISO approaches to ensure high company performance [9].

TQM (Total Quality Management) includes many variables which are used to test and improve company performance. Variations of TQM models are always developing, but research conducted by Bytyçi [3] shows that organizational leadership and supplier management have the greatest impact on the performance of manufacturing companies in Kosovo [3]. This is supported by research by Singh [16] which proves that TQM with organizational dimensions, human resource management, customer relationships, strategic planning and development, and supplier leadership management has a positive relationship with the performance of manufacturing and service industry companies in India [16].

Based on analysis from previous research, the application of TQM in manufacturing companies that have been ISO certified has been proven to have a positive influence on company performance, namely organizational, human resource management, customer relationships, strategic planning development, and leadership supplier management. The aim of this research is to conduct a literature review regarding the impact of Total Quality Management (TQM) in various organizations. This research examines the literature on TQM and company performance by identifying the extent to which the TQM concept has been implemented by companies in various countries and various industrial sectors.

2. Material and methods

This research uses a systematic review method from descriptions and results of previous journals regarding the application of the Total Quality Management method collected from various industrial sectors in various countries. This journal contains a collection of research journal results that discuss the relationship between TQM and other 'practices'.

3. Results and discussion

The aim of this research is to review the literature regarding TQM and performance of organization in various countries and various industrial sectors. A review was conducted on the 16 papers listed in table 1.

The implementation of TQM in organizations has been successful in several organizational sectors. Research by Adem and Andeep [7] conducted in the manufacturing industry with TQM practices, namely leadership, customer focus, employee empowerment and involvement, process management, continuous improvement, education and training and the second variable is operational performance, aims to examine the influence of TQM on operational performance of manufacturing companies. This research shows that only supplier quality management, continuous improvement, and process management were found to have a significant and positive effect on the operational performance of ISO 9001:2008 certified manufacturing organizations in Ethiopia [7].

Research by Okudan and Cenk Budayan [12], aims to investigate differences in the performance of ISO 9001 certified companies with TQM. This research uses cluster analysis and ANOVA methods. TQM practices in this research are customer management, leadership, people management, supplier management, organizational learning, process management, continuous improvement, quality information management and operational performance variables. The results of this research indicate that ISO certified companies should not only rely on ISO certification alone. They must integrate ISO and TQM certification to improve their organizational and operational performance.

Subsequent research by Zaidi and Nurazwa Ahmad [19] conducted in the manufacturing industry, aims to examine the relationship between TQM practices and operational performance. TQM practices in this research are organizational leadership, customer satisfaction and relationships, human resources focus, strategic planning and development and supplier quality management. The five dimensions of TQM have significant results and a positive relationship with operational performance [19].

Research conducted by Anu P Anil and Satish Kumar [2] regarding TQM practices and performance effects in the manufacturing industry in India shows that TQM practices provide empirical support for managers in the manufacturing sector to focus on operational performance because they play an intervention role to achieve goals such as financial stability. The variables in this research are operating performance, employee performance, society results, financial performance, customer satisfaction level, quality performance and innovation performance [2].

Other research regarding customer satisfaction, employee satisfaction and company reputation was conducted by Lepisto et.al. [10] appear comes about that two TQM measurements, to be specific Customer Focus and Product Management, are related to company customer satisfaction, whereas four TQM measurements, to be specific Management/leadership, Customer Focus, Personnel Management, and Risk Management, are related to personnel satisfaction. None of the TQM measurements is related to corporate reputation. Control variables such as industry, company size and certified quality system were not found to impact customer satisfaction, personnel satisfaction or company reputation [10].

Ahmed Ali Khatatbeh's [8] research, which was conducted in the construction sector, provided results showing that there is an important role for TQM in project performance, customer satisfaction, project quality, cost effectiveness, time effectiveness, mutual cooperation and employee motivation [8].

Youssef and Eyad [18], conducted research to examine the impact of integrating ISO 9000 and TQM on the operational performance of manufacturing organizations and their journey towards achieving world-class manufacturing (WCM) status. The result is that factories that integrate ISO 9000 and TQM progress more quickly towards achieving WCM status and have better operational performance [18].

Fernandez, et. al. [5] conducted a systematic literature review on the relationship between quality management, innovation and performance. The results show that there's a positive relationship between quality management, product and process innovation (incremental and radical) and operational and financial performance [5].

Sadikoglu and Zehir [13] investigated the relationship between TQM and performance measures to test the mediating effect of employee performance and innovation performance. In this study there is no extensive empirical evidence about the effects of TQM practices on employee performance and innovation performance. The research results support the proposed hypothesis, namely that employee performance and innovation performance partially mediate the relationship between TQM practices and company performance [13].

Table 1 Reviewed Article

No	Paper Identity	Object	Result
1	Adem & Andeep, 2020 [7]	Manufacturing industry	Supplier quality management, continuous improvement and process management were found to have a significant and positive influence on the operational performance of ISO 9001:2008 certified manufacturing organizations in Ethiopia.
2	Okudan & Cenk, 2021 [12]	Construction companies	ISO certified companies ought to not depend exclusively on ISO certification. They must integrate ISO and TQM certification to improve their organizational and operational performance.
3	Zaidi & Nurazwa, 2020 [19]	Manufacturing industry	The five measurements of TQM have significant results and a positive relationship with operational performance.
4	Anil & Satish K., 2019 [2]	Manufacturing industry	The findings provide empirical support for managers in the manufacturing sector to focus on operational performance, as it plays an intervention role to achieve key goals such as financial stability.
5	Lepisto et. al., 2022 [10]	Companies	The results reveal that two measurements of TQM, specifically Customer Focus and Product Management, are related to the company's customer satisfaction, whereas four measurements of TQM, to be specific Management/leadership, Customer Focus, Personnel Management, and Risk Management, are related to personnel satisfaction. None of the TQM measurements is related to corporate reputation. Control variables such as industry, company size and certified quality system were not found to impact customer satisfaction, personnel satisfaction or company reputation.
6	Ahmed Ali Khatatbeh, 2022 [8]	Construction industry	The results show an important role in project performance, customer satisfaction, project quality, cost effectiveness, time effectiveness, joint cooperation, and employee motivation.

7	Youssef et. al., 2017 [18]	Manufacturing industry	Industries that integrate ISO 9000 and TQM progress more quickly towards achieving WCM status and have better operational performance.
8	Fernandez et.al., 2021 [5]	Literature review	The results show that there's a positive relationship between quality management, product and process innovation (incremental and radical), and operational and financial performance, as well as direct and indirect relationships.
9	Sadikoglu & Zehir, 2010 [13]	Firms	There is no extensive empirical evidence on the effects of TQM practices on employee performance and innovation performance. The research results support the proposed hypothesis that employee performance and innovation performance partially mediate the relationship between TQM practices and company performance.
10	Lassaad Lakhal, 2017 [9]	Tunisia companies	Within the case of Tunisian companies, actualizing ISO 9000 to begin with some time recently beginning TQM leads to way better organizational performance, in spite of the fact that ISO 9000 certification and TQM practices specifically influence organizational performance.
11	Akanmu et. al., 2020 [1]	Companies	The instrument is reliable and the examination appears prove of strong rational validity. The significance of excellence for any successful strategic implementation in improving sustainable performance through the implementation of quality practices.
12	Herzallah, et. al., 2014 [6]	SME sector	The results obtained from this research indicate that TQM practices have an indirect, positive and significant relationship with financial performance through competitive strategy.
13	Bytyci, et. al., 2023 [3]	Manufacturing industry	Organizational leadership and supplier management have the greatest impact on operational performance, while strategic planning development has the slightest affect. It was found that there were contrasts within the operational performance of manufacturing companies by categorizing them according to the application of ISO standards.
14	Satish Kumar, 2019 [15]	Manufacturing companies	TQM significantly influences organizational commitment, employee commitment, employee performance and quality performance.
15	Singh, et. al., 2018 [16]	Manufacturing and service industry	All hypotheses are positive and show the positive impact of TQM on organizational performance.
16	Nurcahyo, 2021 [11]	Manufacturing industry	This study shows that the implementation of the ISO 9001:2015 quality management system has a significant positive impact on operational performance and business performance. Apart from that, operational performance has a significant positive influence on business performance.

Lassaad Lakhal's [9] inquire about created a conceptual model to study the relationship between ISO 9000 certification, TQM practices and organizational performance in the case of companies in Tunisia. Implementing ISO 9000 to begin with some time recently beginning TQM leads to better organizational performance, in spite of the fact that ISO 9000 certification and TQM practices directly affect organizational performance [9].

Research by Akanmu, et.al. [1] tried the mediating and moderating effects of organizational excellence and environmental regulations and approaches (ERP) on the relationship between TQM (quality practices) and sustainable performance. The instrument is reliable and the analysis shows evidence of strong rational validity. The importance of excellence for any successful strategic implementation in improving sustainable performance through the implementation of quality practices [1].

Herzallah et.al. [6] examined the relationship between total quality management (TQM) practices, competitive strategies (leadership, cost, and differentiation) and firm performance in the Palestinian economy. The results obtained from this research indicate that TQM practices have an indirect, positive and significant relationship with financial performance through competitive strategy [6].

Research by Bytyci et.al. [3] Measuring the impact of TQM through components: organizational leadership, customer relations, human resource management, strategic planning development, and supplier management in the operational performance of manufacturing companies in Kosovo. Organizational leadership and supplier management have the greatest impact on operational performance, while strategic planning development has the least impact. It was found that there were differences in the operational performance of manufacturing companies by categorizing them according to the application of ISO standards [3].

Furthermore, research by Satish Kumar [15] which studied TQM practices and their influence on organizational performance in manufacturing companies had another aim, namely to determine the relationship between TQM practices and organizational commitment and performance. The results of this research are that TQM significantly influences organizational commitment, employee commitment, employee performance and quality performance [15].

Vedant Singh [16], conducted research on the impact of TQM on organizational performance in the manufacturing and service industry in India. This research focuses on the implementation of Total Quality Management (TQM) in Indian industry and to study its impact on organizational performance. The results are all hypotheses positively and show the positive impact of TQM on organizational performance [16].

Research by Nurcahyo [11] conducted in Indonesia aims to examine the relationship between ISO 9001 and operational (productivity, customer satisfaction, and product quality) and business performance (sales growth, profit levels, and market share). This research shows that the implementation of the ISO 9001:2015 quality management system has a significant positive impact on operational performance and business performance. Apart from that, operational performance has a significant positive influence on business performance [11].

4. Conclusion

Total Quality Management (TQM) is a systematic quality improvement approach for the management of the entire company with the aim of improving performance in terms of quality, productivity, customer satisfaction and profitability. TQM practices have been adopted by many companies throughout the world because TQM focuses on increasing customer satisfaction in improving product quality, service quality, and overall organizational quality to provide the best product or service solutions to customers. Another reason is because TQM is implemented with total commitment from management and total employee involvement so that it becomes a solid concept that is easy to understand and easy to implement.

A standard measurement method is needed to determine the level or score of TQM implementation in the organization because it must be measurable to make continuous improvements because it has to compete in the current business situation. It is highly recommended to continue further studies in several industrial sectors, especially in new start-up industries such as e-commerce or digital start-ups to ensure that TQM is still suitable for these new industrial sectors.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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