

The Impact of Total Quality Management Practices on Reducing Costs Within the Organization (A Field Study on a Group of Hospitals and Health Centers in the Kingdom of Saudi Arabia)

Dr. Ali Husein Almudeer^{1*}, Dr. Abhijit Ghosh², Dr. Mohamed Salaheldien Ali³

DBA in Business Administration, College of Business Administration, University of Lincoln,
Malaysia^{1,2,3}

Abstract:

This study aimed to identify the impact of Total Quality Management practices on cost reduction within organizations. The study was conducted during the (2025/2026) academic year. It employed a descriptive-analytical approach and used a questionnaire as the primary data collection tool.

The study population consisted of (15) health organizations, all of which operate in the Kingdom of Saudi Arabia. The researcher took into account their geographical distribution to ensure full representation of the study population, and based on who was available at the time of distributing the questionnaire and who was willing to fill it out. Some restrictions prevented targeting the entire study population, so the researcher resorted to using the convenient sampling method, which amounted to (552) respondents. The researcher targeted the entire study sample of managers, department heads, and employees within the group of hospitals and health centers under study.

The study reached a number of results, the most important of which is: The presence of a statistically significant impact of total quality management practices on cost reduction within the organization in the kingdom of Saudi Arabia at a significant level ($\alpha \leq 0.05$). The study recommended a set of recommendations, the most important of which are: The need for the organization to pay attention to the costs of quality control, the costs of failure in quality control, and the need to activate the role of control and supervision within organizations and to take feedback reports into account.

Keywords: Total Quality Management Practices, Cost Reduction, Prevention Cost, Evaluation Cost, Internal Failure Cost, External Failure Cost.

1. Introduction:

The world is witnessing numerous political, economic, intellectual, and technological changes, with diverse influences and forms of competition. Time and space barriers are collapsing, forcing every organization and management to confront new situations that require them to identify and adapt to these changes. As a result of these rapid and successive changes and developments across all public and private sectors, management has found itself periodically facing challenges that necessitate a shift towards modern methods of development and improvement. Therefore, applying modern principles and methods to organizations is of paramount importance to elevate them to high levels of performance and quality and enhance the efficiency of the services they provide.

Quality has assumed a prominent place in contemporary management philosophy, particularly in light of the economic, political, and technological developments the world is experiencing, as well as the intensifying competition in the markets. The availability of resources, with their various components-materials, financial, and human-demands a comprehensive vision and philosophy capable of addressing current and future environmental challenges and enhancing the organization's capacity to adapt and adjust to changes in the competitive landscape. The importance of Total Quality Management (TQM) is further highlighted by organizations' commitment to quality as the only, most sustainable, and decisive path to success and leadership. This is achieved by offering products and services with distinctive characteristics that set them apart from their competitors. TQM's significance also lies in its comprehensive and integrated approach, characterized by its flexibility and adaptability. An organization's commitment to implementing TQM enables it to change customer behavior regarding the concept of quality, enhance employee engagement with teamwork and team spirit, and strengthen their connection and sense of belonging to the organization. Furthermore, the TQM approach facilitates the development of a comprehensive competitive strategy for organizational improvement.

Quality control involves applying quality principles to all processes, from management and planning to design, manufacturing, installation, inspection, storage, and supply. It ensures that goods conform to the required and predetermined specifications and standards. Therefore, it is crucial to raise the issue of quality and its importance in our time, given the increasing number of organizations and the intense competition among them. Quality is essential for organizations to achieve their goals of reducing costs, increasing profits, and maintaining a competitive advantage. Moreover, when quality mechanisms are implemented correctly, they enhance and increase the competitive strength of organizations (Aishouni, 2007).

Organizations have traditionally used many different methods to reduce costs, such as purchasing new technology and reducing the cost of raw materials. Without focusing on quality and understanding its importance in cost reduction, reducing waste and increasing productivity are the natural outcomes of quality improvement. Less waste and higher productivity reduce costs (Stephen & Kirch, 1998).

1.1. Study Problem:

The intensity of global competition has led to fundamental changes in how organizations manage their operations (Al-Rafaa, 2012). Providing high-quality services, as a strategy to achieve quality standards, has become crucial for organizations worldwide. Therefore, quality is considered a strategic tool for measuring business performance in today's dynamic environment (Hassan, 2012).

With modern trends in business and services, the application of Total Quality Management (TQM) has spread globally. Organizations have been widely using TQM since 1920, and many have concluded that effective TQM practices enhance their capabilities and provide them with a strategic advantage in the global market (Koranki, 2013).

As a result of rapid and successive developments in various fields, significant challenges have emerged for all sectors-industrial, manufacturing, and service-regarding the selection of a cost accounting system that identifies and reduces product costs. This is a critical strategic decision for management due to its impact on the sustainability of the organization. This is achieved by considering customer needs, preferences, and expectations to meet or even exceed their satisfaction (Wir, 2014).

As a means to achieve high levels of customer satisfaction and meet the challenges of global competition, many organizations have adopted strategies and implemented resources to enhance and develop aspects of Total Quality Management (TQM) and related strategies. Currently, many organizations view TQM as a means to improve quality, achieve customer satisfaction, increase revenue and profits, and enhance performance (Talib, 2012).

Under these circumstances, all organizations have increasingly realized that focusing on the quality of their products or services contributes to enhancing their reputation with customers, their market position, and consequently, their competitiveness in local and global markets. Therefore, these organizations must bear significant costs to achieve a high level of quality in their products, ensuring their competitiveness and, consequently, their survival and continuity as competitors. Work on improving quality begins with management's conviction of its importance, followed by employee

conviction, along with the implementation of changes in daily performance methods. Many organizations find it difficult to balance quality and cost, as quality has its costs, which can be relatively high. These high costs arise from the organization's management neglecting the underlying causes of high-quality costs. An organization may possess a product or service with high specifications and high-quality components, but if that product suffers from a manufacturing defect or a service delivery issue, the organization will incur substantial warranty costs (Garrison, 2017).

Consequently, the most costly situations occur when customers discover product or service defects, while the cost is lower when defects are discovered internally. Therefore, a balance must be struck between quality and cost, and quality standards must be implemented, recognizing that quality will yield returns for the organization commensurate with its commitment to it, thereby improving its long-term financial performance (Campanella, 1999). **This led to the research problem, which seeks to answer the main research question:**

- **What is the impact of Total Quality Management (TQM) practices on cost reduction within organizations in the Kingdom of Saudi Arabia?**, This main research question branches into several sub-questions:
 - What is meant by Total Quality Management (TQM) practices, and what are their requirements?
 - What is the current state of TQM practices within the organizations under study in the Kingdom of Saudi Arabia?
 - Is there a relationship between TQM practices and cost reduction within the organization?
 - To what extent do the managements of healthcare organizations in the Kingdom of Saudi Arabia recognize the importance of cost reduction?
 - To what extent do healthcare organizations in the Kingdom of Saudi Arabia implement cost reduction systems?
 - To what extent do healthcare organizations in the Kingdom of Saudi Arabia prioritize cost reduction policies?

1.2. Study Objectives:

This study aims to demonstrate the impact of total quality management practices on cost reduction within the organization by applying to a group of hospitals and health centers in the kingdom of Saudi Arabia, through:

- Identify the level of application of total quality management practices in hospitals and health centers in the kingdom of Saudi Arabia under study.
- Identify the reality of quality costs within health organizations in the kingdom of Saudi Arabia.
- Formation of a conceptual structure of the dimensions of total quality management practices and cost reduction and their variables.
- An attempt to understand how Total Quality Management practices contribute to reducing costs within health organizations.
- Develop an accurate strategy that organizations can benefit from in developing the quality of their services and products.
- Identify the quality of products or services provided by hospitals and health centers in the kingdom of Saudi Arabia under study and the extent to which they comply with sustainable quality standards.
- Identify the correlation and impact relationships between Total Quality Management Practices on cost reduction within hospitals and health centers in the kingdom of Saudi Arabia under study.
- Presenting a set of results and recommendations of this study to decision makers and stakeholders within hospitals and health centers in the kingdom of Saudi Arabia under study for use in the processes of developing their operations and services in accordance with Total Quality Management Standards.

1.3. Study Importance:

- Highlight local organizations and highlight the role of total quality management practices on cost reduction.
- Formation of a conceptual framework on the main study variables (Total Quality Management Practices, cost reduction) in ways that contributes to the analysis of their contents and identify their importance and benefits.
- The importance of the study follows from the importance of costs and their impact on the goals of the organization; as costs are the main factor that all organizations are trying to reduce as much as possible due to the impact of costs on increasing and reducing the profits of organizations.
- Measure the efficiency and effectiveness of the quality of a product or service and its impact on reducing costs without affecting the quality of the product in a negative way.
- He drew the attention of stakeholders and decision makers within health organizations to the importance of implementing total quality management practices and their effective role in reducing costs.

- This study comes in a subject where there are few studies, and it is an open field for subsequent studies.
- Supporting and enriching Saudi and Arab libraries and scientific research centers with such studies to open new horizons for researchers on these important topics.

1.4. Study Hypotheses:

The first main hypothesis is:

- **There is no statistically significant effect of overall Total Quality Management practices on overall cost reduction within organizations in Saudi Arabia at $\alpha \leq 0.05$), branching from the main hypothesis a set of the following sub-hypotheses:**
- There is no statistically significant effect of customer focus on overall cost reduction within organizations in Saudi Arabia at $\alpha \leq 0.05$.
- There is no statistically significant effect of senior leadership commitment on overall cost reduction within organizations in Saudi Arabia at $\alpha \leq 0.05$.
- There is no statistically significant effect of training and development on overall cost reduction within organizations in Saudi Arabia at $\alpha \leq 0.05$.
- There is no statistically significant effect of continuous improvement on overall cost reduction within organizations in Saudi Arabia at $\alpha \leq 0.05$.

2. Theoretical Framework:

2.1. Total Quality Management Practices:

Total Quality Management (TQM) has become a global phenomenon, with business organizations worldwide giving it special attention. This is due to the significant challenges facing businesses in contemporary society, challenges related to quality in both goods and services. Quality is used as a competitive advantage among nations, relying on three key pillars: achieving customer satisfaction, employee engagement, and continuous improvement.

(Deming) defines TQM as translating future customer needs into measurable characteristics, where the product is designed and delivered to achieve customer satisfaction (Tariq, 2003).

It is defined as the participation of all organizational functions in the continuous quality improvement process. This concept of organizational management expands the focus from quality control of the manufacturing process to a customer-oriented process centered on delivering a high-quality product (Al-Mousawi, 2010).

- Total Quality Management (TQM) Planning and Practices:

(Juran) divided it into essential steps, including quality planning. This is the first stage, where the organization focuses on identifying its customers and their needs. The product is developed, and the necessary actions are taken to satisfy customer needs and expectations. The organization's financial capabilities are also limited. The scientific steps for producing a service or product are defined, and this facilitates the transfer of information to the production department. This stage helps the organization achieve its future goals and obtain satisfactory results under the operational conditions of TQM. The principles of TQM serve as evaluation frameworks that reflect TQM theories and principles in applicable formats. They also constitute a set of rules and guidelines that help organizations implement the TQM philosophy.

2.1.1. Customer Focus:

This refers to external customers and individuals within the organization, as an individual within the organization includes both the supplier and the consumer. The expected response to customer needs is achieved when the organization is able to perform tasks better than its competitors, specifically in meeting customer needs.

The customer-centric approach is based on the principle of customer satisfaction. The term "customer" encompasses not only external customers but also internal customers, who represent individuals working in various departments within the organization (Ben Aichaoui, 2013).

2.1.2. Leadership Commitment:

Here, we demonstrate that the vitality and stability of organizations in fulfilling their assigned tasks are largely linked to the nature of the leadership that controls and coordinates the organization's human and material resources. This ensures that objectives are achieved more efficiently and responsibly than those of competitors. Furthermore, the ability of the leader to monitor, manage, and respond to various changes is crucial. Introducing any new principle into an organization requires reshaping its culture. The acceptance or rejection of any principle depends on the culture and beliefs of the organization's employees. A quality culture differs fundamentally from a traditional managerial culture. Therefore, it is essential to create a suitable culture for implementing the concept of Total Quality Management (TQM) by changing management methods.

2.1.3. Training and Development:

Training is the organized and planned effort to provide trainees with renewed skills, knowledge, and experiences, aiming to create continuous positive changes in their experiences, attitudes, and

behaviors in order to improve their performance (Al-Ta'ani, 2013).

It as a planned activity aimed at providing individuals with a set of information and skills that lead to increased performance rates (Salahuddin, 2006).

Many organizations are unsuccessful because their employees are not adequately trained in the skills that truly matter in the information age. Training programs help employees become familiar with more advanced technologies and acquire strong competencies and skills to handle the functions and fundamentals of newly introduced technical equipment. Therefore, training is essential to improve employee performance. If employees are trained, they will be aware of their job specifications and the skills required performing their work, and they will be able to use new technology (Khan, 2012).

2.1.4. Continuous Improvement:

Continuous improvement is a renewed and iterative approach to identifying and implementing good and improved methods. The strategic purpose of continuous improvement is to build the capacity to introduce improvements to organizational processes quickly and efficiently, and for the organization to adapt to these improvements. To develop the inherent capabilities of individuals working within the organization, management must provide a broad organizational vision to guide and define performance improvement objectives. Furthermore, the organization's infrastructure must be developed to enable sustainable alignment between the business's production strategy and the application of continuous improvement in processes.

De Magalanes, (2020), emphasizes that the benefits of continuous improvement include eliminating waste, training the workforce, translating organizational goals into tangible results, and increasing the added value of production lines and processes.

Socconini, (2021), explains that the main benefit of continuous improvement lies in its gradual and systematic implementation, which involves the combined efforts of all employees in the organization to make changes without significant capital investment.

2.1.5. Cost Reduction:

The concept of cost has evolved with the changing needs of accountants and economists. It now has a general meaning that varies depending on its purpose and application. Each page adds a specific term, giving it a distinct meaning, as does the process of measuring and recording costs.

It as the financial expenditures incurred by project management to gather productive resources for the purpose of producing goods or services that can be sold (Al-Shanwani, 2000).

Nour, (2004), defines it as a sacrifice of economic value made to obtain a good or service in the present or future.

G. Mylon, (2001), views cost as the sum of all the burdens related to producing a specific product, whether a good or a service, and considers it an internal concept within the organization.

Sufyan and Al-Shara, (2002), define it as the resources sacrificed to achieve a specific goal, and costs are measured in monetary units paid.

- Types of Quality Costs:

Quality costs are classified into quality control costs or conformance costs, the first type; and the second type, quality control failure costs, also known as failure costs or nonconformity costs.

Quality Control Costs: This is the first type of quality costs and includes both prevention costs and evaluation costs.

As the researcher sees it, quality control costs can be defined by their name, meaning they are all costs incurred to ensure that the quality of a product, good, or service reaches the desired, pre-determined level.

As for prevention costs and evaluation costs, they can be defined as follows:

- Prevention costs:

The costs incurred to avoid errors resulting from the production or delivery of defective services before they occur (Arekat, 2015).

(Al-Masoudi, 2017), indicated that prevention costs represent everything an organization spends to prevent the provision of substandard services, both now and in the future. They are also the costs incurred to simultaneously reduce the cost of quality and maintain quality. Therefore, some call them "prevention costs," as they prevent or guard against the occurrence of defective products before they are manufactured or produced. They can be classified as costs related to the design, implementation, and operation of a quality system.

Prevention costs include several activities, including (Abulaila, et al., 2019):

Efficient service design through identifying requirements and specifications that meet customer needs and desires, the organization bears these costs to identify customer needs and expectations for the service; service development costs, which are included in identifying customer needs; training costs, which include the costs of preparing and implementing training programs for workers, supervisors, employees, and managers to ensure the required capabilities at the desired level;

miscellaneous costs, including internet subscriptions, communications, travel, hospitality, conferences and celebrations; and employee rewards to ensure improved customer service quality and reduced waiting times, as well as other quality-related activities; and quality improvement projects through economic feasibility studies.

- Evaluation costs:

These costs are incurred to detect non-conforming services and products. Evaluation costs can be considered costs incurred to maintain the desired quality level and include inspection and testing costs, which are costs incurred to ensure that the product or service meets the specifications, standards, and policies previously established by the service provider or producer. Hussein et al. (2017) see these costs as the costs of examining the final level of service quality and identifying the differences between the specifications of the required service and the service actually delivered. Evaluation costs, as their name suggests, are the costs that assess a product's compliance with established standards, characteristics, specifications, and policies. Evaluation costs include several activities, including (Abulaila et al., 2019):

- Audit costs:

These include the costs of verifying that the service conforms to the established specifications. Building, equipment, and bus inspection costs: These include the costs of inspecting and maintaining buildings and equipment, repair costs/testing costs to identify problems during service delivery, and identify weaknesses in the required quality level and how to address them. Technical consulting fees are also included to keep pace with developments to meet customer requirements and desires. The second type of quality costs is the costs of quality control failure, which are divided into internal and external failure costs.

- Failure costs:

These are the costs incurred after discovering a mismatch between the manufactured product or service provided and the required level previously set by the manufacturer or relevant entity. In other words, failure costs are the costs incurred by an organization due to its failure to achieve the desired or required quality level. They are divided into internal failure costs and external failure costs.

- Internal failure costs

Are the costs incurred by an organization as a result of services or products not conforming to the specifications and standards that meet customer needs, these costs are discovered within the organization and before delivery to the customer (Garrison, 2015).

We may not incur these costs if defects in the service or product do not appear before delivery to the customer.

Internal failure costs are the costs that arise when defects in the service or product are discovered before the customer receives them. Internal failure costs include several activities, including (Abulaila, et al., 2019):

Bad debts: These represent debts that cannot be collected if the customer does not pay the amounts owed; Work-related injury expenses and compensation, including medical treatment and health insurance; and office expenses, including stationery, printing, and computer supplies.

- External Failure Costs:

These are costs incurred by an organization as a result of products or services not conforming to specifications and standards that meet customer needs. These costs are discovered outside the organization after the poor-quality product or service has been delivered to the customer (Garrison, 2015).

Neyestani, (2017), indicated that these costs occur when an organization's services or products fail to meet customer or specific requirements; however, their effects are only discovered after delivery to the customer, their impact can include maintenance, warranty claims, and a negative impact on the organization's reputation.

External failure costs include several activities, including (Abulaila, et al., 2019):

Costs related to court fees and legal services; customer complaint costs, including all costs associated with customer complaints about service failures; and compensation costs resulting from accidents, as well as warranties and guarantees.

After completing the types of quality costs, the researcher emphasizes the necessity of paying attention to the costs of quality control, whether they are prevention or evaluation costs, due to their impact on increasing the quality level of services and products provided, and their impact on reducing the costs of failure as a whole, whether internal failure costs or external failure costs, which in turn will lead to the satisfaction of the recipient of the service or product, and also due to its positive effects on the organization's reputation, which in turn will affect the organization's financial performance.

2.2. The relationship between quality and costs:

The decision to determine the quality level requires a quantitative study of the relationship between

the costs incurred by the organization and the desired quality level, as follows:

- If the quality level requires increasing through the type of raw materials used, the level of technology, the required level of worker skill, the time required for production, the type of machinery used, or the inspection system, all of this will increase the "cost of production." Given the savings achieved in the production process, we note that the marginal increase in costs begins low to a certain extent and then increases due to the need for specialized methods at exaggerated quality levels.
- There is another type of cost that is inversely related to the level of product quality, called the costs resulting from a decrease in the level of product quality. The lower the level of product quality, the higher these costs will be. These costs include the cost of repair and maintenance during the warranty period, the cost of the organization losing some of its customers due to their discovery of the poor quality of its products, and the cost of compensation that the organization may provide for damages incurred by others as a result of the low quality of its goods and services. The following figure illustrates the relationship between the level of product quality and both the cost of production and the cost of the low quality level.



Figure 2.1: The relationship between quality level and costs (Al-Daradka, 2015)

It is noted from the previous figure that the cost of a decline in quality is inversely proportional to the quality level; that is, the higher the quality level, the lower the costs associated with the decline in quality. Meanwhile, the cost of production is directly proportional to the quality level; that is, the higher the quality level, the higher the production cost. It is also noted that the best quality level is at the lowest point in total costs, where these costs are at their lowest value. This point is called the "best quality point."

3. Previous Studies:

- Study (Taha, 2024), The Role of Total Quality Management and Target Costing in Reducing Costs.

In the contemporary business environment, organizations continuously seek strategies to enhance efficiency and reduce operational costs. This study explores the synergistic impact of Total Quality Management (TQM) and Target Costing (TC) in achieving cost reduction. Total Quality Management emphasizes a customer-focused approach, continuous improvement, and employee involvement, fostering a culture of quality throughout the organization. Target Costing, on the other hand, is a proactive cost management technique that sets cost targets based on market conditions and customer expectations, ensuring that products are profitable even before they reach the market. By integrating TQM and TC, organizations can achieve significant cost savings while maintaining high-quality standards. This research investigates the theoretical underpinnings and practical applications of both methodologies, examining their individual and combined effects on cost reduction. Through a comprehensive literature review and case study analysis, the study demonstrates how the alignment of TQM's quality-driven philosophy with TC's cost control mechanisms can lead to improved product design, efficient resource utilization, and enhanced customer satisfaction. The findings suggest that the implementation of TQM and TC not only drives down costs but also contributes to competitive advantage and long-term sustainability. The study concludes with recommendations for businesses seeking to leverage these strategies for optimal performance and cost efficiency.

- Study (Lamine, 2022), The Role of Value Chain Analysis and Total Quality Management in Cost Reduction: A Survey Study of a Sample of Industrial Organizations in the State of Blida.

This study aims to highlight the role of value chain analysis and total quality management in cost reduction, attempting to apply this through a survey exploratory study of 120 employees (administrators and technicians) from a sample of industrial institutions in Blida by adopting a descriptive analytical approach. This research concluded that both techniques under study contribute to cost reduction from three aspects: saving costs in the product planning and design phase, avoiding additional costs in the product implementation phase, and finally achieving indirect cost savings by exploiting the energy saved by eliminating waste. It also contributes to profit maximization, competition support, and maximizing the value of products from the customer's perspective.

- Study (Abbas, 2025), The Role of Target Costing and Quality Function in Improving Product Value.

This study aims to provide theoretical frameworks for the application of target cost technology and

the deployment of the quality function to improve product value and achieve competitive advantage. Data were collected from plastic and woven bag factories, along with field visits and observations, interviews with managers and employees, accounting records, financial reports. The study concluded that the application of these technologies contributes to improving product value and increasing sales, which leads to increased profitability of the company in the long and short term. Where the economic and competitive transformations currently taking place in the world, companies are constantly striving to improve the value of their products and increase profitability. Among the practical tools to achieve this goal are the target cost technique and the quality function, which are two means of achieving a balance between cost and quality.

4. Research Methodology:

In light of the nature of the study, the questions raised, the hypotheses, and the objectives set forth, which focus on studying the impact of Total Quality Management practices on reducing costs within the organization, applied to a group of hospitals and health centers in the Kingdom of Saudi Arabia as they are in reality, and attempting to describe them accurately, we adopted the descriptive approach in our study because it is related to studying topics related to the humanities. It is one of the common forms of research that many researchers rely on, as it seeks to determine the current situation of a particular phenomenon and then works to describe it and clarify its characteristics.

4.1. Study Population and Sample:

Sampling is crucial, as constraints such as budget and time prevent a complete survey of the study population. Sampling also provides higher reliability and faster results (Bakri, 2009). The study sample consisted of a diverse group of managers, department heads, and staff within a group of hospitals and health centers in the Kingdom of Saudi Arabia. The researcher also attempted to diversify the categories of respondents and the activities of the organizations in an effort to generalize the study's findings to Riyadh, where (15) health organizations, all operating in Riyadh, were included. The researcher considered the geographical distribution of these organizations to ensure full representation of the study population. The study sample consisted of 552 respondents. The researcher targeted the entire study sample. The questionnaire was distributed to the entire study sample, which consisted of (552) respondents.

4.2. Data Sources:

4.2.1. Primary Data: The study data was collected directly through questionnaires. A questionnaire related to the study hypotheses and research model was developed based on what authors and

researchers have reported regarding the impact of Total Quality Management (TQM) practices on cost reduction within organizations. This questionnaire served as the primary source. The primary data for this study was collected through questionnaires, The questionnaire consisted of two sections: the first section, Total Quality Management (TQM) Practices, with its dimensions of Customer Focus, Leadership, Commitment, Training and Development, and Continuous Improvement, comprised twenty statements; the second section, Cost Reduction, comprised sixteen statements. The questionnaire was developed based on a review of previous literature.

4.2.2. Secondary Data: In addition to the data collected from the primary source, which is the basis of the analysis process, some data was also extracted from books, journals, research papers, theses, articles, working papers, and the World Wide Web. In this way, it was easier to build a strong theoretical background to clarify the definition of the problem, test it, and compare the results of the study with the results of the literature.

4.3. Validity and Reliability:

According to Sekran (2013), validity relates to whether we are measuring the correct concept, while reliability relates to the stability and consistency of the measurement.

4.3.1. Validity:

Two methods were used to test the questionnaire in order to ensure clarity and provide a coherent study questionnaire with a high degree of accuracy.

- **First**, multiple data sources, such as journals, research papers, dissertations, the internet, and articles, were used to define and refine the model and measures.
- **Second**, a comprehensive review covering all aspects of the study was conducted by academic reviewers from the University of Lincoln and business practitioners. Some items were added, while others were dropped based on their valuable recommendations. Other items were revised to be more precise in order to improve and refine the study instrument.

4.3.2. Reliability:

Reliability testing was conducted using Cronbach's Alpha test, to measure the internal consistency of the study instrument (questionnaire) as well as reliability. This test indicates the extent to which it is without bias or error and thus ensures consistent measurement across the different items in the instrument. In other words, it can be simply described as precision in measurement that includes stability and consistency. The reliability of the questionnaire (Study Tool) means that it gives almost the same results if it is presented repeatedly under the same conditions in different periods of time.

Reliability is expressed statistically through the Cronbach alpha reliability coefficient, whose value generally ranges between zero and the correct one; where the greater the value of the coefficient, the It approached one. This indicates that the tool has high reliability and vice versa. In general, most studies indicate that the tool has an acceptable degree of reliability when the average exceeds 0.6.

The Cronbach alpha method was used to measure the reliability of the questionnaire, and the results are shown in the following table:

Table 4.1: Cronbach's alpha reliability coefficient for each axis of the study

| Variables | | Total Quality Management (TQM) Practices | | |
|-------------------|----------------|--|--------------------------|------------------------|
| | Customer Focus | Leadership Commitment | Training and Development | Continuous Improvement |
| No. of paragraphs | 5 | 5 | 5 | 5 |
| Cronbach's Alpha | 0.823 | 0.940 | 0.942 | 0.863 |
| Variables | | Cost Reduction | | |
| No. of paragraphs | | 16 | | |
| Cronbach's Alpha | | 0.986 | | |
| Total All | | 0.940 | | |

It appears from the table above that the value of the Cronbach alpha coefficient for the total questionnaire items amounted to 0.940, which is a very high value that reflects the high degree of reliability it enjoys. We also note that the reliability coefficient for all variables was close and all of them exceeded the minimum required to achieve the reliability condition, which is (0.60).

5. Findings and Analysis:

5.1. Descriptive Analysis of Study Variables:

5.1.1. Independent Variable: Total Quality Management Practices (Customer Focus):

Table 5.1: Arithmetic mean and standard deviation of the axis of total quality management practices (Customer Focus)

| No. | Paragraph | Mean | std | Order | Level |
|-----|---|------|------|-------|-------|
| 1 | The organization strives to be proactive in meeting its customers' needs. | 4.43 | 0.23 | 5 | High |
| 2 | The organization works to anticipate problems that customers may face. | 3.75 | 0.92 | 2 | High |

| | | | | | |
|------------------------|--|-------------|-------------|-------------|------|
| 3 | The organization considers customer satisfaction essential for long-term sustainability. | 4.29 | 0.72 | 2 | High |
| 4 | The organization seeks to exceed customer expectations by introducing new products and services. | 4.00 | 5.52 | 3 | High |
| 5 | The organization values customer feedback. | 4.00 | 5.52 | 4 | High |
| Overall Average | | 4.09 | 0.76 | High | |

5.1.2. Independent Variable: Total Quality Management Practices (Leadership Commitment):

Table 5.2: Arithmetic mean and standard deviation of the axis of total quality management practices (Leadership Commitment)

| No. | Paragraph | Mean | std | Order | Level |
|------------------------|--|-------------|-------------|---------------|--------|
| 1 | The organization's senior management embraces employee suggestions that enhance quality within the organization. | 3.29 | 5.38 | 4 | Medium |
| 2 | The organization encourages and promotes collaborative teamwork. | 3.82 | 5.22 | 2 | High |
| 3 | Senior management fosters a sense of responsibility among employees for delivering high-quality products. | 3.82 | 5.07 | 3 | High |
| 4 | Senior management develops clear plans to ensure product quality. | 3.29 | 5.39 | 2 | Medium |
| 5 | Senior management adopts a vision for improving product quality and develops future plans to achieve this. | 4.00 | 0.28 | 5 | High |
| Overall Average | | 3.66 | 1.04 | Medium | |

5.1.3. Independent Variable: Total Quality Management Practices (Training and Development):

Table 5.3: Arithmetic mean and standard deviation of the axis of total quality management practices (Training and Development)

| No. | Paragraph | Mean | std | Order | Level |
|-----|--|------|------|-------|--------|
| 1 | The organization believes that training is the best way to acquire practical skills. | 3.75 | 5.22 | 1 | High |
| 2 | The organization implements regular training programs for new employees to equip them with the necessary skills. | 3.43 | 5.53 | 3 | Medium |

| | | | | | |
|------------------------|---|-------------|-------------|---------------|--------|
| 3 | The organization develops comprehensive training plans for its staff. | 3.29 | 5.55 | 4 | Medium |
| 4 | The organization is committed to conducting training courses that are relevant to the nature of its work. | 3.28 | 5.53 | 2 | Medium |
| 5 | The organization evaluates employee performance after they complete training courses. | 3.54 | 5.22 | 5 | Medium |
| Overall Average | | 3.43 | 1.05 | Medium | |

5.1.4. Independent Variable: Total Quality Management Practices (Continuous Improvement):

Table 5.4: Arithmetic mean and standard deviation of the axis of total quality management practices (Continuous Improvement)

| No. | Paragraph | Mean | std | Order | Level |
|------------------------|--|-------------|-------------|---------------|--------|
| 1 | The organization strives for continuous performance improvement. | 3.82 | 0.29 | 5 | High |
| 2 | The organization is committed to developing new services that meet customer needs. | 3.82 | 0.29 | 2 | High |
| 3 | The organization seeks improvement through research and field studies. | 2.82 | 5.22 | 2 | Medium |
| 4 | The organization links performance and quality to the improvement process. | 3.27 | 5.27 | 4 | Medium |
| 5 | The organization benchmarks its results against those of its competitors. | 3.27 | 5.53 | 3 | Medium |
| Overall Average | | 3.54 | 0.83 | Medium | |

5.1.5. Dependent Variable: Cost Reduction (Prevention Costs, Assessment Costs, Internal Failure Costs, External Failure Costs):

Table 5.5: Arithmetic mean and standard deviation of the axis of total quality management practices (Cost Reduction)

| No. | Paragraph | Mean | std | Order | Level |
|-----|--|------|------|-------|--------|
| 1 | The organization accurately calculates the costs of designing new products and services. | 3.54 | 5.34 | 8 | Medium |

| | | | | | |
|------------------------|--|-------------|-------------|----|--------|
| 2 | The safety and functionality of equipment and devices are verified before services are provided. | 3.43 | 0.98 | 2 | Medium |
| 3 | Specialized training courses are held for employees to enhance their skills, preventing wasted time and increased costs. | 3.27 | 5.40 | 1 | Medium |
| 4 | The service production process is planned in a way that prevents and helps detect errors before or at the moment they occur. | 3.29 | 5.55 | 4 | Medium |
| 5 | The costs of testing products or services are calculated before they are offered to the customer. | 3.29 | 5.38 | 5 | Medium |
| 6 | Loss rates are calculated for products or services that do not conform to specifications. | 3.54 | 5.22 | 7 | Medium |
| 7 | Costs of inspecting stored materials before their use in production processes are calculated. | 3.00 | 5.52 | 11 | Medium |
| 8 | Costs of field quality control processes and tests for operational procedures are calculated accurately. | 3.29 | 0.92 | 3 | Medium |
| 9 | Losses resulting from sudden work stoppages are calculated accurately. | 3.54 | 5.07 | 6 | Medium |
| 10 | Costs resulting from internal failures are calculated accurately. | 3.00 | 5.54 | 10 | Medium |
| 11 | The costs of redesigning services or products that failed initial testing as a new product or service are calculated. | 3.00 | 5.52 | 12 | Medium |
| 12 | The cost of delays in finding alternative solutions in the event of an operational failure is calculated. | 3.05 | 5.52 | 9 | Medium |
| 13 | The costs of handling customer complaints are accurately calculated. | 2.82 | 5.22 | 15 | Medium |
| 14 | The costs or losses of replacing defective or damaged products or services discovered by the customer are calculated. | 3.00 | 5.52 | 13 | Medium |
| 15 | The costs of lawsuits against the organization resulting from harm to customers or others are calculated. | 2.75 | 5.38 | 16 | Medium |
| 16 | The change in annual sales volume compared to previous years is calculated. | 3.00 | 5.45 | 14 | Medium |
| Overall Average | | 3.12 | 1.11 | | |

5.2. Testing Study Hypotheses:

5.2.1. The First Main Hypothesis

There is no statistically significant effect of overall Total Quality Management practices on overall cost reduction within organizations in Saudi Arabia at $\alpha \leq 0.05$.

Table 5.6: Correlation Matrix between Overall TQM Practices and Overall Cost Reduction

| Variables | Cost Reduction | TQM Practices |
|-----------------|----------------|---------------|
| Cost Reduction | 1.000 | .915 |
| TQM Practices | .915 | 1.000 |
| Sig. (1-tailed) | — | .002 |
| N | 552 | 552 |

The results in Table 5.6 show a strong positive correlation between overall Total Quality Management practices and overall cost reduction, where the Pearson correlation coefficient was $r = .915$, with a significance value less than $.05$. This indicates that higher levels of overall Total Quality Management practices are associated with higher levels of overall cost reduction.

Table 5.7: Model Summary for the Simple Linear Regression of Overall Cost Reduction on Overall TQM Practices

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|------|----------|-------------------|----------------------------|
| 1 | .915 | .837 | .837 | .49137 |

a. Predictor: Overall TQM Practices

b. Dependent Variable: Overall Cost Reduction

The results in Table 5.7 show that the correlation coefficient between overall Total Quality Management practices and overall cost reduction was $R = .915$. The coefficient of determination was $R^2 = .837$, indicating that overall Total Quality Management practices explain approximately 83.7% of the variance in overall cost reduction. This reflects a strong explanatory power of the regression model.

Table 5.8: Regression Coefficients for the Effect of Overall TQM Practices on Overall Cost Reduction

| Model | B | Std. Error | Beta | t | Sig. | Zero-order | Partial | Part |
|-----------------------|-------|------------|------|--------|------|------------|---------|------|
| Overall TQM Practices | 1.231 | .023 | .915 | 53.187 | .000 | .915 | .915 | .915 |

a. Dependent Variable: Overall Cost Reduction

The results in Table 5.8 indicate that overall Total Quality Management practices have a positive and statistically significant effect on overall cost reduction. The unstandardized coefficient was $B = 1.231$, which means that a one-unit increase in overall Total Quality Management practices is associated with an increase of 1.231 units in overall cost reduction. The standardized coefficient was $\text{Beta} = .915$, indicating a strong positive effect. The t -value was 53.187 with a significance value of .000, which is less than .05. Therefore, the effect is statistically significant.

Table 5.9: ANOVA Results for the Significance of the Simple Linear Regression Model

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|------------|----------------|-----|-------------|----------|------|
| Regression | 683.022 | 1 | 683.022 | 2828.897 | .000 |
| Residual | 132.794 | 550 | .241 | | |
| Total | 815.816 | 551 | | | |

a. Dependent Variable: Overall Cost Reduction

b. Predictor: Overall TQM Practices

The results in Table 5.9 show that the regression model is statistically significant, $F(1, 550) = 2828.897$, $p < .05$. This means that overall Total Quality Management practices significantly predict overall cost reduction. Accordingly, the null hypothesis is rejected, and the alternative hypothesis is accepted. Therefore, there is a statistically significant effect of overall Total Quality Management practices on overall cost reduction within organizations in Saudi Arabia at $\alpha \leq 0.05$.

5.2.1.1. The First Sub-Hypothesis

There is no statistically significant effect of customer focus on overall cost reduction within organizations in Saudi Arabia at $\alpha \leq 0.05$.

Table 5.10: Results of the Simple Linear Regression Analysis for the Effect of Customer Focus on Overall Cost Reduction

| Dependent Variable | Independent Variable | R | R ² | Adj. R ² | F | Sig. (F) | β | t | Sig. (t) | VIF |
|------------------------|----------------------|------|----------------|---------------------|---------|----------|---------|--------|----------|-------|
| Overall Cost Reduction | Customer Focus | .702 | .493 | .492 | 534.393 | .000 | .702 | 23.117 | .000 | 1.000 |

The results in Table 5.10 show that customer focus has a positive and statistically significant effect on overall cost reduction. The correlation coefficient was $R = .702$, indicating a strong positive relationship between customer focus and overall cost reduction. The coefficient of determination was

$R^2 = .493$, which means that customer focus explains approximately 49.3% of the variance in overall cost reduction.

The regression model was statistically significant, $F(1, 550) = 534.393$, $p < .05$. In addition, the standardized regression coefficient was $\beta = .702$, and the t-value was 23.117 with a significance value of .000, which is less than .05. This indicates that customer focus is a statistically significant predictor of overall cost reduction.

Accordingly, the null hypothesis is rejected, and the alternative hypothesis is accepted. Therefore, there is a statistically significant effect of customer focus on overall cost reduction within organizations in Saudi Arabia a

5.2.1.2. The Second Sub-Hypothesis

There is no statistically significant effect of senior leadership commitment on overall cost reduction within organizations in Saudi Arabia at $\alpha \leq 0.05$.

Table 5.11: Results of the Simple Linear Regression Analysis for the Effect of Senior Leadership Commitment on Overall Cost Reduction

| Dependent Variable | Independent Variable | R | R ² | Adj. R ² | F | Sig. (F) | β | t | Sig. (t) | VIF |
|------------------------|------------------------------|------|----------------|---------------------|---------|----------|---------|--------|----------|-------|
| Overall Cost Reduction | Senior Leadership Commitment | .734 | .539 | .538 | 642.427 | .000 | .734 | 25.346 | .000 | 1.000 |

The results in Table 5.11 show that senior leadership commitment has a positive and statistically significant effect on overall cost reduction. The correlation coefficient was $R = .734$, indicating a strong positive relationship between senior leadership commitment and overall cost reduction. The coefficient of determination was $R^2 = .539$, which means that senior leadership commitment explains approximately 53.9% of the variance in overall cost reduction. The regression model was statistically significant, $F(1, 550) = 642.427$, $p < .05$. In addition, the standardized regression coefficient was $\beta = .734$, and the t-value was 25.346 with a significance value of .000, which is less than .05. This indicates that senior leadership commitment is a statistically significant predictor of overall cost reduction. Accordingly, the null hypothesis is rejected, and the alternative hypothesis is accepted. Therefore, there is a statistically significant effect of senior leadership commitment on overall cost reduction within organizations in Saudi Arabia at $\alpha \leq 0.05$.

5.2.1.3. The Third Sub-Hypothesis

There is no statistically significant effect of training and development on overall cost reduction within organizations in Saudi Arabia at $\alpha \leq 0.05$.

Table 5.12: Results of the Simple Linear Regression Analysis for the Effect of Training and Development on Overall Cost Reduction

| Dependent Variable | Independent Variable | R | R ² | Adj. R ² | F | Sig. (F) | β | t | Sig. (t) | VIF |
|------------------------|--------------------------|------|----------------|---------------------|----------|----------|---------|--------|----------|-------|
| Overall Cost Reduction | Training and Development | .920 | .846 | .846 | 3030.729 | .000 | .920 | 55.052 | .000 | 1.000 |

The results in Table 5.12 show that training and development have a positive and statistically significant effect on overall cost reduction. The correlation coefficient was $R = .920$, indicating a very strong positive relationship between training and development and overall cost reduction. The coefficient of determination was $R^2 = .846$, which means that training and development explain approximately 84.6% of the variance in overall cost reduction.

The regression model was statistically significant, $F(1, 550) = 3030.729$, $p < .05$. In addition, the standardized regression coefficient was $\beta = .920$, and the t-value was 55.052 with a significance value of .000, which is less than .05. This indicates that training and development are statistically significant predictors of overall cost reduction.

Accordingly, the null hypothesis is rejected, and the alternative hypothesis is accepted. Therefore, there is a statistically significant effect of training and development on overall cost reduction within organizations in Saudi Arabia at $\alpha \leq 0.05$.

5.2.1.4. The Fourth Sub-Hypothesis

There is no statistically significant effect of continuous improvement on overall cost reduction within organizations in Saudi Arabia at $\alpha \leq 0.05$.

Table 4.13: Results of the Simple Linear Regression Analysis for the Effect of Continuous Improvement on Overall Cost Reduction

| Dependent Variable | Independent Variable | R | R ² | Adj. R ² | F | Sig. (F) | β | t | Sig. (t) | VIF |
|------------------------|------------------------|------|----------------|---------------------|----------|----------|---------|--------|----------|-------|
| Overall Cost Reduction | Continuous Improvement | .959 | .920 | .920 | 6297.695 | .000 | .959 | 79.358 | .000 | 1.000 |

The results in Table 5.13 show that continuous improvement has a positive and statistically significant effect on overall cost reduction. The correlation coefficient was $R = .959$, indicating a very strong positive relationship between continuous improvement and overall cost reduction. The coefficient of determination was $R^2 = .920$, which means that continuous improvement explains approximately 92.0% of the variance in overall cost reduction.

The regression model was statistically significant, $F(1, 550) = 6297.695$, $p < .05$. In addition, the standardized regression coefficient was $\beta = .959$, and the t-value was 79.358 with a significance value of .000, which is less than .05. This indicates that continuous improvement is a statistically significant predictor of overall cost reduction.

Accordingly, the null hypothesis is rejected, and the alternative hypothesis is accepted. Therefore, there is a statistically significant effect of continuous improvement on overall cost reduction within organizations in Saudi Arabia at $\alpha \leq 0.05$.

6. Conclusions and Recommendations:

6.1. Results:

- The descriptive results generally confirmed, from the perspective of the study sample, the high importance of the customer focus dimension as one of the dimensions of Total Quality Management. The results also showed low dispersion in the responses of the study sample regarding the customer focus variable and its items, which reflects a convergence of views among the respondents regarding the importance of customer focus in supporting and improving overall cost reduction within hospitals and health centers in the Kingdom of Saudi Arabia under study.
- The descriptive results also showed, from the perspective of the study sample, a moderate level of importance for the dimensions of senior leadership commitment, training and development, and continuous improvement. The low dispersion in the responses indicates a convergence of views among the study sample regarding the role of these dimensions in supporting and improving overall cost reduction within hospitals and health centers in the Kingdom of Saudi Arabia under study.
- The descriptive results revealed that the overall cost reduction variable, including prevention costs, evaluation costs, internal failure costs, and external failure costs, was perceived at a moderate level by the study sample. The results also showed low dispersion in the responses, which reflects a convergence of views among the respondents regarding the importance of cost reduction practices within hospitals and health centers in the Kingdom of Saudi Arabia under study.

- The simple linear regression analysis revealed a statistically significant positive effect of overall Total Quality Management practices on overall cost reduction within organizations in Saudi Arabia at a significance level of $\alpha \leq 0.05$. The results showed that overall TQM practices explained approximately 83.7% of the variance in overall cost reduction, indicating strong explanatory power of the model.
- The simple linear regression analysis showed a statistically significant positive effect of customer focus on overall cost reduction at a significance level of $\alpha \leq 0.05$. The results indicated that customer focus explained approximately 49.3% of the variance in overall cost reduction. Accordingly, the first sub-hypothesis null hypothesis was rejected.
- The simple linear regression analysis showed a statistically significant positive effect of senior leadership commitment on overall cost reduction at a significance level of $\alpha \leq 0.05$. The results indicated that senior leadership commitment explained approximately 53.9% of the variance in overall cost reduction. Accordingly, the second sub-hypothesis null hypothesis was rejected.
- The simple linear regression analysis showed a statistically significant positive effect of training and development on overall cost reduction at a significance level of $\alpha \leq 0.05$. The results indicated that training and development explained approximately 84.6% of the variance in overall cost reduction. Accordingly, the third sub-hypothesis null hypothesis was rejected.
- The simple linear regression analysis showed a statistically significant positive effect of continuous improvement on overall cost reduction at a significance level of $\alpha \leq 0.05$. The results indicated that continuous improvement explained approximately 92.0% of the variance in overall cost reduction. Accordingly, the fourth sub-hypothesis null hypothesis was rejected.
- The findings indicate that Total Quality Management practices and their dimensions play a significant role in enhancing overall cost reduction within hospitals and health centers in the Kingdom of Saudi Arabia. Among the individual dimensions, continuous improvement showed the strongest explanatory power, followed by training and development, senior leadership commitment, and customer focus.

6.2. Recommendations:

- Activating the role of control and supervision within the group of hospitals and health centers in the kingdom of Saudi Arabia under study and taking into account feedback reports.
- Work on reducing costs at the design and planning stage before starting the production process or providing services by scaling costs.

- Paying attention to modern methods of cost management, including the target cost system, through which the organization is able to reduce the costs of its products and reserve a niche for it in the market, achieve customer satisfaction and raise the level of profitability.
- The use of some statistical tools and means of quality control in order to detect errors in the provision of Service and take corrective measures to address them.
- To study the customer's behavior and criticism of the product or service, which constitute strong opportunities to create and develop the competitive advantage of the organization.
- Continue to design new mechanisms and methods to develop working methods in accordance with international quality standards.
- Encourage organizations to obtain more quality certificates and local and international specifications.
- The need to conduct more studies that examine the relationship of Total Quality Management and its impact on cost reduction on sectors other than society and the study sample.

7. References

- Aboyassin, N. A., & Sultan, M. A. (2017). The role of human resources training in improving the employee's performance: Applied study in the five stars hotels in Jordan. *International Journal of Business Administration*, 8(5), 46.
- Abulaila, M. D., Abdulrahman, I., Aloudat, A. A., (2019), The Impact of Quality Cost on Financial Performance of Banks Operating in Jordan, *Research Journal of Finance and Accounting*, Vol 10, (No 2), P 53-61.
- Aishouni, Muhammad Ahmad (2007). *Quality Control: Basic Applications and Their Applications in Production and Service Fields*, 1st ed., Riyadh, Dar Al-Ashab for Publishing and Distribution.
- Al-Badawi, Al-Tayeb Yousef Med Ahmed. (2015). *Applying Total Quality Management Procedures in Educational Institutions: Creating Suitable Conditions for the Teaching and Learning Processes*. (Khartoum: Sudan University of Science and Technology, Deanship of Scientific Research, *Journal of Total Quality Management*, Vol. 16, No. 1), p. 34.
- Al-Baldawi, Abdul Hamid Abdul Majeed, and Nadeem, Zainab Shukri Mahmoud. (2007). *Total Quality Management: Reliability and Modern Technologies in its Application and Sustainability*. Amman, Jordan: Dar Al-Shorouk for Printing and Publishing.

- Al-Daradka, Mamoun Suleiman. (2015). Total Quality Management and Customer Service, Dar Safaa for Publishing and Distribution, 1st Edition, Amman.
- Al-Masoudi, Haider (2017). Strategic Management of Quality Costs. 2nd ed., Amman, Jordan: Dar Al-Yazouri for Publishing and Distribution.
- Al-Mousawi, Abbas Nour Kahit. (2010). Integrating Total Quality Management and Activity-Based Costing (ABC) (Baghdad: Al-Mustansiriya University, College of Administrative and Economic Sciences, Journal of Management and Economics, Issue 80, p. 6).
- Al-Rfou, A.N. (2012). Achieving Competitive Advantage through Enterprise Resource Planning System (ERP) Empirical Evidence from Jordan. International Journal of Asian Social Science, 2(6), 850-857.
- Al-Sirafi, Muhammad Abdul-Fattah. (2006). Monitor the Quality of Your Products, 1st ed., Dar Al-Fikr Al-Jami'i, Alexandria, Egypt.
- Arekat. (2015). The Impact of Quality Control on Cost Reduction: An Applied Study on Food Companies in the Hashemite Kingdom of Jordan.
- Ben Aishawi, Ahmed. (2013). Total Quality Management - The Path to Achieving Outstanding Organizational Performance. Algerian Institutions Performance Journal, 01(02), pp. 33-46.
- Campanella, Jack, (1999), Principles of quality costs, Third edition, American society for quality.
- Crosby. (1980). Free Is Quality.
- De Magalanes. (2020), emphasizes that the benefits of continuous improvement include eliminating waste, training the workforce, translating organizational goals into tangible objectives, and increasing the added value of production lines and processes.
- Elnaga, A., & Imran, A. (2013). The effect of training on employee performance. European journal of Business and Management, 5(4), 137-147.
- G.Mylon. (2001). Comptabilité analytique, édition Bréal.
- Garrison, R. H., Noreen, E. W., Brewer, P. C., (2015), Managerial Accounting, (13 th ed), New York, McGraw-Hill Irwin.
- George, Stephen & Wimers Kirch Arnold. (1998). Total Quality Management. Jerusalem: Dar Al-Basheer.
- Ghanem, Anwar Suleiman Kamal. (2020). The Impact of Quality Costs on Financial Performance in Jordanian Service Companies Listed on the Amman Stock Exchange. (Unpublished Master's Thesis); Faculty of Business/Middle East University.

- Hassan, Ahmed Al-Taani. (2012). Administrative training according to a developmental vision (the nature of training and electronic training methods, components of the training process, the training package, building and evaluating training programs), Amman: Wael Publishing and Distribution House.
- Horngren, C. T. Datar, S. M. Rajan, M. V., (2016) Cost Accounting: a Managerial Emphasis, (16 th ed), New Jersey, Toronto Pearson.
- Iqbal, M. Z., & Khan, R. A. (2012). The growing concept and uses of training needs assessment: A review with proposed model. Journal of European Industrial Training.
- Istaiti, Litiya; Akram, Dima Mustafa. (2005). Total Quality Costs and Total Quality Management: An Analytical Study of Pharmaceutical Companies in Jordan, University of Jordan, Amman, Jordan.
- Jekiel, Cheryl M. (2020). Lean Human Resources Redesigning HR Processes for a Culture of Continuous Improvement, Second Edition. Al-Shanwani, Salah Al-Din. (2000). Studies in Business Economics, Dar Al-Nahda Al-Arabiya, Beirut, Lebanon.
- Korankye, A. (2013). Total Quality Management (TQM): A Source of Competitive Advantage: A Comparative Study of Manufacturing and Service Firms in Ghana. International Journal of Asian Social Science, 3(6), 1293-1305.
- Nayestani, Behnam (2017) Principles and Contributions of Total Quality Mangement (TQM) Gurus on Business Quality Improvement.
- Nour, Ahmed Mohammed. (2004). Cost Accounting for Measurement Purposes in the Contemporary Manufacturing Environment, University Press, Egypt.
- Rashwan, Ahmed Abdel-Aal. (2020). Quality Management, Alexandria University, Faculty of Commerce, Department of Business Administration.
- Salah Al-Din, Mahmoud. (2006). Factors for Success in Implementing Total Quality Management and Its Impact on the Performance of Small and Medium Enterprises, University of Jordan Studies.
- Socconini. (2021), explains that the main benefit of continuous improvement lies in its gradual and systematic implementation, which includes the combined efforts of all employees in the organization to implement changes without significant capital investments.
- Sufian, Suleiman, and Al-Shara, Majid. (2002). Managerial Accounting: Decision Making and Control. Dar Al-Sharq for Publishing and Distribution.

- Talib, F.; Rahman, Z.; Qureshi M. (2012). Impact of Total Quality Management and Service Quality in the Banking Sector. *Journal of Telecommunications System and Management*, 1(2), 2167-0919.
- Tariq, Majd Hussein, and Dr. Ahmed Saba'i Qutb. (2003). An Analytical Study of Models and Factors for Measuring the Quality of External Control over Accounts. (Cairo: Cairo University, Faculty of Commerce, *Journal of Accounting, Management and Insurance*, Vol. 42, No. 6, p. 358).
- Tayel, Mustafa Kamal Al-Sayed. (2013). *Total Quality Management Standards*. Amman: Dar Osama for Publishing and Distribution, p. 71.
- Ware, E.O. (2014). Investigate the Benefit Practice of Total Quality Management as Competitive Advantage in Corporate Institution: A Case Study of Cocoa-Cola Bottling Company Ghana Ltd. *Research Journal of Finance and Accounting*, 5(23), 97-99.
- Youssef, Mohammed Mahmoud. (1994). *Cost Accounting*, Volume 1, Dar Al-Hikma for Printing and Publishing, Doha, Qatar.

This article is distributed under the terms of the Creative Commons Attribution-Non-Commercial 4.0 International License (CC BY-NC 4.0), which permits any non-commercial use, sharing, adaptation, and reproduction in any medium or format, provided appropriate credit is given to the original authors and source.

Doi: <https://doi.org/10.52133/ijrsp.v7.79.8>