



Relationship between Total Quality Management Practice and Organizational Performance: A Conceptual Model Based on Iraq Manufacturing Industries

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Abstract: Many organizations use various organizational improvement initiatives such as ISO 9001, Total Quality Management (TQM) and Innovation Management as strategies to be competitive in their market segments. Despite the global acceptance of the TQM concept by manufacturing and service organizations, Iraqi manufacturing organizations are still at the primary stage of the TQM journey. This paper attempts to discuss the relationships between TQM implementation and organizational performance. It also argues the importance of innovation and ISO 9001 as mediators between the application of TQM and organizational results. The related literature was reviewed prior to the development of a framework which included TQM practice, ISO 9001, innovation and organizational performance. It is expected that ISO9001 and innovation would help the practice of TQM in enhancing organizational performance. Data collection and analysis will be performed to validate and/or refine the hypotheses raised in this paper.

Keyword: Total Quality Management, ISO 9001, innovation, organizational performance

1. Introduction

Total Quality Management (TQM) is undoubtedly one of the most vitally relevant approaches that businesses cannot afford to neglect if they want to move toward excellence. There are diverse findings and questions concerning the connection between TQM activities and success of the company. However, such research has been performed in diverse types of industries and cultural backgrounds[1][2]. Organizations have utilized numerous corporate management strategies (Lean, ISO9001, Six Sigma, and TPM) in their path towards sustainable growth. Nevertheless, much of the literature review has been conducted in developed countries on the effect of quality management on company results. While the developing countries have done little work, especially in Arab countries, including Iraq.

The manufacturing sector plays a key position in Iraq's gross domestic product between the energy and agriculture industries, where the private sector contributed 39.5 per cent, whilst the public sector accounted for 60.5 per cent. But they triggered a decline in growth and economic progress due to political and social turmoil and uncertainty throughout (1999-2003). This has been found in 609 major corporations marked by technical retardation, poor productivity, and recovery and growth criteria. Moreover, 49,672 small businesses which were inefficient or poorly operated after 2003[3], as well as negative environmental impacts of industrial pollutant activities[4]. According to the National Development Plan 2018-2022, there are targets to provide maximum support to manufacturing firms to achieve

strategic advantages, as well as to raise the share of the private sector and the non-oil and extractive manufacturing sectors in GDP by 40 percent of the economy in general.

Industrial organizations' success has reported a significant positive effect on economic development in developed and developing countries[5], so it is necessary to study, evaluate, analyse and examine factors pertaining to the output of Iraqi industrialization. The key objective of this paper is to try to bridge the research gaps by highlighting the mediation effect of some of the quality management approaches already accessible among Iraqi manufacturing companies, namely ISO9001 and innovation that can be used to strategically enhance organization performance.

Previous large-scale longitudinal studies have demonstrated the significant role played by TQM[6][7][17] ISO9001 [8][9][10][11][12] and innovation[13][14][15][16] in enhancing the organizational performance. Very few scholars, however, studied the influence of TQM on the success of the company through the mediation effect of ISO9001 and innovation, especially in Iraqi literature. In addition, the limited studies on the effect of the ISO9001 and innovation in this field, have motivated the researchers to pay attention to this analysis as a significant move. Consequently, the concerns posed in our research were: Will innovation, TQM and ISO9001 effect on organizational performance? Has the application of innovation and ISO9001 considered a significant mediating impact on the interaction between TQM and the organizational performance?

This paper attempts to connect TQM, innovation and ISO9001 implementation with the organizational performance (OP) (such as customer, individuals, community and company performance) in the Iraqi manufacturing context. The results will be valuable for other researchers to conduct an identical study to enrich Iraqi manufacturing in other sectors of the industry.

2. Literature Review

Table 1 summarizes several studies related to TQM practice on organizational performance together with the mediators. It is found that most previous studies were limited to a specific region and company and did not focus on the impact of ISO9001 and innovation.

Table 1- Summary of several studies related to TQM practice on organizational performance

Author	Mediators	Findings
Mahmud and Hilmi (2014)[17]	Organization learning	TQM has a significant positive impact on organizational learning and the performance of Malaysian SMEs.
Ngadiman et al. (2015)[18]	Total productive maintenance (TPM)	Suggested a conceptual model that show the relationships between TQM practices, TPM, and business performance
Md Fauzi et al. (2016) [19]	Continuous improvement (Kaizen)	Proposed a model that integrates the TQM, Kaizen, and business performance
Shan et al. (2016)[20]	Innovation	Proposed a model that integrates the TQM practices and different types of innovation
Jimoh et al. (2018)[21]	Continuous improvement	Continuous improvement has mediating roles necessary for ensuring better organizational performance
Alghamdi et al. (2018)[22]	Organizational Culture	TQM and the organizational culture have a statistically significant and positive relation to the performance of the organization.
Anu, et al (2019) [23]	Employee performance.	TQM practices have an indirect and positive effect on performance indicators through employee performance

2.1 Total Quality Management (TQM)

Quality as an intended destination plays a critical role in any company, as it has had a significant impact on the progress and growth of business performance over the past twenty years[24],thus it is considered one of the most effective management strategies that contributes to the quality of products and services[2] . TQM gurus such as Juran, Deming, Ishikawa and Feigenbaum [14][15]proposed a number of key elements for applying and assessing TQM in the manufacturing sector. TQM also can be described as a management strategy aimed at enhancing productivity, performance and efficiency through management, staff engagement, and strategic planning. TQM framework is also

known as Business Excellence Framework and can be used to assess organizational performance as well as provide guidance towards achieving organizational excellence [25].

2.2 Organizational Performance

To provide a theoretical foundation for the research, the authors reviewed obtainable articles in the management literature on Iraqi Organizational Performance. Previous studies on organizations performance in Iraq were showed indifferent fields of management. Such as, some articles carried out in the area of Knowledge Management[26], Strategic Cost Management [27], economic management and policies[28], public sector organisation's performance in Iraq generally[29] and quality management implementation in oil industry sector [30]. However, except public studies not easy to find an extensive comprehensive study on the performance of Iraqi manufacturing companies. Very limited research in the literature explains a gap in previous studies in Iraqi small, medium and large size companies with a lack of focus on moderators' variables and their impact on corporate performance. In this study, the authors focus on two major variables that effect on the performance of Organization, namely innovation and ISO9001 implementation.

2.3 Innovation

Innovation can be applied in various strategies and this paper adopts two common types of innovation: innovation in processes and products. They addressed most of the technological debates and research, which presented firms with a competitive advantage[16] [17] [18]. Innovation aims to incorporate a new dimension in the production mechanisms of products, equipment, machinery, procedures, tasks and workflows[31] as well as to redesign or recover the business process to increase business competency and customer satisfaction. It thus included new process research techniques and enhanced job methods[32][33]. Innovation has recently been defined by Crossan and Apaydin mostly as the production or adoption, assimilation and utilization of value-added innovation in the fields of economic and social affairs; the renovation and expansion of products, services and markets; the implementation of the latest production methods and the creation of new management systems[34]. In other terms, innovation is one of the key factors in achieving adoption of the TQM [35]. Both have valuable resources to develop skills, product and service processes, and efficiency enhancement [24]. However, the relationships between innovation, quality management systems and company performance are a significant area of research in deciding the circumstances under which particular relationships encourage or limit competencies in innovation and performance[7]. But according to the last published knowledge of the National Development Plan 2018-2022, there are real gaps in the rates of modern technology adoption and the level of innovation of the levels of organization and manufacturing firms as well as between large and small firms and domestic and private firms, so the firms need to move on to being good innovators. That is a significant reason for exploring this partnership and fixing this void in Iraqi manufacturing.

2.4 ISO9001

Companies seeking for ISO9001 certification to demonstrate their ability to deliver products and services that consistently meet the needs of their clients and other related stakeholders [36]. Therefore, providing specific standards that would help stabilize the regulatory environment inside. In fact, allowing for repetitive and effective organizational and technical activities within the enterprise to operate. Besides, minimum duplication and chaotic non-conformity to satisfy customer requirements [37]. Consequently, achieving ISO 9001 is an effective way to access the market. Some findings indicate that ISO 9001 certification can improve overall performance of the company. Nevertheless, there has been the negative impact of ISO 9001 on the above constructs [38]. Despite the widespread use of ISO 9001 certification and more accredited organizations in the Arab countries, the adoption of ISO 9001 certificates by Iraqi companies is still at the bottom of the list due to various obstacles and misconceptions that impede the adoption of ISO 9001 in the manufacturing and service sectors, such as employee resistance and senior management commitment [39]. Although empirical studies exist, use innovation indicators that measure the number of times companies have changed, modified, or adopted different components or behaviours, but the little study focused on the reciprocal innovation relationship with TQM and ISO9001 and the impact on the performance of the organization specifically in Iraq and developing countries.

3. Theoretical and Hypotheses Formulation

Figure 1 shows the proposed conceptual model of the relationship between TQM and organizational performance with mediators of ISO9001 and innovation. This model was proposed based on comprehensive review of the previous research.

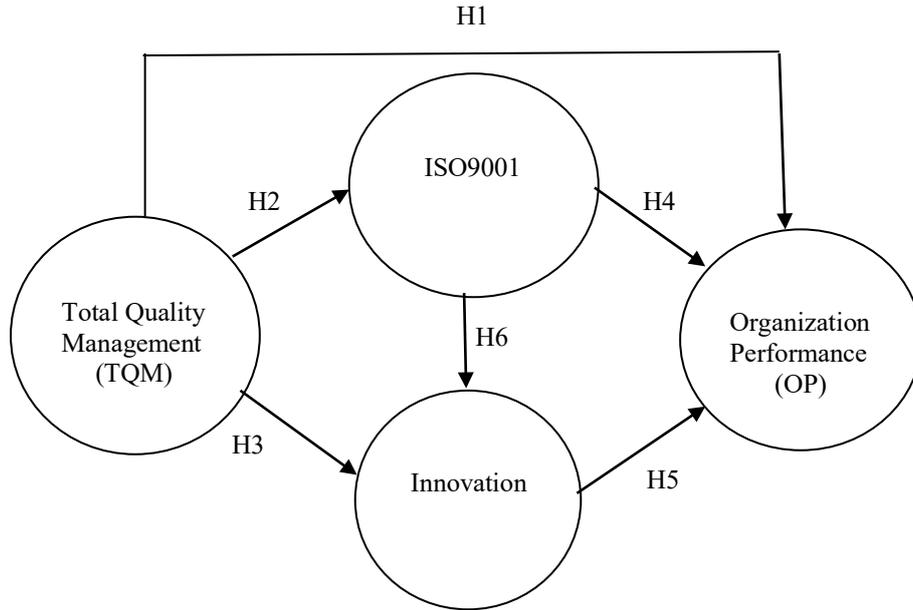


Fig. 1 - Proposed conceptual model of TQM with mediators of ISO9001 and innovation

3.1 TQM and Organizational Performance

In recent years, the relationship between the performance of the organizations and total quality management (TQM) has attracted more attention by numerous researchers in different countries and companies, where the majority of these studies show a positive indirect and direct effect of TQM practices on financial performance, quality performance, productivity and manufacturing performance[40][26]. In addition, the significance of TQM adoption in the manufacturing and services sector suggests a favourable association between TQM practices and success independent of their emerging technologies. However, several studies have indicated that there is no sufficient objective proof of the impact of TQM approaches on workplace performance and innovation success [16][18], as well as businesses that use a TQM framework are not inherently stronger than their equivalents that do not use TQM approach [31]. The theory proposed the following based on the previous discussion:

H1: TQM practice have a direct impact on the organizational performance.

3.2. TQM and ISO9001 Implementation

One of the main reasons for adopting ISO9001 in this study is to ensure that the quality initiative is currently in place and being implemented in the Iraqi industry, so it seeks to use ISO 9001 certification to support the implementation of the TQM system and the development of the Iraqi sector. Though in previous research the correlation between the critical factors in ISO 9000 and TQM has not been sufficiently addressed.

ISO9001 Quality management standards have been developed on the basis of seven Quality Management Principles (QMPs), namely Leadership, People's Engagement, Customer Focus, Continuous Improvement, Evidence-based Decision-Management and Relationship Management, Process Approach, thus leading to improved efficiency and, consequently, competitiveness of business only when properly implemented [41]. In addition, measuring the interaction between ISO 9000 and TQM revealed that the merger of ISO 9000 and TQM has a positive effect on manufacturing organizations' operational performance and enhances their competitive advantage as well as this integration is necessary for continuous improvement efforts [42] [43]. Taking into account implementation priorities where some of the research findings indicate first implementation of ISO 9000 before embarking on TQM leads to improved organizational performance [10]. The hypothesis suggested the following based on the previous discussion:

H2: TQM practice has a direct effect on implementation of ISO9001

3.3 TQM and Innovation

Most researchers have categorized innovation into two parts: an innovation process that deals with the creation and correct implementation of ideas, as well as outcome that result from implementation as products or services[35]. TQM practices play an important role in enhancing the innovative capacity of the organization, and the willingness of organizational employees to accept new ideas such as applying a TQM approach can make it easier to adapt

innovations presented by others [28-29], so that they can also develop their innovations by building on the work of continuous and breakthrough improvements [39]. The positive relationship between TQM and performance in innovation is reported by many researchers [40][30][31][44][45]. In the modern global market, they obtain a vast, sustainable competitive feature [41]. In addition, other studies investigated various factors may contribute to product improvement, and process innovation is positive such as top management quality practices and process quality management specifically [32]. In addition, mediator effects such as knowledge management (KM) between TQM practices and innovation showed a positive association with process innovation and product innovation [32]. Practices alone, however, have a contrasting impact to improve performance in innovation, if we ignore the factor of quality performance [33]. In addition, product design capability contributes to strategic product innovation, whereas TQM culture directly influences process improvement and product design capabilities but not product innovation [46]. Furthermore, only companies adopting innovation strategies in their processes promote the adoption of TQM practice [47]. However, for reasons such as organizational culture, the role of R&D units in the value chain and the importance of implementing TQM vary from region to region [40], the above results may not be generalizable. The hypothesis suggested the following based on the previous discussion:

H3: TQM practice have a direct effect on innovation.

3.4 ISO 9001 and Organizational Performance (OP)

ISO 9001 standard aims to satisfy customers by constantly improving the quality management system and preventing non-conformities in products and services in order to proactively meet customer expectations through standard operating procedures, internal audits and management reviews. ISO 9001 QMS has contributed to the development of a Standardized Corporate Governance system in organizations [48][8][38][11]. However, some studies [43-44] indicated that there was no statistically significant difference in performance specifically financial benefits seen or unconvincingly seen between certified and uncertified companies. It has, however, an indirect effect through operational performance mediation [29]. While other studies indicated that ISO9001 approved the types of internal and external motivations for implementation and seniority were important variables for achieving positive results from ISO 9001 application [38- 40]. As a general performance, the internalization of ISO 9000 standards that occurs primarily through the development of human and organizational capital [47], improves product quality and quantity [42], customer satisfaction, improves operational performance, financial performance, and business performance [29]. In addition, the performance of operations and markets [48]. Based on the previous discussion, the hypothesis suggested the following:

H4: Implementation of ISO9001 has positively correlated with organizational performance.

3.5 Innovation and Organizational Performances (OP)

Organizations that adopt innovation strategies through their operations encourage the adoption of TQM practices and, in turn, a statistically positive relationship exists between the effective implementation of TQM practices and product innovation [49]. Several studies focused on the relationship between innovation and organizational performance and cited a positive assessment of innovation dimensions, which in turn improved business performance [50][51][52]. In addition, performance indicates that it is affected by type of innovation. on the other hand Companies that adopt product innovation strategies have advanced in their financial performance, Whereas companies that adopt process innovation have an improvement in their operating and financial performance [23]. Furthermore, The integration of product and process innovations has greatly improved the company's growth [49]. Additionally, competitive and dynamic environments have an impact on product and process innovation and consequently, influence on business performance [14]. The hypothesis suggested the following based on the previous discussion:

H5: Innovation has positively correlated with organizational performance (OP).

3.6 ISO9001 and Innovation

The Quality Management System (ISO 9001) consists of principles compatible with innovation, which in turn creates an innovative, productive environment [50] Additionally, the extent to which the standard implements whether radical or incremental product innovation [25] will influence the performance. Although ISO 9000 has a positive effect on creative process and innovation support [43]. On the contrary, when taken in isolation [46][47], practices do not have a significant relationship with incremental and radical product innovation. The hypothesis suggested the following, based on the previous discussion:

H6: ISO9001 has been positively correlated with innovation

4. Conclusion

The company must constantly improve its business performance in order to create the competitive nature of the companies in global markets. This can be achieved by promoting a quality culture and by encouraging the use of TQM approach to generate more competitive advantages. Whether they are large or small companies in the manufacturing and services sectors [51] regardless of the country's technological development. This conceptual study will help organizations gain benefits from TQM, innovation and ISO9001 practices to improve organizational capability. TQM, innovation and ISO9001 thus have a considerable positive effect on performance. The results of this paper may also give a clear picture of the influence of the innovation and ISO9001 as mediators on the relationship between TQM and organizational performance in Iraqi manufacturing organizations which are lacking in the previous research see Table (1). Finally, the researchers recommend the organizations to invest time and resources in implementing TQM, innovation and ISO9001 in order to enhance the organizational performance. These valuable initiatives can be sources of competitive advantage which, just like developed countries organizations, can make companies more competitive.

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