

## ASSESSING THE IMPACT OF TOTAL QUALITY MANAGEMENT PRACTICES ON ORGANIZATIONAL PERFORMANCE IN JORDANIAN SMALL AND MEDIUM INDUSTRIAL ENTERPRISES WITH INNOVATION AS A MEDIATOR

[1]Odeh Mohammad Al Nohoud, [2] Zainudin Awang, [3] Mutaz Khazaaleh

[1][2]Faculty of Economics and Management Science, University Sultan Zainal Abidin,  
Malaysia

[3]Department of Computer Science, Al-Balqa Applied University, Jordan

**Abstract**— the use of total quality management practices aims to improve the organization's efficiency and competitiveness. Implementing TQM practices is fraught with challenges, especially in developing countries. It is important to improve the efficiency of organizations and workers as well as the quality of production, improve operational effectiveness, provide high-quality products, and improve overall performance, which are the goals of implementing Total Quality Management (TQM) practices. On the other hand, companies face constant challenges, such as the rapid rate of technological innovation, competition for superior product quality, pricing, and service quality, and consumer expectations are always changing, so it is important and required to apply total quality management practices. In order to maximize the benefits of innovative solutions that improve organizational performance, the company's long-term continuity and success, and its competitiveness locally and globally. The role of innovation has become an absolute necessity that requires the application of these practices. This research examines the role that innovation plays as a mediator in the relationship between organizational performance and total quality management practices in the context of small and medium industrial enterprises in Jordan. The study focuses specifically on industrial enterprises (SMEs) in Jordan. At the same time, the aim of this study was to provide insight into ways to enhance the organizational performance of the industrial sector in Jordan. In addition, the research aims to verify and test this model by collecting secondary data from owners, engineers, and technicians of Jordanian industrial companies. This will be done by applying structural equation modeling (SEM) to test hypotheses and determine the role that innovation plays as a mediating factor between TQM practices and organizational performance. The purpose of this study is to develop and propose a conceptual framework and research model for TQM practices and organizational performance. It is necessary to conduct a comprehensive analysis of the literature on organizational performance, innovation, and TQM. In addition, by studying the function of innovation as a mediator, we can strengthen this connection. The results show that there is a beneficial mediation effect of innovation between organizational performance and TQM practices. Furthermore, TQM practices have a positive impact on the mediator's role, and the mediator has a positive impact on organizational performance. These results highlight how important it is to support fresh approaches to maximize the advantages of putting TQM practices into practice and innovation's contribution to the organization's overall performance improvement.

**Keywords** — Total Quality Management, TQM Practices, Innovation, Organizational Performance, Industrial SMEs, Mediating Role, Jordan.

## I. INTRODUCTION

Industrial companies have to improve their organizational performance in order to continue to exist and thrive in the face of an ever-increasing level of market competition. A large number of companies have implemented flexible and balanced business plans in order to achieve this goal, in addition to achieving a balance between the quality, price, and production quantity of their products. These processes were implemented in collaboration with employees and carried out under the supervision of managers and supervisors throughout the process. The ability to achieve outstanding organizational performance, which will be supported by an effective, fair, and balanced incentive system with a primary focus on skills development, will provide employees with the ability to achieve a competitive advantage that will allow them to survive in the market [1]. In addition, in order to improve performance and increase competitiveness, business managers in organizations are required to create policies designed to improve organizational performance (OP). It is expected that in the future, increased profitability and organizational performance (OP) will be achieved by encouraging employees to commit to achieving the organization's goals, giving them the impression that they are integrated members and having the right to submit suggestions and opinions, and establishing positive horizontal and vertical relationships at the functional level in order to implement these policies between supervisors and employees [2]. It is necessary to access contemporary and cutting-edge knowledge sources before other organizations in order to achieve superior organizational performance (OP). Additionally, it is necessary to provide supervisors and employees with regular lectures and up-to-date knowledge courses, encourage employees and supervisors to share their experiences, and link the acquisition of knowledge with financial incentives. Through the accomplishment of distinctive organizational performance, each of the aforementioned acts contributes to the enhancement of the organization's capacity to achieve success and to preserve its competitiveness [3]. In the majority of companies, leaders and managers make an effort to motivate employees and improve their performance. The results of previous studies have highlighted the impact of innovation on improving organizational performance. Complexity, globalization, uncertainty, and rapid technical growth are considered essential characteristics in today's world. In terms of core competencies, creativity, innovation, and the ability to solve problems are the three most important points for improving organizational performance in companies [4]. For manufacturing organizations to remain competitive in the ever-changing global industrial production environment, it is essential to recognize the important role that innovation plays by providing financial support. Furthermore, it is essential for manufacturing companies to place greater emphasis on innovation if they wish to continue to succeed in the market and improve their overall performance. The reason for this is that organizations with a limited number of resources are under a significant level of pressure as a result [5]. In other words, managers are responsible for creating and enhancing intellectual capital assets in order to enhance organizational performance in companies [6]. Moreover, evaluating the impact of TQM practices

on organizational performance (OP) and implementing these practices are more widespread in industrialized countries than in developing countries [7]. It is anticipated that the firm will be able to successfully grow its market share by implementing Total Quality Management (TQM) standards. Because of this, the total performance will improve, operations will continue to improve, and long-term sustainability advantages will be offered through training, education, collaboration, support, organizational sustainability, and continuing expansion these benefits will be supplied through the provision of sustainability. The market share of the company will expand as a result of these benefits, which will also have a favorable impact on the organization's performance in both financial and non-financial areas [8]. Moreover, innovation bolster performance inside the organization [9].

## **I. Literature Review**

### **A. Organizational Performance**

It is described as accomplishing the stated mission of an organization with effective management, consistent efforts, and superior governance. Which ultimately leads to achieving organizational goals, Another factor that contributes to achieving this result [10]. The performance of an organization is determined by the kinds of activities that it participates in in order to work toward accomplishing its objective [11]. Enhancing staff performance, teamwork, and other factors are all part of increasing organizational performance, which also entails lowering employee turnover, expensive accidents, and disorders, and much more [12]. Organizational performance dimensions most commonly used are non-financial performance and financial performance aspects [13]. It examines elements like market effectiveness, and non-financial performance, which includes elements like customer contentment, the timeframe for releasing new products, and more recently, staff satisfaction and productivity [14][15]. On the other hand, financial performance covers metrics such as ROA, sales income, benefit indices, and net profits [16]. Financial and non-financial performance will be used in this study to gauge organizational performance.

### **B. Total Quality Management (TQM)**

The Total Quality Management (TQM) approach is defined as continuously monitoring all operational activities and processes within an organization in order to meet customer expectations and improve the quality of the system within the organization, This ultimately leads to increased production and profitability, in addition to improving efficiency and reducing costs [17]. TQM is the continuous use of a management approach to assure improvements in an organization's final output and product. To fulfill the demands and expectations of the customer, TQM means working with customers to ensure their needs are met in the most effective way possible [18]. Total Quality Management is a concept that integrates production and management with the goal of increasing productivity in order to satisfy customers, Quality has increased as a result of managers' effective TQM implementation [5]. Total Quality Management (TQM) is the co-management approach used in the business and service sectors, Organizations employ TQM to obtain a competitive advantage in terms of quality, productivity, customer satisfaction, and profitability [19]. Total Quality

Management (TQM) is the concept of managing organizations in a better way that goes beyond the traditional general approach and contributes to the administrative and organizational strengthening of the organization. Total Quality Management can also be defined as a pioneering and advanced management philosophy and an idea of how organizations should be managed [20]. The idea of overall quality management has been essential in developing standards for improving managerial procedures [21]. The purpose of this study is to build a conceptual framework to investigate TQM and how it relates to organizational performance, It is a controllable resource that has a connection to an organization's effectiveness [22]. Additionally, it has emerged as the top competitive advantage for businesses looking to acquire and use it [23]. It can be recognized as the management's first real step in ensuring they achieve excellence [24]. TQM has been interpreted differently throughout time by different schools of thought due to the fact that it was previously one of the most divisive topics in management, according to many [25]. Despite these differences, all schools of thought concur that the TQM idea is essential for continually improving production and operations in order to raise and exceed customer satisfaction and expectations [26][27].

### **C. Total Quality Management Practices**

TQM practices are a set of guidelines for managing quality and enhancing operational performance through employee empowerment, teamwork, creating a system based on equitable compensation and employee compensation, leadership management, successful employee participation, employee promotion, and achieving a competitive advantage. Customer and staff happiness must be given top priority by the business [28]. The industrial sector, meanwhile, received little attention. There is a mismatch in the impact of TQM practices on organizational performance, according to further studies on TQM practices and organizational performance in numerous industries [29][30]. TQM covers a wide range of topics, such as but not limited to: staff happiness, customer and relationship satisfaction, strategic planning and development, data and reporting quality, and implementation comprehension [19]. TQM practices are related to business performance [15] and business competitive advantages [31]. Previous studies have been empirically developed frameworks that involved measurable TQM practices [18][24][32][33]. Those studies investigated different practices of TQM. For examples, supplier quality management [19], customer focus [22], process management [5], leadership [34], and top management [35].

### **D. Supplier Quality Management**

Making suppliers more responsible for the quality of their own production while highlighting the need for direct buyer investment in supplier development is the definition of supplier quality management. To study supplier quality management, buyer investment efforts to improve supplier quality must be evaluated, along with financial incentives to encourage suppliers' efforts to improve product quality. In addition, we take into account the overall relationship between the buyer and supplier efforts to improve the quality of suppliers, enabling them to operate in an integrated manner. Using outsourcing to upgrade suppliers [36]. TQM's supply chain management

practices include reducing and streamlining the supplier base, working together to ensure that requirements are met, and involving suppliers early in the product development cycle, TQM also aims to take advantage of the knowledge and skills of its suppliers [37][38]. Inputs from suppliers are used in the initial step of a company's manufacture of goods or services. The top-notch inputs are high-end goods/or services. Suppliers should adhere to TQM and participate in this process acts as a consequence. Effective supply management systems enable quality control to be included and reliable, high-quality goods or services to be delivered on time [38].

#### **E. Customer Focus**

"Customer focus" is an extension of the term "brand loyalty" which was coined under the brand umbrella, evolved through time, and was first used in the U.S. at the turn of the 20th century [39]. Customer focus, which emphasizes the need for understanding and meets customers' demands to preserve customer loyalty and constantly increase organizational effectiveness, is a crucial component of TQM. The phrase "customer joy," which is widely used in literature, has another sense that refers to understanding and fulfilling consumers' needs [40]. Customer focus The highest brand focus appears in specialty stores, while the greatest customer focus is in direct marketing and online merchants [41]. Customer Focus relationship management, supported by a strong technological solution, is the solution to developing business innovation policies a strong solution to business management in the dynamic and variable market today [42]. By first learning about customers' preferences and demands, companies may then offer products and services that best meet those needs. Manufacturing may be organized to take into account consumer demands, wants and interests thanks to active customer service processes. Companies put a lot of effort into providing timely, efficient and high caliber goods and services while increasing productivity and profitability. Consumer satisfaction increases when their needs are met, which increases sales and the company's market share [38].

#### **F. Process Management**

Process management is the control of the manufacturing operation using strategies and procedures to decrease process variation. It aims to ensure that a factory runs smoothly without breakdowns, missing parts, equipment, devices, etc., despite the variety of personnel working for a particular company [43]. Focuses on how various analytical and behavioral processes operate, To minimize process variability and raise product quality, this calls for proactive and positive quality management techniques [44]. Process management systems are increasingly important tools for businesses to use to help them track and manage acquired resources and inventories as well as more efficiently track the inputs and output of industrial processes. Systems may rapidly identify and correct mistakes in production and reduce the risk of over-production and loss of jobs [45]. The information revolution is having an impact on business, and in order to progress, organizations must develop operations management. This will help them anticipate competitors, deal with risks, bring in opportunities, and enhance the innovation of their digital operations [46]. Periodic process control and ongoing quality data monitoring improve operations, Negative environmental effects

are reduced by effective process management implementation, As a result of the prevention-focused initiatives, the company's expenses are decreased, and earnings are enhanced [47].

### **G. Leadership**

One of the most crucial TQM techniques for achieving unique and extraordinary company results is the ability to lead others. "Leadership" is necessary for the organization's success at all levels of the hierarchy. the capacity to respond to fast change by offering appropriate and valuable involvement [33]. A TQM framework allows leaders to perceive the company as a system, encourage employee growth, provide many points of communication with employees, managers, and clients, and use knowledge effectively and efficiently, Leaders also promote employee participation in decision-making and give employees authority [48]. Leadership style has been identified as one of the most, if not the most, important styles that influence innovation. Leadership styles directly and indirectly influence innovation. It has been determined that the leadership style is one of the most important styles as well as one of the most important styles that affect innovation. There is a direct and indirect relationship between leadership styles and innovation [49]. Nevertheless, the contextual conditions under which this impact occurs will continue to exist, and despite the increased interest in the development of breakthrough technology, many factors will continue to exist. After doing a literature analysis on the topic of leadership and innovation, it has become apparent that leaders are the primary agents responsible for fostering an increase in inventive production. In order to make the process of innovation easier [50].

### **H. Top management**

Top management should provide a strong foundation for certain concepts and strategies, offer suitable tools, communicate quality objectives to suppliers and employees, stimulate the continuous improvement of performance, and assess them using the framework of quality standards [33]. Senior managers should make quality the cornerstone of business execution, and emphasize to employees the importance of implementing overall quality management. They should also enhance the working environment and circumstances for employees to involve them in accomplishing management goals [51]. When it comes to comprehensive quality management, senior management is known to be one of the most significant practices, and it is considered one of the most important components that contribute to the success of organizations. Therefore, managers must demonstrate their distinguished administrative ability to deal with variables, find solutions to problems, and separate from traditional management practices to better understand the adoption and implementation of total quality management improve and develop new and advanced concepts, accommodate changes in the market, and make innovation one of the important axes that must be relied upon [15][32].

### **A. Innovation**

Innovation is the application of new combinations of previously existing productive forces, in addition to the economic impact of technological development, to address corporate issues and

improve organizational performance. Schumpeter is credited with being the originator of the theory of innovation in economics as a whole [52]. Innovation is the search for, and adoption of, new ideas and technologies that lead to the creation of new goods and services. Organizations can be defined as having the propensity to adopt novel concepts, discoveries, and inventions that result in their own distinctive business procedures and innovations [53]. Many research papers from Pakistan, Mexico, Italy and Indonesia were considered in this study from 2015 to 2019. The study discovered that, in addition to enhancing non-financial and financial organizational performance and lowering external risks, innovation has a statistically significant impact on organizational performance in small and medium-sized businesses. It also identified the circumstances under which innovation can successfully improve internal performance [54]. The most important element in creating and sustaining competitiveness is the ability to innovate, which is seen as a major contributor to improved organizational performance and increased competitiveness [55]. The ability of a corporation to produce a distinctive and long-lasting differentiating trait is what we mean when we talk about innovation. This ability can be attained through a variety of means, including invention. When it comes to enhancing organizational performance, innovation is a clear tool that entrepreneurs and enterprises may use. This, in turn, fosters the creation of a robust and successful small and medium-sized enterprise sector [56].

## II. Research Questions

The following research questions were developed to examine the context of industrial SMEs in Jordan, based on the above research objectives;

RQ1: Does the TQM practices (supplier quality management, customer focus, process management, leadership, and top management) has positive and significant effect on innovation among industrial SMEs in Jordan?

RQ2: Does innovation has a positive and significant effect on organizational performance of industrial SMEs in Jordan?

RQ3: Does innovation mediates the relationship between TQM practices (supplier quality management, customer focus, process management, leadership, and top management) and organizational performance of industrial SMEs in Jordan?

## III. Underline theories

### Equations Organizational Performance theories

A resource-based view (RBV) is a comprehensive approach to understanding a company's competitive business environment, focusing on its internal resources and capabilities. It is an alternative to Porter's Five Forces model and helps companies make strategic choices in the external business environment. RBV emphasizes the reshaping of value chain activities to identify capabilities that provide competitive advantages, using internal resources as inputs, and thus emphasizes the development of the company's overall organizational performance [57]. Brandenburg and Stewart's value creation framework uses a resource-based view (RBV) theory to clarify dependent variables, approach to value creation, and allocate economic value. This theory has administrative implications for improving organizational performance through intellectual

resources and innovation [58]. The resource-based view (RBV) hypothesis explains how an organization may use its resources and capabilities to improve organizational performance [59]. An organization's resources and capabilities are defined by the US Federal Reserve in its definition of a company's total assets - those that make up the organization's main source of revenue. They include both tangible and intangible assets that may be used to achieve the intended aim of an organization's activities [60].

### **Total Quality Management Practices theories**

The Oakland model aims to enhance corporate governance practices through an efficient performance management chain, covering seven TQM components: performance, culture, planning, communication, commitment, processes, and people [61]. Total Quality Management (TQM) is a philosophy that focuses on integrating business goals with customer needs. It involves a continuous improvement process, employee involvement, and the use of various management techniques. Staff members must be motivated, polite, and eager to learn, with management taking initiative in designing activities [62]. This is in line with the Oakland approach, which claims that the strategic objectives of organizational performance are as follows: client-centered quality strategy, knowledge of procedures to avoid mistakes, treating people as subjects and motivating them, collective problem-solving, adequately ensuring quality and ISO 9000 requirements, by doing With all that, customer orders are processed [62][63]. The US government's MBNQA Model assesses outstanding companies using seven indicators across various industries, including manufacturing, service, healthcare, and education [64][65]. As a result, the seven MBNQM criteria consist of the following: (1) civic engagement and organizational leadership; (2) plan and policy development and implementation; (3) A focus on the customer; knowledge of the customer and the business; customer interactions; and customer pleasure (4) information management, organizational performance evaluation, and data analysis; (5) placing great emphasis on human resources, organizational structure, employee education, training, and development, as well as the welfare and satisfaction of workers; (6) Process management, including business processes, processes for products and services, and process support; (7) business outcomes, including those that are customer-focused, financial and business-related, human resource-related, and organizational effectiveness-related , The aim of the quality model is to disseminate information about quality and its importance to competitiveness as well as effective quality techniques and the advantages of putting them into practice.

In addition, it provides a set of metrics that companies, the public sector, the private sector, and other organizations may use to assess and raise the level of organizational performance [66][67].

### **Innovation theories**

The theoretical underpinnings of innovation and organizational performance are covered in this paper. The theoretical framework pertaining to innovation and organizational performance is given in this research. It articulates the pertinent theory applied in this research. The present study employs resource dependence theory and resource-based view (RBV) of organization theory as



foundational frameworks to generate hypotheses concerning the impact of contextual factors on innovation and the linkages between organizational performances. It is critical to comprehend the theoretical relationship between innovation and organizational performance. The way that these theories are applied will determine whether I choose to utilize them as the investigation's fictitious framework [59]. The US Federal Reserve defines a company's total assets as those that constitute the company's primary source of revenue, which includes its resources and capabilities and includes items that can be used to achieve the stated purpose of improving organizational performance. These include financial and intellectual capital, resources, tangible and intangible assets, innovation and creativity [60].

#### IV. Conceptual Framework

Based on the above, a conceptual framework was developed and a proposed research model was developed to explore the relationships between specific TQM practices and the mediating role of innovation between TQM practices and organizational performance (financial and non-financial organizational performance). The independent variables are TQM practices. The framework contains five variables: (supplier quality management, customer focus, operations management, leadership, and senior management). The dependent variable is organizational performance (financial and non-financial organizational performance). The mediating variable identified is innovation. The framework aims to study the relationship between these variables. The research hypotheses include the following relationships between the mentioned variables, which are as follows:

H1: TQM Practices has positive and significant effect on Innovation.

H2: Innovation has positive and significant effect on Organization Performance.

H3: Innovation mediates the relationship between TQM Practices and Organization Performance.

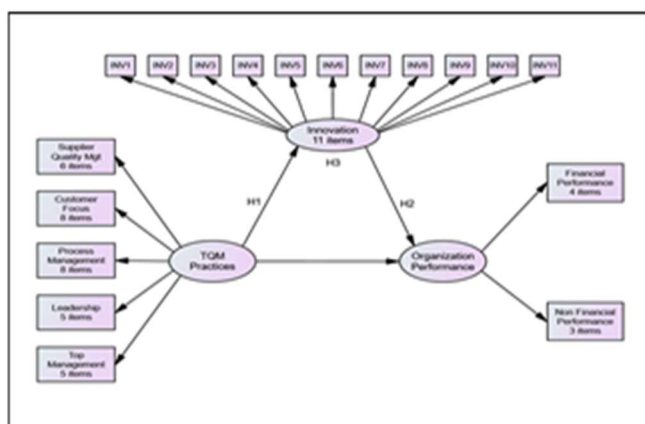


Figure 1: The framework for the main constructs and hypotheses

#### V. Methodology

##### A. Sampling Method

The target population for this investigation consists of manufacturing sector owners, engineers, and technicians in Jordan. Additionally, a random sampling approach is the most appropriate tactic to employ to achieve the goal of this investigation.

### **B. Sampling Method**

According to [68], the full sample size for the investigation would be Furthermore, with a sample size of 381; the target population for the current study can be described as follows:

- Elements: Owner (managers), engineers and technicians in Jordanian industrial SMEs.

### **C. Data Collection Procedure**

To boost response rates and strengthen the stability of the surveys, the researchers emphasized that responses are crucial and will help the Jordanian industrial sector. They also emphasized that the surveys are anonymous and were collected by the researchers alone, for academic purposes and in compliance with legal approval requirements.

### **D. Measurement for Constructs**

This study examined three constructs: organizational performance, innovation, and total quality management practices. Measurement items for each of the three constructs were obtained through comprehensive progression. Initially, local and international studies were used to adapt the measurement items. In addition, since this study was conducted specifically with regard to Jordanian industry, everything that the Jordanian researchers prepared was done with the utmost care. Moreover, taking into account the societal basis of Jordan. Second, through reliability analysis and exploratory factor analysis, the small sample will be analyzed to exclude items that are not significantly related to the constructs. As of now, you will be filling out questionnaires.

## **VI. Significant of study**

Academics, researchers and organizational managers are among the groups expected to be affected by the study results. Depending on how management presents the results, these groups may be able to plan, develop, design and implement more effective actions to improve organizational performance in Jordanian industrial SMEs. This can ensure the stability of these companies and contribute to the country's economic growth. Scholars and researchers believe that authors should write a paper explaining how TQM practices impact organizational performance in Jordanian small and medium industrial companies, as well as the impact of TQM practices on innovation, and they should conduct research on the results to evaluate the effectiveness of previous approaches taken to address issues. Management and implementation. Applying reviews and conclusions to enhance organizational performance is another. By defining the objectives and design of the current study, it is possible that in addition to shedding light on how innovation affects the organizational performance of industrial SMEs, it will also help in revealing flaws, managerial problems or incorrect assumptions that have not been adequately addressed in previous

research. Finally, the findings contribute to the body of research by examining the mediating role that innovation plays between TQM practices and organizational performance.

## VII. Conclusion

This study aimed to improve organizational performance in small and medium-sized Jordanian industrial companies by understanding the relationship between total quality management practices and innovation. The research involved owners, engineers, and technicians in these companies. The study found that innovation mediates the relationship between TQM practices and organizational performance. Total quality management practices positively impacted innovation, as experts provided suggestions and future visions. The primary goal is to improve performance by absorbing market fluctuations, improving products, abandoning traditional administrative systems, and keeping pace with modern scientific developments. However, the study's limitations include an insufficient research design and the limitations of its scope, which should only be applied to Jordanian small and medium industrial enterprises when generalized. The scope of future research is to test and validate this model. Collect secondary data by distributing self-administered questionnaires on the production line. Owners, engineers and technicians of industrial companies in Jordan, using structural equation modeling (SEM) approach to test hypotheses and find out the influence of these intermediaries between total quality management Organizational practices and performance.

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