

# The Impact of Total Quality Management on Sustainable Competitive Advantage at Jordanian Commercial Banks

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## Abstract

The study aimed to identify the impact of Total Quality Management with its dimensions (customer focus, continuous improvement, top management commitment, and operations management) on Sustainable Competitive Advantage with its combined dimensions (superior efficiency, cost, superior quality, flexibility, superior innovation, and superior responsiveness) at Jordanian commercial banks, the study was conducted with (300) managers in upper and middle management at these banks, a questionnaire was distributed to them to collect primary data, and (267) valid questionnaires were returned for statistical analysis representing a response rate of (89%), (SPSS) was used to analyze the data and test the hypotheses. The study concluded that Total Quality Management and Sustainable Competitive Advantage are of high relative importance at Jordanian commercial banks, it also found a statistically significant impact of Total Quality Management, with its dimensions (customer focus, continuous improvement, top management commitment, and operations management) on Sustainable Competitive Advantage with its combined dimensions (superior efficiency, cost, superior quality, flexibility, superior innovation, and superior responsiveness) at Jordanian commercial banks. The study presented a set of recommendations, the most important of which are: Focus on adopting a comprehensive quality framework that integrates all bank operations by developing a unified quality management system aligned with the bank's strategic objectives. Foster innovation by supporting a creative culture within the bank, establishing incubators for ideas, investing in financial technology (FinTech), and developing new banking products that meet evolving market needs

**Keywords:** Total Quality Management, Sustainable Competitive Advantage, Jordanian Commercial Banks

## Introduction

In light of rapid market fluctuations in a dynamic and highly competitive environment, providing superior products and services that meet and exceed customer expectations has

become a key priority and a necessity for organizational success, this has necessitated the adoption of management strategies through which the organization achieves success and continuity, one of the most prominent of these strategies is Total Quality Management (TQM), considered an effective tool for integrating internal and external customers to achieve continuous improvement of activities and processes, and to provide high-quality products and services at reasonable prices. In doing so, the organization will excel and expand its offerings, ultimately resulting in prosperity and stability in the foreseeable future (Karunakaran et al., 2022, 164-165).

Today, in an era of global competition, organizations worldwide strive to achieve a Sustainable Competitive Advantage (SCA) through value creation, this advantage is reflected in offering superior products or services at a lower cost, achieved by investing in the organization's resources and capabilities, these investments provide distinctive efficiencies that create a unique competitive advantage, one that cannot be replicated or imitated in terms of cost or differentiation. Ultimately, these advantages lead to the creation of value exceeding that of competitors (Kumar, 2015, 77), which is fundamental to achieving a SCA.

The study problem lies in the Sustainable Competitive Advantage (SCA) of Jordanian commercial banks, this is driven by the external environment, characterized by rapid technological advancements and unstable economic and political changes, these factors have intensified competition among organizations, accelerating market volatility and creating challenges that hinder banks' ability to adapt to surrounding developments and conditions, and to respond efficiently to evolving customer demands, by adopting a comprehensive management system and implementing changes to its components and elements, under the guidance of a leadership that is aware of the importance of managing its operations and making continuous improvements, these banks can overcome these challenges and provide high-quality services that meet customer expectations and needs, thereby fostering customer satisfaction and loyalty, ultimately achieving the SCA they aspire to. On the other hand, the study importance is evident in that it examined variables that have garnered the attention of researchers in contemporary management thought, namely: Total Quality Management (TQM) and Sustainable Competitive Advantage (SCA), and contributing to bridging a research gap between these two variables by deepening their concepts and dimensions, and providing a valuable research contribution to the Arabic library that will benefit researchers in the future, moreover, this study presents results and recommendations that may benefit the management of Jordanian commercial banks in continuous development and improvement, allowing them to keep pace with progress and development and face challenges and competition in a rapidly changing environment.

Based on the above, current study seek to investigate the impact of Total Quality Management on Sustainable Competitive Advantage at Jordanian commercial banks.

## **Literature Review**

### *Total Quality Management (TQM)*

Interest in quality and its monitoring began at the start of the 20th century and increased significantly after World War II. With growing competition and evolving customer expectations, the concept of quality rapidly expanded to encompass comprehensive organizational quality, prioritizing customer needs alongside continuous improvement (Shaker & Ibrahim, 2021). According to the Oxford Dictionary, quality is the standard by which

something is compared to other similar things, or how good or bad something is, as an economic term, quality arose from technological and industrial competition among industrialized nations to control production quality and gain customer and market trust (Lahbib, 2019, 9). Quality expresses the extent to which customer expectations are met or exceeded (Reed & Sanders, 2020, 143). It refers to the quality of a product or service as perceived by the customer, including its perceived value and usefulness, and its conformity to specifications and standards (Bilaine & Raman, 2020, 25).

TQM represents a shift from traditional management practices to neo-classical and modern management practices (Mizrak, 2024, 3). TQM is a management philosophy that focuses on an organization's readiness for change and the willingness of its employees to create and enhance value in a competitive market (Elhawi, 2022). It is defined as a holistic approach to achieving long-term success through customer satisfaction, it is not simply a specific quality management system, but a philosophy that integrates all organizational functions to focus on meeting customer needs and achieving its objectives, every individual in the organization participates in improving the processes, products, services, and culture within which they work (Kumar et al., 2024, 177). Root and Kumar (2025, 37) emphasized that TQM is a holistic approach that focuses on customer satisfaction through continuous improvement and providing customers with high-quality products at the right time and place, meeting or exceeding their requirements (Kerzner, 2025, 633).

Hill and Hill (2018, 292) defined TQM as an approach and set of guiding principles for managing quality within an organization. It relies on a number of management theories, methods, tools, and practices that can help the organization improve its performance by increasing service quality, product conformity, and reducing costs. Karunakaran et al. (2022, 165) described it as an effective system for coordinating and synchronizing the efforts of all departments within an organization to maximize output and efficiency while maintaining or improving quality to the point where the customer is completely satisfied at the lowest possible cost.

#### *Total Quality Management (TQM) Dimension*

TQM encompasses a set of integrated practices. Al-Jaradi and Al-Shami (2024) identified the dimensions of TQM as follows: top management commitment, customer focus, employee engagement, continuous improvement, and fact-based decision-making. Tajouri and Lakhali (2024) identified top management commitment to quality, employee engagement and training, customer focus, supplier relations, operational management, continuous improvement, and data and analytics as dimensions of TQM. Mohammed and Ashour (2023) identified the dimensions of TQM as: customer focus, continuous improvement, top management commitment, full employee engagement, and training and development, this study will focus on customer focus, continuous improvement, top management commitment, and operational management as dimensions of TQM.

#### *Customer Focus*

The first and most important feature of TQM is the organization's focus on its customers, where the goal of quality is first and foremost to meet customer needs. TQM recognizes that perfectly produced products or services are worthless if they are not as customers want them, this indicates that quality is customer-driven, however, it is not always

easy to determine what the customer wants due to customers' changing tastes and preferences. Therefore, organizations need to continuously gather information through focus groups, market surveys, and customer interviews to keep up with what they want (Reid & Sanders, 2020, 143). On the other hand, in the perspective of TQM, the customer is anyone who receives and uses what an organization or individual provides, this indicates that customers are not only outside the organization, but they are also inside the organization, namely the employees (internal customers), to ensure their complete satisfaction, all employees in any organization must feel satisfied. Also, identifying and proactively meeting employee demands is one of the basic requirements of TQM, therefore, the focus on customers must begin with serving the employees who work in the organization, who must have a motivating experience so that they can replicate and implement it with customers (Charantimath, 2011, 451-453).

### *Continuous Improvement*

Traditional systems operated on the assumption that once an organization achieved a certain level of quality, it was considered successful and required no further improvement. However, the concept of continuous improvement emerged within the philosophy of TQM, also known as "Kaizen", this Japanese term describes the idea of an organization constantly striving to improve and become better through learning and problem-solving, continuous improvement requires the organization to continuously evaluate its performance and take the necessary steps to enhance it (Reid & Sanders, 2020, 143). Sirisha (2024, 4) added that continuous improvement is a fundamental principle of TQM, emphasizing ongoing efforts to improve processes, systems, and practices to achieve better results, this includes identifying areas for improvement, implementing changes, monitoring results, and making further adjustments as needed; by adopting a continuous improvement mindset, organizations can drive innovation, increase efficiency, and effectively adapt to changing market dynamics.

### *Top Management Commitment*

TQM begins with a strong commitment from leadership and support from senior management, leaders establish the vision, values, and strategic direction for quality improvement initiatives and actively advocate for TQM principles throughout the organization (Sirisha, 2024, 4). The primary task of managers in any organization is to lead, guide, and supervise employees to work together toward achieving desired goals (Min et al., 2022). According to Shaaban (2009, 235), senior management's commitment is demonstrated through the development and implementation of a TQM system, manifested in several aspects: raising awareness of and compliance with regulatory, legal, and customer requirements; establishing a quality policy and defining its objectives; conducting management reviews; and ensuring the availability of resources.

### *Operations Management*

Operations are defined as a set of interconnected or interacting activities that use inputs to deliver intended results (Moon & Mathew, 2024, 21). In organizations, TQM encourages viewing operations as interconnected activities that contribute to the overall quality of products and services, it also encourages analyzing and improving these operations to eliminate waste, reduce variance, and enhance efficiency and effectiveness (Sirisha, 2024, 5). Reid and Sanders (2020, 153) pointed out that, according to the TQM principle, a good product comes from a quality operation, this means that quality must be an integral part of

the operations quality at the source, this highlights the difference between the old and new concepts of quality, the old concept focused on inspecting goods after production or after a specific stage of production, if the inspection revealed defects, the defective products were returned for reprocessing or disposal, leading to increased costs for the organization, which were then passed on to the customer, the new concept of quality focuses on identifying and correcting quality problems at the source, quality at the source is the belief that it is better to discover the source of quality problems and eliminate or correct them rather than disposing of defective items after production, if the source of the problem is not corrected, it will continue.

### **Sustainable Competitive Advantage (SCA)**

SCA emerged in 1984 with George Day, who presented strategies for maintaining a competitive edge (Hoffman, 2000). However, it gained prominence as a formal term in 1985 when Michael Porter discussed the fundamental competitive strategies organizations can employ to achieve sustainable competitive advantage: low cost, differentiation, and focus, these strategies are based on the core idea that competitive advantage is the essence of any strategy, and achieving it requires the organization to decide on the type of competitive advantage it seeks and the scope within which it will achieve it (Porter, 1985, 12). In 1991, Barney introduced the concept of organizational resources and SCA, demonstrating that when an organization implements a value-creating strategy that current or potential competitors do not, and are unable to replicate, the benefits of that strategy, then the organization possesses a sustainable competitive advantage (Barney, 1991). This work provided a strong theoretical basis for understanding how organizations achieve and maintain a SCA through the strategic use of their unique and valuable resources (Popkova, 2024, 50).

Competitive advantage refers to the advantage an organization gains by outperforming its competitors in the same industry, this advantage is achieved through implementing innovative ideas that allow the organization to provide high-quality goods or services at competitive prices, ultimately increasing shareholder wealth (Serafimova & Vasilev, 2024).

SCA, on the other hand, involves establishing a system with a unique advantage over competitors to create value for customers in an efficient and sustainable manner (Belayneh & Raman, 2020, 24). SCA is defined as an organization's assets, features, or capabilities that are difficult to replicate or overcome, providing a superior position over competitors in the long term (Alfawaire & Atan, 2021). SCA reflects an organization adopting a unique strategy for gaining benefits, one that cannot be easily imitated or copied by its competitors. An organization is identified as possessing a SCA when current or potential competitors cannot replicate its success or when imitation would be prohibitively expensive for them (Xiao & Yu, 2020).

### **Sustainable Competitive Advantage (SCA) Dimension**

Numerous previous studies on SCA have addressed multiple and diverse dimensions across various fields. Uchenna and Onouha (2023) identified efficiency and cost leadership as key dimensions of SCA. Al-Omari et al. (2023) identified superior quality, superior efficiency, superior innovation, and superior responsiveness. Hilali (2025) identified excellence, responsiveness, and flexibility as dimensions of SCA. The current study will adopt superior

efficiency, cost, superior quality, flexibility, superior innovation, and superior responsiveness as dimensions of total quality management.

### *Superior Efficiency*

Efficiency refers to an organization's ability to use its resources optimally to achieve maximum output (Al-Jaradi & Al-Shami, 2024). Efficiency is the use of resources without waste and ensures improved processes that encompass resource utilization, such as cash, labor, machinery, and energy, it also represents the highest level of performance, using the fewest inputs to produce the greatest output (Uchenna & Onuoha, 2023). Wentland (2009, 99) indicated that superior efficiency relates to the efficient conversion of inputs into outputs, inputs refer to the essential factors of production, such as labor, land, capital, management, and technological knowledge, outputs are the goods and services produced by the organization, the more efficient an organization is at converting inputs into outputs, the higher its productivity level, typically, the most productive organization in an industry has the lowest production costs and thus gains a competitive advantage. Ateljević et al. (2023, 122) confirmed that superior efficiency leads to increased organizational productivity and reduced production costs.

### *Cost*

Cost is a key driver of organizational competition, as an organization with a low-cost position has a favorable defense against competitors (Jagdev et al., 2004,108). Cost refers to a company's ability to maintain lower prices than its competitors by improving production and efficiency, eliminating waste, or controlling costs (Uchenna & Onuoha, 2023). Generally, costs include production costs, inventory storage costs, and any other costs incurred in resource utilization, as well as operating costs, which include labor, materials, and overhead expenses (Belayneh & Raman, 2020, 25).

### *Superior Quality*

Quality is related to the process of eliminating defects and achieving defect-free results through a focus on continuous improvement (Radi, 2023). Adam et al. (2022) indicated that quality is the conformity of products or services to specified standards and specifications; in other words, it is the sum of the characteristics and aspects of a product or service that enhance its ability to meet customer needs. Customers often evaluate product quality by considering excellence and reliability, two essential qualities for maintaining value and consistency (Al Shawabkeh, 2024). Superior quality leads to reduced organizational costs or superior product quality (Ateljević et al., 2023, 122). It requires additional efforts to enhance the skills and capabilities of the organization's workforce to ensure improved quality of the products or services offered, thus contributing to addressing emerging challenges (Singh & Gaur, 2024, 97).

### *Flexibility*

In adapting to a constantly changing environment, it is crucial for an organization to be flexible in terms of product sizes and types, such flexibility enhances an organization's ability to manufacture a diverse range of products, mixes, and sizes to meet the demands of its discerning customers (Jagdev et al., 2004, 109). Flexibility is either the ability to manufacture new products or the time required to change size, if a process is flexible, new products can be introduced quickly, and changes in size can be implemented rapidly (Belayneh & Raman,

2020, 25). Furthermore, flexibility involves adapting processes to meet evolving customer needs, this entails fulfilling four key requirements: (1) Product flexibility: the ability of processes to introduce new or modified products; (2) Mix flexibility: the ability of processes to produce a mix of products; (3) Size flexibility: the ability of processes to adjust output levels or production activities to offer different product sizes; and (4) Delivery flexibility: the ability of processes to adjust product delivery times (Benaouag & Kharchi, 2024).

### *Superior Innovation*

The term "innovation" originated in the 5th century BC from the Greek word *kainotomia*, derived from *kainos*, meaning "new", originally, innovation referred to new ideas, sometimes with a neutral or even positive connotation, but more often with a negative one, from the 16th to the 19th centuries, innovation meant introducing a new change, whether religious or political, however, in the 20th century and continuing to the present, epistemology has prevailed, leading to Schumpeter's definition of innovation as a new entry into the market through new products and services (Schramm, 2017, 1). In organizations, according to Lumpkin and Dess (1996), innovation refers to the organization's support for the creative process and new ideas that collectively lead to new services, products, or technological processes. More broadly, Shavinina (2003, 513) explained that the innovation process is a combination of activities—such as design, research, market investigation, tools, and management—that are necessary for developing an innovative product or production process. Superior innovation is a cornerstone of competitive advantage; innovative organizations offer customers products unavailable from other organizations. This unavailability allows the organization to maintain a competitive edge and command a higher price. Furthermore, innovative organizations can cultivate brand loyalty, making it difficult for competitors to gain market share (Wentland, 2009,100). Therefore, superior innovation leads to lower production costs or a more efficient way of meeting needs, with the primary focus being on increasing the product's price (Ateljević et al., 2023,122).

### *Superior Responsiveness*

Responsiveness refers to the rapid adaptation to changes in product size and mix, and the swift customization of products to meet customer requirements, while minimizing the time required to bring new products and product variants to market (Jagdev et al., 2004, 110). It also encompasses the development and enhancement of products and services to possess unique characteristics that differentiate them from those already available in the market (Al-Damak & Nafeh, 2022).

Superior responsiveness is concerned with customer responsiveness and is achieved by identifying and meeting the needs of consumers (the target market) better than any other organization. This responsiveness includes activities such as quality, customization, response time, design, and outstanding pre- and post-sales service (Wentland, 2009, 100). Belayneh and Raman (2020, 24-25) emphasized that superior responsiveness is viewed as flexible, reliable, and rapid, and it encompasses the full range of values related to product development and timely delivery.

## The Relationship Between Total Quality Management (TQM) and Sustainable Competitive Advantage (SCA)

Given the importance of TQM in achieving SCA, numerous previous studies have explored the relationship between them. Among these is Al-Hilali's study (2025), which demonstrated a significant correlation between TQM practices and achieving SCA. Abdulmajid's study (2023) revealed a statistically significant positive impact of TQM on SCA in an Iraqi insurance company. Furthermore, within the context of commercial banks, Ibegbulem's study (2021) showed that TQM is strongly linked to and positively influences SCA in Nigerian commercial banks.

### Study Hypotheses and Model

#### *The Main Hypothesis*

**H01:** There is a significant impact at ( $\alpha \leq 0.05$ ) of total quality management with its dimensions (customer focus, continuous improvement, top management commitment, and Operations management) on sustainable competitive advantage with its combined dimensions (superior efficiency, cost, superior quality, flexibility, superior innovation, and superior responsiveness) at Jordanian commercial banks.

The main hypothesis branches into the following sub-hypotheses

**H01.1:** There is a significant impact at ( $\alpha \leq 0.05$ ) of total quality management with its dimensions (customer focus, continuous improvement, top management commitment, and Operations management) on superior efficiency at Jordanian commercial banks.

**H01.2:** There is a significant impact at ( $\alpha \leq 0.05$ ) of total quality management with its dimensions (customer focus, continuous improvement, top management commitment, and Operations management) on cost at Jordanian commercial banks.

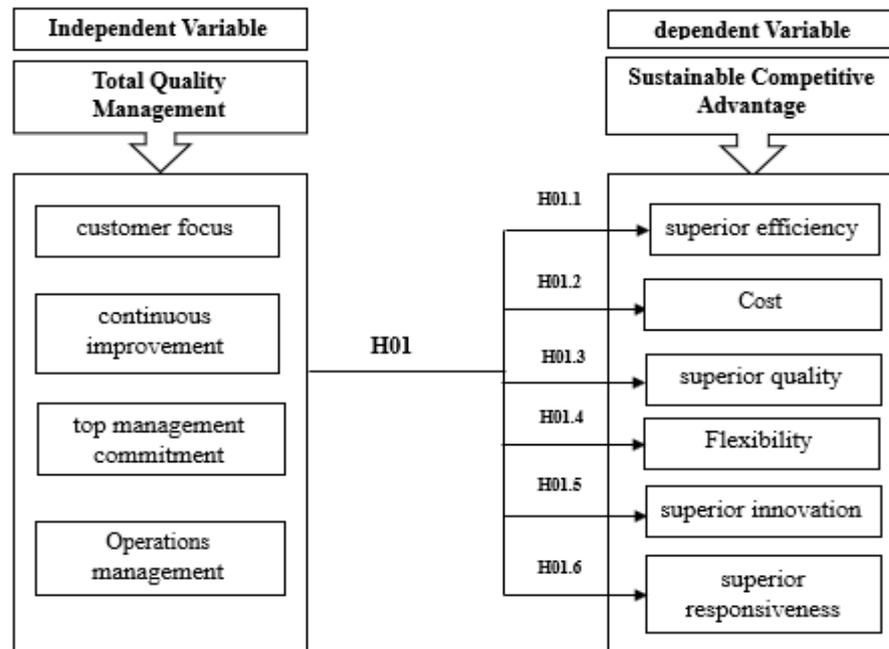
**H01.3:** There is a significant impact at ( $\alpha \leq 0.05$ ) of total quality management with its dimensions (customer focus, continuous improvement, top management commitment, and Operations management) on superior quality at Jordanian commercial banks.

**H01.4:** There is a significant impact at ( $\alpha \leq 0.05$ ) of total quality management with its dimensions (customer focus, continuous improvement, top management commitment, and Operations management) on flexibility at Jordanian commercial banks.

**H01.5:** There is a significant impact at ( $\alpha \leq 0.05$ ) of total quality management with its dimensions (customer focus, continuous improvement, top management commitment, and Operations management) on superior quality at Jordanian commercial banks.

**H01.6:** There is a significant impact at ( $\alpha \leq 0.05$ ) of total quality management with its dimensions (customer focus, continuous improvement, top management commitment, and Operations management) on superior responsiveness at Jordanian commercial banks.

Based on previous hypotheses, researcher designed the study model as shown in Figure 1.



Figer (1) Study Model

## Methodology

### Study Population and Sample

The study population consisted of managers working at the senior and middle management levels in the (12) Jordanian commercial banks, according to the Central Bank of Jordan's annual report (2023). These banks employ (899) managers, according to statistics obtained from the human resources departments of these banks, as shown in Table (1). To represent the study population, a stratified proportional random sample was used, with a sample size of (269) managers according to the sampling table and based on the total size of the study population, allowing a margin of error of (5%) (Sekaran & Bougie, 2016, 263). To ensure accurate results, the sample size was increased to (300) managers, and the questionnaire was distributed. (267) questionnaires were returned, representing a response rate of (89%).

Table 1

### Study population and sample

No.	Bank Name	Managers No.	Sample Size
1	Arab Bank	125	42
2	Housing Bank for Trade and Finance	117	39
3	Jordan Ahli Bank	106	35
4	Cairo Amman Bank	98	33
5	Bank of Jordan	86	29
6	Bank al Etihad	80	27
7	Jordan Kuwait Bank	76	25
8	Capital Bank of Jordan	55	18
9	Arab Banking Corporation (ABC Bank)	47	16
10	Jordan Commercial Bank	44	15
11	Jordan Arab Investment Bank	39	13
12	Jordan Investment and Finance Bank	26	8
<b>Total</b>		<b>899</b>	<b>300</b>

**Source:** - Annual Report 2023, Central Bank of Jordan. - Human Resources Departments of Jordanian Commercial Banks.

### *Study tool*

A questionnaire was used to collect data from managers working at the senior and middle management levels in Jordanian commercial banks. The questionnaire consisted of three sections:

Section 1: This section included the personal and professional characteristics of the study sample, namely: (gender, age group, educational qualification, and years of work experience).

Section 2: This section included the items used to measure the independent variable (Total Quality Management).

Section 3: This section included the items used to measure the dependent variable (Sustainable Competitive Advantage).

### **Results**

To ensure the reliability of the study instrument, Cronbach's Alpha coefficient which is one of the most widely used measures of internal consistency, was used (Bonett & Wright 2015). Also, the means and standard deviations of the study variables and their dimensions were calculated, table (2) presents the results.

Table 2

#### *Descriptive analysis Results for Study Items*

<b>Dimension</b>	<b>Items</b>	<b>Alpha</b>	<b>Mean</b>	<b>Std. Deviation</b>
Customer focus	5	.687	4.4704	.39564
Continuous improvement	5	.721	4.3715	.44224
Top management commitment	5	.726	4.3236	.45900
Operations management	5	.712	4.3663	.42505
Superior efficiency	5	.628	4.3873	.40706
Cost	5	.648	4.3708	.39647
Superior quality	5	.687	4.3483	.42109
Flexibility	5	.648	4.3498	.39853
Superior innovation	5	.738	4.3116	.46142
Superior responsiveness	5	.690	4.3378	.43756

Table (2) shows that the Cronbach's alpha values for the study variables and dimensions ranged between (.628) and (.738), which are considered acceptable. According to Sekaran and Bougie (2016, 290), reliability values below (.60) are considered weak, while those within the range of (.70) are acceptable. This confirms that all alpha values met the requirements of the coefficient, indicating that the study instrument exhibits internal consistency among its components.

Table (2) also displays the arithmetic means and standard deviations for independent variable (Total Quality Management) and dependent variable (Sustainable Competitive Advantage) and their dimensions. It shows that the overall average for Total Quality Management (4.3830), and the values of the arithmetic mean of its dimensions ranged between (4.3236 & 4.4704), customer focus occupied the first rank and its arithmetic mean value (4.4704), followed by continuous improvement in the second rank with an arithmetic

mean value of (4.3715), operations management obtained the third rank with an arithmetic mean of (4.3663), while the fourth rank was recorded by the commitment of senior management with an arithmetic mean of (4.3236).

As can be seen from the table, the overall average for sustainable competitive advantage (4.3509), the arithmetic mean values for its dimensions ranged between (4.3116 & 4.3873), superior efficiency ranked first with an arithmetic mean of (4.3873), followed by cost in second place with an average value of (4.3708), flexibility in third place with an average value of (4.3498), superior quality in fourth place with an average value of (4.3483), superior responsiveness in fifth place with an average value of (4.3378), and superior innovation in sixth place with an average value of (4.3116).

Standard multiple linear regression analysis was used to test the main hypothesis H01 and its sub-hypotheses, and the results were as follows:

Table 3  
Hypothesis Testing Results

	Model Summary		ANOVA			Statement	Coefficient				
	R	R <sup>2</sup>	F	DF	Sig.		B	Std. error	β	T	Sig.
<i>Ho1</i> <i>The impact of total quality management with its dimensions on sustainable competitive advantages with its combined dimensions</i>	.816	.667	130.960	4	.000	Customer focus	.082	.053	.089	1.530	.127
						Continuous improvement	.259	.049	.317	5.307	.000
						Top management commitment	.186	.048	.236	3.893	.000
						Operations management	.233	.051	.274	4.592	.000
	R	R <sup>2</sup>	F	DF	Sig.	Statement	B	Std. error	β	T	Sig.
<i>H01.1</i> <i>The impact of total quality management with its dimensions on superior efficiency</i>	.729	.531	74.299	4	.000	Customer focus	.029	.071	.029	.415	.679
						Continuous improvement	.309	.065	.336	4.750	.000
						Top management commitment	.197	.064	.222	3.080	.002
						Operations management	.217	.068	.226	3.196	.002
	R	R <sup>2</sup>	F	DF	Sig.	Statement	B	Std. error	β	T	Sig.
<i>H01.2</i> <i>The impact of total quality management with its dimensions on cost</i>	.719	.517	70.173	4	.000	Customer focus	.160	.203	.160	2.283	.023
						Continuous improvement	.264	.070	.295	4.106	.000
						Top management commitment	.180	.064	.208	2.846	.005

						Operations management	.137	.063	.147	2.040	.042
						<b>Statement</b>	<b>B</b>	<b>Std. error</b>	<b><math>\beta</math></b>	<b>T</b>	<b>Sig.</b>
<i>H01.3</i>						Customer focus	.061	.073	.057	.832	.406
<i>The impact of total quality management with its dimensions on superior quality</i>						Continuous improvement	.189	.067	.198	2.826	.005
						Top management commitment	.161	.065	.176	2.460	.015
						Operations management	.383	.070	.386	5.506	.000
						<b>Statement</b>	<b>B</b>	<b>Std. error</b>	<b><math>\beta</math></b>	<b>T</b>	<b>Sig.</b>
<i>H01.4</i>						Customer focus	.126	.073	.125	1.732	.084
<i>The impact of total quality management with its dimensions on flexibility</i>						Continuous improvement	.221	.066	.246	3.331	.001
						Top management commitment	.109	.065	.126	1.675	.095
						Operations management	.273	.069	.291	3.947	.000
						<b>Statement</b>	<b>B</b>	<b>Std. error</b>	<b><math>\beta</math></b>	<b>T</b>	<b>Sig.</b>
<i>H01.5</i>						Customer focus	-	.088	-	-.201	.841
<i>The impact of total quality management with its dimensions on superior innovation</i>						Continuous improvement	.297	.081	.285	3.676	.000
						Top management commitment	.265	.079	.264	3.349	.001
						Operations management	.216	.084	.199	2.565	.011
						<b>Statement</b>	<b>B</b>	<b>Std. error</b>	<b><math>\beta</math></b>	<b>T</b>	<b>Sig.</b>
<i>H01.6</i>						Customer focus	.131	.080	.118	1.632	.104
<i>The impact of total quality management with its dimensions on superior responsiveness</i>						Continuous improvement	.274	.073	.277	3.729	.000
						Top management commitment	.206	.072	.217	2.865	.005
						Operations management	.176	.077	.171	2.297	.022

Table (3) presents the results of the standard multiple linear regression analysis for the main hypothesis and its sub-hypotheses.

The results of main hypothesis H01 revealed a very high correlation between Total Quality Management (TQM) and Sustainable Competitive Advantage (SCA) at Jordanian commercial banks. The correlation coefficient R (.816) and the coefficient of determination R<sup>2</sup> (.667) indicating that TQM explained (66.7%) of the variance in sustainable competitive advantage at degrees of freedom (4), the F-value (130.960) at a significance level of (.000), which means the regression was significant at ( $\alpha \leq 0.05$ ). The results in the coefficient table

also showed that beta value  $\beta$  for customer focus (.089), and the t-value (1.530) at a significance level of (.127), which is not statistically significant. Continuous improvement achieved a beta value  $\beta$  (.317) and t-value (5.307) at a significance level (.000), which is statistically significant, beta value  $\beta$  for top management commitment was estimated at (.236), and t-value (3.893) at a significance level of (.000), which is also statistically significant, beta value  $\beta$  for operations management (.274), and t-value (4.592) at a significance level (.000), which is also statistically significant. Therefore, three dimensions of TQM are statistically significant, which requires accepting the main hypothesis which states: There is a significant impact at ( $\alpha \leq 0.05$ ) of total quality management with its dimensions (customer focus, continuous improvement, top management commitment, and Operations management) on sustainable competitive advantage with its combined dimensions (superior efficiency, cost, superior quality, flexibility, superior innovation, and superior responsiveness) at Jordanian commercial banks.

Regarding the results of the sub-hypotheses **H01.1, H01.2, H01.3, H01.4, H01.5, and H01.6**, the results in table (3) show the following:

The results of first sub-hypothesis H01.1 showed a high correlation between total quality management and superior efficiency in Jordanian commercial banks. The correlation coefficient R (.729) and the coefficient of determination  $R^2$  (.531) indicating that TQM explained (53.1%) of the variance in superior efficiency at degrees of freedom (4), the F-value (74.299) at a significance level of (.000), which means the regression was significant at ( $\alpha \leq 0.05$ ). The results in the coefficient table also showed that beta value  $\beta$  for customer focus (.029), and the t-value (.415) at a significance level of (.679), which is not statistically significant. Continuous improvement achieved a beta value  $\beta$  (.336) and t-value (4.750) at a significance level (.000), which is statistically significant, beta value  $\beta$  for top management commitment was estimated at (.222), and t-value (3.080) at a significance level of (.002), which is also statistically significant, beta value  $\beta$  for operations management (.226), and t-value (3.19) at a significance level (.002), which is also statistically significant. Therefore, three dimensions of TQM are statistically significant, which requires accepting the main hypothesis which states: There is a significant impact at ( $\alpha \leq 0.05$ ) of total quality management with its dimensions (customer focus, continuous improvement, top management commitment, and Operations management) on superior efficiency at Jordanian commercial banks.

The results of Second sub-hypothesis H01.2 showed a high correlation between total quality management and cost in Jordanian commercial banks. The correlation coefficient R (.719) and the coefficient of determination  $R^2$  (.517) indicating that TQM explained (51.7%) of the variance in cost at degrees of freedom (4), the F-value (70.173) at a significance level of (.000), which means the regression was significant at ( $\alpha \leq 0.05$ ). The results in the coefficient table also showed that beta value  $\beta$  for customer focus (.160), and the t-value (2.283) at a significance level of (.023), which is statistically significant. Continuous improvement achieved a beta value  $\beta$  (.295) and t-value (4.106) at a significance level (.000), which is statistically significant, beta value  $\beta$  for top management commitment was estimated at (.208), and t-value (2.846) at a significance level of (.005), which is also statistically significant, beta value  $\beta$  for operations management (.147), and t-value (2.040) at a significance level (.042), which is also statistically significant. Therefore, all dimensions of TQM are statistically significant, which requires accepting the main hypothesis which

states: There is a significant impact at ( $\alpha \leq 0.05$ ) of total quality management with its dimensions (customer focus, continuous improvement, top management commitment, and Operations management) on cost at Jordanian commercial banks.

The results of Third sub-hypothesis H01.3 showed a high correlation between total quality management and superior quality in Jordanian commercial banks. The correlation coefficient R (.735) and the coefficient of determination  $R^2$  (.540) indicating that TQM explained (54%) of the variance in superior quality at degrees of freedom (4), the F-value (76.800) at a significance level of (.000), which means the regression was significant at ( $\alpha \leq 0.05$ ). The results in the coefficient table also showed that beta value  $\beta$  for customer focus (.057), and the t-value (.832) at a significance level of (.406), which is not statistically significant. Continuous improvement achieved a beta value  $\beta$  (.198) and t-value (2.826) at a significance level (.005), which is statistically significant, beta value  $\beta$  for top management commitment was estimated at (.176), and t-value (2.460) at a significance level of (.015), which is also statistically significant, beta value  $\beta$  for operations management (.386), and t-value (5.506) at a significance level (.000), which is also statistically significant. Therefore, three dimensions of TQM are statistically significant, which requires accepting the main hypothesis which states: There is a significant impact at ( $\alpha \leq 0.05$ ) of total quality management with its dimensions (customer focus, continuous improvement, top management commitment, and Operations management) on superior quality at Jordanian commercial banks.

The results of Fourth sub-hypothesis H01.4 showed a high correlation between total quality management and flexibility in Jordanian commercial banks. The correlation coefficient R (.700) and the coefficient of determination  $R^2$  (.491) indicating that TQM explained (49.1%) of the variance in flexibility at degrees of freedom (4), the F-value (63.066) at a significance level of (.000), which means the regression was significant at ( $\alpha \leq 0.05$ ). The results in the coefficient table also showed that beta value  $\beta$  for customer focus (.125), and the t-value (1.732) at a significance level of (.084), which is not statistically significant. Continuous improvement achieved a beta value  $\beta$  (.246) and t-value (3.331) at a significance level (.001), which is statistically significant, beta value  $\beta$  for top management commitment was estimated at (.126), and t-value (1.675) at a significance level of (.095), which is not statistically significant, beta value  $\beta$  for operations management (.291), and t-value (3.947) at a significance level (.000), which is also statistically significant. Therefore, two dimensions of TQM are statistically significant, which requires accepting the main hypothesis which states: There is a significant impact at ( $\alpha \leq 0.05$ ) of total quality management with its dimensions (customer focus, continuous improvement, top management commitment, and Operations management) on flexibility at Jordanian commercial banks.

The results of Fifth sub-hypothesis H01.5 showed a high correlation between total quality management and superior innovation in Jordanian commercial banks. The correlation coefficient R (.662) and the coefficient of determination  $R^2$  (.438) indicating that TQM explained (53.1%) of the variance in superior innovation at degrees of freedom (4), the F-value (51.092) at a significance level of (.000), which means the regression was significant at ( $\alpha \leq 0.05$ ). The results in the coefficient table also showed that beta value  $\beta$  for customer focus (-.015), and the t-value (-.201) at a significance level of (.841), which is not statistically significant. Continuous improvement achieved a beta value  $\beta$  (.285) and t-value (3.676) at a

significance level (.000), which is statistically significant, beta value  $\beta$  for top management commitment was estimated at (.264), and t-value (3.349) at a significance level of (.001), which is also statistically significant, beta value  $\beta$  for operations management (.199), and t-value (2.565) at a significance level (.011), which is also statistically significant. Therefore, three dimensions of TQM are statistically significant, which requires accepting the main hypothesis which states: There is a significant impact at ( $\alpha \leq 0.05$ ) of total quality management with its dimensions (customer focus, continuous improvement, top management commitment, and Operations management) on superior quality at Jordanian commercial banks.

The results of Sixth sub-hypothesis H01.6 showed a high correlation between total quality management and superior responsiveness in Jordanian commercial banks. The correlation coefficient R (.695) and the coefficient of determination  $R^2$  (.484) indicating that TQM explained (48.4%) of the variance in superior responsiveness at degrees of freedom (4), the F-value (61.355) at a significance level of (.000), which means the regression was significant at ( $\alpha \leq 0.05$ ). The results in the coefficient table also showed that beta value  $\beta$  for customer focus (.118), and the t-value (1.632) at a significance level of (.104), which is not statistically significant. Continuous improvement achieved a beta value  $\beta$  (.277) and t-value (3.729) at a significance level (.000), which is statistically significant, beta value  $\beta$  for top management commitment was estimated at (.217), and t-value (2.865) at a significance level of (.005), which is also statistically significant, beta value  $\beta$  for operations management (.171), and t-value (2.297) at a significance level (.022), which is also statistically significant. Therefore, three dimensions of TQM are statistically significant, which requires accepting the main hypothesis which states: There is a significant impact at ( $\alpha \leq 0.05$ ) of total quality management with its dimensions (customer focus, continuous improvement, top management commitment, and Operations management) on superior responsiveness at Jordanian commercial banks.

## Discussion

The results showed that the relative importance of Total Quality Management (TQM) and its dimensions was high, customer focus ranked first, followed by continuous improvement in second place, process management in third, and senior management commitment in fourth, these results indicate a strong agreement among the managers in the study sample regarding the significant attention Jordanian commercial banks give to TQM. They reflect the banks' priority in meeting customer needs and continuously improving their processes, an organizational culture focused on practical, customer-oriented quality initiatives, and leadership participation and oversight that enhance the success of TQM.

The results showed that the relative importance of Sustainable Competitive Advantage (SCA) and its dimensions was high, superior efficiency ranked first, followed by cost in second place, flexibility in third place, superior quality in fourth place, superior responsiveness in fifth place, and superior innovation in sixth place, this indicates that Jordanian commercial banks pay great attention to SCA and maintaining a distinguished and strong competitive position. It also indicates that these banks follow an integrated strategic approach to respond effectively to environmental changes and excel in their performance by focusing on the efficiency of their operations, cost management, adapting to rapid developments and

changes, continuous quality improvement, rapid response to changing market requirements, and continuous innovation.

There is a significant impact at ( $\alpha \leq 0.05$ ) of total quality management with its dimensions (customer focus, continuous improvement, top management commitment, and Operations management) on sustainable competitive advantage with its combined dimensions (superior efficiency, cost, superior quality, flexibility, superior innovation, and superior responsiveness) at Jordanian commercial banks. This finding indicates that the adoption of Total Quality Management (TQM) practices by Jordanian commercial banks is a crucial factor in enhancing their ability to build a sustainable competitive advantage that is difficult for competitors to imitate. Banks' focus on understanding customer needs and meeting their expectations fosters customer satisfaction and loyalty, while continuous improvement ensures that processes and services are constantly evolving to keep pace with changes in the banking environment, top management commitment provides the necessary support and resources to embed a culture of quality within the bank, while efficient process management reduces waste and increases productivity. When these dimensions are integrated, they enhance quality, flexibility, innovation, and responsiveness, and reduce costs, giving banks the continuous ability to differentiate themselves and adapt to increasing competition, thus achieving long-term competitive superiority.

### **Contribution**

This study contributes scientifically to expanding the understanding of the relationship between the application of Total Quality Management (TQM) and the dimensions of SCA at Jordanian commercial banking sector, it does so by providing an explanatory framework that clarifies how customer focus, continuous improvement, senior management commitment, and process management contribute to building competitive capabilities that are difficult to imitate, furthermore, it offers a practical contribution by demonstrating that banks' adoption of TQM principles enhances operational efficiency, reduces costs, and improves service quality. This, in turn, supports flexibility, innovation, and rapid response to market changes and customer needs, enabling Jordanian banks to achieve a SCA in a highly competitive banking environment.

### **Recommendations**

Based on the study's findings, the researcher proposes the following recommendations for Jordanian commercial banks:

1. Focus on adopting a comprehensive quality framework that integrates all bank operations by developing a unified quality management system aligned with the bank's strategic objectives, this includes monitoring clear performance indicators that measure customer satisfaction, operational efficiency, and the quality of banking services, this integration contributes to improved competitiveness and increased service reliability.
2. Enhance customer engagement programs through systematic tools such as periodic surveys, customer feedback dashboards, and multi-channel support services, the aim is to understand customer expectations and develop services that meet their evolving banking needs.
3. Implement continuous improvement methodologies such as Lean and Six Sigma to reduce operational errors, improve service quality, and expedite banking procedures, employees

are encouraged to propose improvement ideas through a formal internal system to foster innovation.

4. Strengthen the leadership role of senior management by providing the necessary human and technological resources to implement total quality management, this involves adopting a culture of quality as a core component of the bank's vision, directly monitoring performance results, and encouraging employees to adopt quality practices.
5. Adopting a comprehensive competitive strategy based on continuous innovation, developing organizational capabilities, and achieving excellence in customer value, while investing in digital transformation and technological infrastructure to ensure long-term competitive advantage that is difficult for competitors to imitate.
6. Enhancing operational efficiency through process automation, workflow simplification, and the adoption of business intelligence systems that minimize waste of time and resources, leading to increased productivity and improved asset utilization.
7. Implementing cost reduction strategies by optimizing the operating expense structure, expanding the use of low-cost digital channels, and adopting smart procurement, contributing to the provision of competitively priced banking services without compromising service quality.
8. Focus on improving the quality of banking services by implementing approved quality standards, training staff, and regularly measuring customer satisfaction levels to ensure highly reliable and accurate service.
9. Foster innovation by supporting a creative culture within the bank, establishing incubators for ideas, investing in financial technology (FinTech), and developing new banking products that meet evolving market needs.
10. Banks must enhance their customer service capabilities by responding promptly to complaints and requests, adopting effective communication platforms, and tailoring services based on customer expectations to strengthen customer loyalty and trust.

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