NEXUS BETWEEN TOTAL QUALITY MANAGEMENT AND COMPETITIVE ADVANTAGE IN JORDANIAN BANKING SECTOR: THE MEDIATING EFFECT OF QUALITY PERFORMANCE

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Abstract

Competitive advantage expresses the extent to which the organization has higher capabilities than its competitors in exploiting the available opportunities and limiting the potential effects. Its importance also enables the organization to make better use of its material, human and technological resources than its competitors by providing the best services and the best products to its customers. This lofty goal prompted Jordanian banks to adopt total quality management (TQM) and quality performance as crucial factors to achieve a superior competitive advantage for an organization. Thus, the purpose of this study is to examine the mediating effect of quality performance on the relationship between total quality management and competitive advantage. This study employed a questionnaire survey with a sample of 336 managers of the Jordanian banking sector. The study model is validated and tested using the partial least squares structural equation modeling. The result of this study showed that total quality management has a positive significant effect on competitive advantage and quality performance mediated the relationship between TQM and competitive advantage in the Jordanian banking sector.

Keywords: TQM, Competitive Advantage, Quality Performance, Jordanian Banking Sector

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1. INTRODUCTION

The intensification of competition globally, regionally, and locally posed a great challenge to many economic sectors, especially with the unprecedented changes in the requirements and needs of customers and their behavior, so many economic sectors in many countries began to organize their competitive priorities to ensure their survival and continued growth (Qasaroi, ALmahamid, Maghraby, & Qasaroi, 2016; Duh, Hsu, & Huang, 2012). Jordan's economy, like other economies of the third world countries, suffers from a weak competitive advantage among its various sectors despite the efforts and reforms

that the state made to improve the environment in support of increasing competitiveness (Abu Wadi & Saqfalhait, 2017), as it ranks 73 among the economies of 138 countries (World Economic Forum, 2019).

The Jordanian banking sector, like other economic sectors, suffers from the problem of a low level of competitiveness among its various banks. This weakness has several manifestations as the large banks still have monopolistic control over the banking market, where the five largest Jordanian banks own 54.3% of the total assets of licensed banks by the end of 2016 (Central Bank of Jordan, 2016), which means, as Tan (2017) mentioned, that the competitive situation is still weak. Besides, Alsmadi, Zurigat, and Benshaib (2013) pointed out that the foreign banks operating in Jordan form a great challenge to the Jordanian banks due to their competitiveness and profitability being higher than those of the Jordanian banks (Rowland, Hall, & Altarawneh, 2017). Also, there is a lack of awareness that the competitive advantage is built upon the strengths available at the bank's treasuries and overcoming the weaknesses (Rousan, 2007).

To face the problem of weak competitive advantage in the Jordanian banking sector, the Jordanian government has gone through radical changes as re-considered the regulations and laws, in addition to the enactment of new legislation as basic requirements to reform the infrastructure to be able to absorb the data of the globalization era, which, in turn, encouraged the establishment of new Jordanian banks, such as the Islamic International Arab Bank. Also, the licenses of investment banks, (such as Bank al Etihad) and specialized banks, (such as the Housing Bank), changed into comprehensive commercial banks (Abu Wadi & Saqfalhait, 2017). Despite all of these radical changes, the competitive advantage of the Jordanian banking sector remained weak and low as Al-Rosan (2017) has mentioned that the competitive advantage among Jordanian banks is still to a large extent within the lowest limits.

Therefore, this weak competitive reality forced Jordanian banks to use total quality management (TQM) as an important source of achieving competitive advantage (Addae-Korankye, 2013; Chen, Lee, and Wang, 2020; Chen, Lee, & Wang, 2018; Ferdousi, Baird, Munir, & Su, 2018; Elshaer & Augustyn, 2016). Also, TQM is considered an effective way to obtain competitive performance (Pantouvakis & Karakasnaki, 2017; Mehralian, Nazari, Zarei, & Rasekh, 2016; Valmohammadi & Roshanzamir, 2015; Ahmad, Zakuan, Jusoh, Yusof, & Takala, 2014). In the context of the relationship between total quality management and quality performance, there are many studies that indicate a positive relationship between them, for example, Basu, Bhola, Ghosh, and Dan (2018), Soares, Soltani, and Liao (2017), Patyal and Koilakuntla (2017), Barros, Sampaio, and Saraiva (2014).

In examining the relationship between TQM, quality performance, and competitive advantage it becomes clear that most previous studies focused on the direct impact of TQM on competitive advantage or TQM on quality performance. Therefore, the current study aims to further contribute to the literature in this area by exploring the role of quality performance as a mediator in the relationship between TQM and competitive advantage in the Jordanian banking sector.

The importance of this study stems from the contributions, on both the theoretical and applied levels. In theory, this study supports the theoretical basis for the effect of TQM on the competitive advantage in the Jordanian banking sector. It also contributed to bridging the knowledge gap that was identified in previous studies on the lack of studies testing the effect of TQM on competitive advantage. Moreover, this study provided empirical evidence that TQM has an impact on competitive advantage, which is consistent with previous studies (Masrom, Daut, Rasi, & Lo, 2022; Ahmed & Ferdousi, 2020; Abimbola, Oyatoye, & Oyenuga, 2020).

In addition to its many practical contributions, this study has enhanced the perceptions of TQM, quality performance, and competitive advantage by providing managers in Jordanian banks with frameworks that will improve the quality of their performance, which, in turn, will improve the competitive advantage of Jordanian banks.

This study also helped to shed light on the quality of performance as an important variable and mediator in the relationship between TQM and competitive advantage in the banking sector in Jordan. Therefore, managers in Jordanian banks must focus their efforts on raising the level of quality of services provided to customers, reducing the rate of errors in the implementation of required services, working correctly from the first time, and reducing customer complaints by providing them the best services that satisfy their desires and tastes. The good implementation of these dimensions of quality performance, in addition to the application of the dimensions TQM (top management, customer focus, continuous improvement, process management, and personnel management) provides banks with the possibility to enhance and improve their competitive advantages.

The remainder of this paper is organized as follows. Section 2 explores the literature review and hypotheses. Section 3 presents the research methodology. Section 4 analyzes the data and provides the empirical results. Section 5 discusses the findings. Section 6 presents conclusions, limitations, and future directions for research.

2. LITERATURE REVIEW

2.1. Competitive advantage

Many scholars have dealt with explaining a variety of definitions and opinions about competitive advantage. Kamal (2021) asserts that competitive advantage is the core of organizations' performance in banking markets. Obeidat et al. (2021) argue that the organization uses competitive advantages to create economic value that enables it to avoid looming risks and helps it take advantage of the opportunities available in the environment in which it operates, which helps it to lead revenues and reduce costs, which will reflect positively on the organization's customers. In addition, Davis and Simpson (2017) added four criteria for considering the resources the organization possesses as a competitive advantage: a) the resource must help to create added value to the organization; b) the resource is scarce or unique; c) it is difficult to imitate; d) it cannot be substituted with another

resource for use by competitors. Competitive advantage is a favorable position for the organization due to its ability to provide greater value to customers, which gives it a feature that distinguishes it from the rest of the competitors in the market (Respatiningsih, 2021).

Various indicators to measure competitive advantage were used by various researchers, for example, the study of Liao, Hu, and Ding (2017) presented: price/cost, delivery dependability, product innovation, and time to market. Samsir (2018) used: resources of value, not easily imitated, and unlike the others. Abdulameer (2021) used time, cost, quality, and flexibility. Kamukama, Kyomuhangi, Akisimire, and Orobia (2017), Singjai, Winata, and Kummer (2018), Liu and Atuahene-Gima (2018) identified differentiation and cost leadership. Depending on the review of the theoretical literature, this study used differentiation and cost leadership to measure competitive advantage.

2.2. Total quality management (TQM)

TQM is defined as a comprehensive approach that focuses on continuous improvement within organizations to meet customer needs by providing higher-quality goods and services (Tsou, Huang, Liu, & Do, 2021; Anil & Satish, 2019). Owusu and Duah (2018) argued that TQM is a holistic and structured approach to organizational management that seeks to improve the quality of services and products through continuous improvements. Bathaei, Awang, and Ahmad (2021) add that TQM is a strategy that enables the organization to improve learning at all its administrative levels and to improve and increase its competitive advantage.

Although TQM is widely known as a management philosophy, there is no consensus in the literature about the dimensions and application of TQM that have an important and positive impact on performance and competitive advantage in different sectors, especially the banking sector (Jayamana & Choi, 2021). For example, Ali and Johl (2021) identified leadership/top management commitment, customer focus, training and learning, quality big data and analysis, process management, continuous improvement, and product/service design as TQM practices. Ramlawati and Putra (2018) go on to identify ten TQM practices: top management commitment, leadership, supplier quality management, focus on the consumer, employee training, continuous improvement, internal quality information, product design, and employee involvement. Similarly, Alshourah (2021) indicated six dimensions of TQM practices in Jordanian manufacturing organizations: leadership, people involvement, design of products, suppliers support, processes management, and customer focus.

Therefore, for the purpose of the current study, the following TQM practices are measured: top-management, customer focus, continuous improvement, employee management, and process management. The reasons for selecting these practices are: these dimensions are widely recognized and used as critical factors of TQM (Ali & Johl, 2021); it is also more important for the TQM (Kulenović, Folta, & Veselinović, 2021). Finally, the following factors, top management, customer focus, process management, and continuous

improvement, are used as indicators in many international quality awards, such as Malcolm Baldrige Award, New Zealand Business Excellence Award, European Quality Award, Japanese Quality Award, and Egyptian Quality Award (Nguyen, Phan, & Matsui, 2018).

2.3. Quality performance

A quality performance is defined as a multi-dimensional structure that demonstrates product quality, process, service, employee service quality, employee satisfaction, and customer satisfaction (Talib, Rahman, & Qureshi, 2013). Leading quality scientists, such as Deming, Juran, and Crosby emphasize the positive relationship between implementation quality and organizational performance (as cited in Shafiq, Lasrado, & Hafeez, 2017). Talib et al. (2013) also indicated that implementing TQM improves the quality performance of the company. According to Patyal and Koilakuntla (2017), quality performance affects business performance in two ways, manufacturing, and marketing. In a first way, improved performance means increased reliability, flexibility, durability, responsiveness, effectiveness, rework rates, less scrap, and less waste. In the second method, improving performance also reduces prices and thus increases sales and market share.

Various indicators to measure quality performance were used by various researchers, for example, Barros et al. (2014) used eight indicators: number of complaints and stakeholder satisfaction, lead time, quality management systems maturity, productivity, flexibility, non-conforming product/ service, product reliability, product durability and service continuity, fulfillment of the customer requirements, customer loyalty. Furthermore, Soares et al. (2017) suggested nine indicators of quality performance: product performance, conformance, technical durability, reliability, serviceability, aesthetics, value for money features, and perceived quality.

In this study, the quality performance was selected among the performance indicators for several reasons, firstly: it can be measured in some respects as shown in previous studies (Arumugam, Ooi, & Fong, 2008). Secondly, it has been used to measure organizational performance as a criterion in the Malcolm Baldrige National Quality Award model under the quality results (Barros et al., 2014). Thirdly, it has been used as an indicator to measure performance in various sectors and countries, in many previous research studies related to TQM (Alshourah, 2021; Basu et al., 2018; Soares et al., 2017; Patyal & Koilakuntla, 2017).

2.4. TQM and competitive advantage

Several studies have dealt with the relationship between TQM and competitive advantage, including Masrom et al.'s (2022) study, which confirmed that there is a significant impact of TQM on the competitive advantage in manufacturers of electrical and electronic appliances in Malaysia, where the application of TQM in these companies helped to gain an advantage cost from the internal and the advantage of differentiation from the external side.

Ahmed and Ferdousi's (2020) study concluded that the adoption of TQM practices, such as appointing a quality consultant, encouraging culture and learning, developing a mechanism for communicating information, involving top management with employees in continuous improvement processes, and using work teams, all of which help to obtain a competitive advantage. Moreover, the results of Abimbola et al.'s (2020) study indicate that proper application of TQM practices along with employee commitment will ensure results of a competitive advantage measured in terms of increased revenue, customer satisfaction, and employee satisfaction. Ferdousi et al. (2018) argue that competitive advantage plays an important role in any organization which makes it different according to the competitors in the market. Mawarti (2016) studies point out that the implementation of TQM has an enormous effect on achieving competitive advantages. Another study by Kafetzopoulos, Gotzamani, and Gkana (2015) reported that TQM can directly impact competitive advantage and improve the products and process innovation. Thus, the following hypothesis is proposed:

H1: TQM has a positive significant effect on competitive advantage in the Jordanian banking sector.

2.5. TQM and quality performance

Much empirical evidence indicates that implementing TQM improves quality performance in organizations (Alshourah, 2021). Wall's (2021) study also points out the importance of applying TQM to companies operating in the manufacturing and service sectors in Thailand, and the importance of this in achieving effective quality performance for these companies. Also, Budaj, Klencová, Daňková, and Piteková's (2018) study indicated the impact of the implementation of TQM practices directly on the performance of the organization by focusing on the commitment of senior management to implement quality programs in various parts of the organization. Hilman, Ali, and Gorondutse's (2019) study confirmed the importance of applying TQM, especially the commitment of senior management to improving quality performance in the organization. Barros et al. (2014) showed a significant and positive relationship between the implementation of quality management practices and their impact on Portuguese companies' quality performance. Also, Sarwar (2017) found a positive relationship between TQM practices and the quality performance in Dubai and Pakistan Islamic banks.

Soares et al. (2017) assert that there is an impact of the TQM series on the quality performance in UK-based manufacturing companies. Also, a study by Basu et al. (2018) confirmed that customer information acquisition, security management, intermittent optimization, and quality documentation are some of the most frequently used aspects of TQM to improve the quality of performance of Indian IT-enabled SMEs service. On the other hand, quality performance has been used as an indicator to measure organizational performance with other indicators, such as innovation performance, employee satisfaction, project performance, financial performance, operational performance, customer satisfaction, and

business performance in several studies (Sadikoglu & Olcay, 2014; Shafiq et al., 2017; Patyal & Koilakuntla, 2017; Wei, Chang, Zhang, Wu, & Tang, 2017; Basu et al., 2018). Thus, the following hypothesis has been proposed:

H2: TQM has a positive significant effect on quality performance in the Jordanian banking sector.

2.6. Quality performance and competitive advantage

Ferdousi et al. (2018) pointed out the importance of the link between quality performance and competitive advantage, and that organizations must provide high-quality products to establish and maintain a competitive position that enables them to deal with competitors in a better way and thus achieve sustainable competitive advantage. Also, the study of Rashwan and Kassem (2021) aimed to know the efficiency and quality of performance of Palestinian banks in light of digital transformation to enhance their competitive advantage.

Also, Evans and Lindsay (2011) added that quality practices increase productivity, reduce costs, and help firms to improve their competitive advantage. A study by Wang, Chen, and Chen (2012) also confirmed that TQM has an impact on the organizational performance of hotels through enhancing teamwork, rapid response to customer needs, and improving operating and production methods. This, in turn, affects how competitors are dealt with, thus improving the reliability and efficiency of the products and services. Furthermore, Zehir, Ertosun, Zehir, and Müceldilli (2012) confirm that high quality reduces the number of customer complaints, which helps to improve the competitive situation. Besides, good quality performance leads to reducing session time and reducing the cost of defects thus enhancing competitive advantage (Zakuan et al., 2012). Thus, the following hypothesis is proposed:

H3: Quality performance has a positive significant effect on competitive advantage in the Jordanian banking sector.

2.7. Quality performance as a mediator between TQM and competitive advantage

There are many previous studies that examined quality performance as a mediating variable between many different administrative and organizational variables. Ferdousi et al.'s (2018) study examined the quality of performance as a mediating variable in the relationship between organizational factors and competitive advantage in Bangladeshi business units, and its results indicated that quality performance mediates the relationship between organizational factors and competitive advantage. The results of Bandiyono and Augustine's (2019) study also indicated that quality performance mediates the relationship between educational firms and tax compliance in Indonesian firms. The study of Molina-Azorín, Tarí, Pereira-Moliner, Lopez-Gamero, and Pertusa-Ortega (2015) also confirmed that quality performance mediates the relationship between cost advantages, differentiation, and TQM in the hotel industry. Summers (2006) mentioned that TQM practices can lead to improvements in the quality performance of services and products, and costs reduce and minimize mistakes which

facilitate an organization to enhance competitive advantage. In another study, conducted in the hotel sector by Molina-Azorín et al. (2015), the result of this study pointed out that hotels applying quality management practices in their job improves their quality performance, which, in turn, gives them competitive advantages regarding differentiation and costs. Also, Kharub and Sharma (2018) examined the relationship between quality management practices, quality management system, firm performance, and competitive positioning in the context of micro, small and medium enterprises. The result of this study showed that quality management practices do not directly influence competitive advantage in positioning, but it does so indirectly by improving firm performance. Thus, the following hypothesis is proposed:

H4: Quality performance mediates the relationship between TQM and competitive advantage in the Jordanian banking sector.

3. RESEARCH METHODOLOGY

3.1. Research framework

The following model explains the relationship between various variables of the study as shown in Figure 1. TQM includes top management, customer focus, continuous improvement, process management, and employee management, while the dependent variable is a competitive advantage. Lastly, mediating variable is quality performance.

Figure 1. Research framework
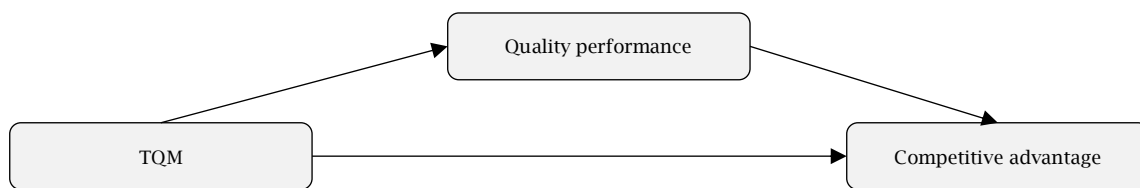
3.2. Research design

The current study used a cross-sectional descriptive survey design to collect data from the respondents, where the effect of the research is limited only to the study's measurements, but it does not interfere with the research settings (Cooper & Schindler, 2014).

3.3. Population and sample

The unit of analysis in this study is managers of Jordanian banks. According to the Association of Banks in Jordan, the number of managers in 16 banks is 2237. According to Sekaran and Bougie (2016), the sample size needed was 331 respondents based on the target population which represents 14.79% of the study population. However, the sample size was increased to 20% of the population to reduce sampling error and take care of the issue of non-response rate (Hair, Wolfinbarger, & Ortinall, 2008). Thus, 448 questionnaires were distributed. Only 336 usable questionnaires were returned with a 75% response rate.

3.4. Data collection instrument

The questionnaire survey consisted of four sections. The first section is comprised of questions related to the background of the respondents. The second section consists of five dimensions to measure TQM, namely: top management, customer focus, continuous improvement, employee management, and process

management, with 33 items adapted from Talib et al. (2013). The third section consists of competitive advantage with 13 items adapted from Molina-Azorín et al. (2015), Pereira-Moliner et al. (2016), Singjai et al. (2018), and Liu and Atuahene-Gima (2018). The fourth section includes 7 items indicating quality performance adapted from Talib et al. (2013). A five-point Likert scale was used, ranging from 5 = "Strongly agree" to 1 = "Strongly disagree" to collect the responses.

3.5. Data analysis

SmartPLS was used to test the data of the current study. The data were analyzed in two steps: the first step was to test the measurement model and the second step was to test the structural model.

4. RESULTS

4.1. Data screening

Data screening is an important proactive step that is performed to ensure that there are no missing values in the data or outliers. It is also useful to ensure that the data is distributed normally. This study used the skewness and kurtosis test to evaluate the distribution of the data. The values of the extent of kurtosis and skewness were less than ± 2, and therefore, the normality of the data for the study variables is acceptable (Singh & Sharma, 2016).

Table 1. Assessment of the normality of the variables

Variables	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Top management	336	-0.895	0.133	1.164	0.265
Customer focus	336	-0.598	0.133	0.008	0.265
Continuous improvement	336	-0.891	0.133	1.606	0.265
Employee management	336	-0.885	0.133	0.739	0.265
Process management	336	-0.892	0.133	1.124	0.265
Competitive advantage	336	-0.418	0.133	-0.461	0.265
Quality performance	336	-0.476	0.133	-0.082	0.265

4.2. Descriptive analysis of study variables

It is clear from Table 2 that the average values for the elements of TQM amounted to 4.18 for top management, 4.20 for customer focus, 4.23 for continuous improvement, 4.15 for employee management, and 4.19 for process management, which indicates the great agreement among the sample members in explaining the dimensions of TQM. On the same track, the average score for the quality performance components was 4.09, and the average for the competitive advantage components was 4.28. The high values of the dimensions of TQM and the quality performance are strong indicators for the managers of the Jordanian banking sector of the importance of these variables and consider them as an important and decisive factor in achieving a competitive advantage.

Table 2. Results of descriptive statistics for variables

Constructs	Items	N	Minimum	Maximum	Mean	Std. Deviation
Independent variables: TQM	Top management	336	2.00	5.00	4.18	0.564
	Customer focus	336	2.50	5.00	4.20	0.511
	Continuous improvement	336	2.00	5.00	4.23	0.544
	Employee management	336	2.29	5.00	4.15	0.553
	Process management	336	2.00	5.00	4.19	0.528
Dependent variable	Competitive advantage	336	3.00	5.00	4.28	0.434
Mediator variable	Quality performance	336	2.29	5.00	4.09	0.553

4.3. Assessment of the measurement model

The measurement model was evaluated in order to ensure the reliability and validity of the model using convergence validity and discriminant validity, besides Cronbach's alpha criterion to evaluate constructs' internal consistency reliability (Hair, Black, Babin, & Anderson, 2010).

The study model includes one higher-order construct (reflective-reflective), namely, TQM which includes five first-class structures (top management, customer focus, continuous improvement, employee management, and process management). In addition, two first-order–reflective constructs namely, quality performance and competitive advantage. Therefore, this study applied a two-stage approach recommended by Sarstedt, Hair, Cheah, Becker, and Ringle (2019). In the first stage using the repeated indicator approach then extracting the composite reliability and average variance extracted for the higher-order construct from the first-order construct that existed in the higher-order construct.

In other words, the study model was evaluated in two stages. In the first stage, the reliability and convergent validity of building a second-class TQM were evaluated, as shown in Table 3, and in the second time, the overall model was evaluated, as shown in Table 4. Then, the researchers moved to evaluate the discriminant validity of the overall model.

4.3.1. Convergent validity

Convergent validity is used as a statistical test to show whether there is any conflict between measurements and is also used to aim at the level of agreement between related indicators for the same concept (Cheah, Sarstedt, Ringle, Ramayah, & Ting, 2018). Hair et al. (2010) recommended that some different tests must be checked to test the convergent validity, such as composite reliability, outer loading, and average variance extracted (AVE), which must achieve at least their minimum values of 0.60, 0.60, and 0.50, respectively. Meanwhile, Cronbach's alpha criterion was used to evaluate constructs' internal consistency reliability and the threshold value is 0.7 (Hair et al., 2010).

Table 3. Convergent validity and Cronbach's alpha for the model for TQM

Construct	Items	Factor loading ranges	Composite reliability	Cronbach's alpha	AVE
Top management	7	0.753–0.818	0.915	0.891	0.605
Customer focus	6	0.628–0.823	0.879	0.834	0.548
Continues improvement	5	0.767–0.812	0.895	0.853	0.629
Employee management	7	0.653–0.799	0.903	0.874	0.571
Process management	6	0.668–0.841	0.895	0.859	0.589

Table 3 shows the convergent validity for results in which all 31 items of TQM achieved acceptable standard external loads of more than 0.60. Also, the appropriate values for AVE and composite reliability (CR) were more than 0.50 and 0.60,

respectively. It can also be observed that Cronbach's alpha values were greater than the recommended threshold value of 0.7 (Nunnally & Bernstein, 1994). This confirms that all components have sufficient reliability to measure their respective structure.

Table 4. Cronbach's alpha and convergent validity results for the overall model

Construct	Items	Factor loading	Composite reliability	Cronbach's alpha	AVE
TQM	Top management	0.812	0.891	0.941	0.620
	Customer focus	0.790			
	Continues improvement	0.790			
	Employee management	0.804			
	Process management	0.748			
Quality performance	QP 1	0.754	0.912	0.912	0.598
	QP 2	0.781			
	QP 3	0.794			
	QP 4	0.719			
	QP 5	0.748			
	QP 6	0.807			
	QP 7	0.805			
Competitive advantage	CA 1	0.706	0.906	0.883	0.620
	CA 2	0.689			
	CA 3	0.791			
	CA 4	0.739			
	CA 5	0.782			
	CA 6	0738			
	CA 7	0.718			
	CA 9	0.648			
	CA 13	0.654			

Table 4 shows the convergent validity results for the overall model in which they achieved acceptable standard external loads of more than 0.60 except for four items from a competitive advantage (CA8, CA10, CA11, and CA12) which had loads less than 0.60 and were removed in line with the recommendation made by Hair, Hult, Ringle, and Sarstedt (2017). By removing indicators with external loads between 0.40 and 0.70 from the scale, especially when omitted the indicator indicates increased composite reliability or AVE provided that, this does not affect the validity of the content. Also, the appropriate values for AVE and CR were more than 0.50 and 0.60, respectively. This confirms that all components have sufficient reliability to measure their respective structures.

4.3.2. Discriminant validity

Discriminant validity can be assessed using the approach proposed by Fornell and Larker (1981), which is based on comparing the covariance between measures with the AVE of individual measures. Table 5 shows the results of Fornell and Larcker (1981) and indicates that the value of each construct is more than the other values off-diagonal values in its respective column and row in the correlation according to the recommendation given by Fornell and Bookstein (1982). Thus, all constructs met discriminant validity.

**Table 5.** Discriminant validity analysis

	CA	CI	CF	EM	PM	QP	TM
CA	0.720						
CI	0.496	0.793					
CF	0.524	0.545	0.741				
EM	0490	0.524	0.510	0.756			
PM	0.637	0.492	0.511	0.536	0.768		
QP	0.631	0.452	0.507	0.525	0.602	0.733	
TM	0.435	0.610	0.584	0.543	0.417	0.425	0.778

Notes: CA = competitive advantage; CI = continuous improvement; CF = customer focus; EM = employee management; PM = process management; QP = quality performance; TM = top management.

Figure 2 shows the results of the PLS algorithm, including factor loading, path coefficients, and coefficient of determination. All items achieved

loading of more than 0.60, except items CA8, CA10, CA11, and CA12, which achieved loading less than 0.60 and were removed.

Figure 2. Results of PLS algorithm
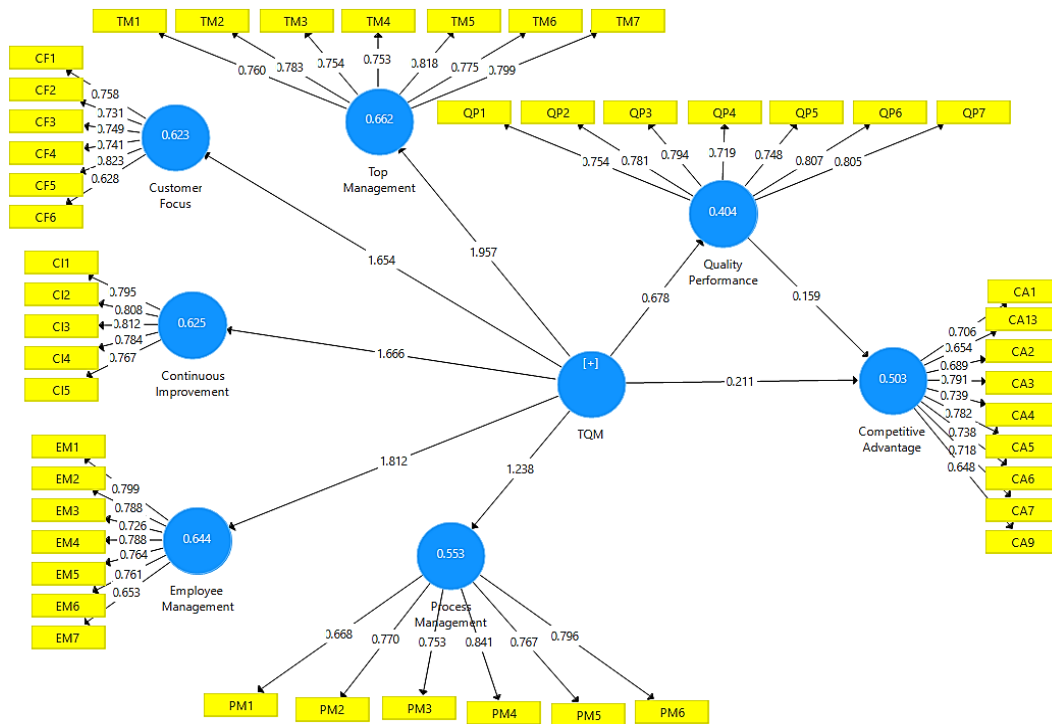
4.4. Structural model assessment

The second step is to run and evaluate the structural model to test the hypotheses *H1, H2,* and *H3* of the study. According to Hair, Hult, Ringle, and Sarstedt (2014), there are some tests to be performed to evaluate the internal model which generally focuses on the underlying structure. These tests are coefficient of determination (R^2), effect size (F^2), and predictive relevance (Q^2). All of these test results are mentioned in Table 6.

4.4.1. Hypotheses testing

The proposed hypotheses were examined using the SmartPLS algorithm and bootstrapping as

recommended by Felsenstein (1985). The structural model test results are shown in Table 6. The results demonstrated that TQM has a positive impact on the competitive advantage at the 0.001 level of significance ($\beta = 0.419$, $t = 7.391$, $p < 0.001$), supporting *H1*. Further, the results showed that TQM had a significant impact on quality performance at the 0.001 level of significance ($\beta = 0.636$, $t = 16.352$, $p < 0.001$), supporting *H2*. Quality performance was found to have a positive effect on the competitive advantage at the 0.001 level of significance ($\beta = 0.365$, $t = 5.849$, $p < 0.001$), supporting *H3*.

Table 6. Hypotheses testing results

Hypothesis	Path shape	Std. Beta	Std. Error	T-value	R^2	F^2	Q^2	P-value	Decision
H1	TQM–CA	0.419	0.057	7.391	0.503	0.211	0.252	0.000	Supported
H2	TQM–QP	0.636	0.039	16.352	0.404	0.678		0.000	Supported
H3	QP–CA	0.365	0.062	5.849		0.159		0.000	Supported

Table 6 shows that the R^2 value for competitive advantage is 0.503 and for quality performance is 0.404, which indicates that about 50% of the variance in competitive advantage is explained by two exogenous variables (TQM and quality performance) and that approximately 40% of the variance in quality performance has been explained by a single predictor (TQM). In addition, the overall results showed that R^2 values met the 0.19 threshold value recommended by Chin (1998).

Table 6 also indicates that the F^2 values for the three outside predictions are 0.211, 0.678, 0.159, respectively, and that the effect size is medium, large, and medium, respectively, according to the recommendation made by Draper (2018), which indicates the extent to which external predictors

interpret competitive advantage and performance quality. On the other hand, the predictive value Q^2 of the competitive advantage was 0.252, which is above zero, which indicates that the model has predictive relevance (Chin, 2010).

4.4.2. Testing the mediating role of quality performance

To analyze the role of quality performance as a mediating variable in the relationship between TQM and competitive advantage, the current study used Preacher and Hayes's (2008) method. The result of bootstrapping analyses in Table 7 showed that the indirect effect of TQM on competitive advantage

through quality performance was positive and statistically significant at the 0.05 level ($\beta = 0.232$, $t = 5.987$, $p = 0.000$). Also, the boot confidence interval (CI) bias-corrected did not straddle a 0 in between, indicating, as reported by Preacher and Hayes (2008), that there was a mediating effect. The lowest level (LL) = 0.157, and the highest level (UL) = 0.305. This confirms that the mediation effect was statistically significant, and thus the *H4* was supported.

Table 7. Mediation effect

Hypothesis	Relationship	Std. β	Std. Dev.	T-value	P-value	LL (2.5)	UL (97.5)	Decision
H4	TQM-QP-CA	0.232	0.039	5.987	0.000	0.157	0.305	Supported

4.4.3. The predictive relevance of the model

This study used R^2 values to evaluate the predictive ability of the study model and as a rule, the following values are considered as thresholds for knowing the predictive ability of the study model from 0.75 and above, between 0.25 and 0.75, equal to or less than 0.25 to be strong, medium, and weak predictive power, respectively (Hair et al., 2017). At current, the highest value of the R^2 was a competitive advantage (0.503), followed by the quality performance (0.404) as can be seen in Table 6. These results indicate a moderate in-sample predictive power of the study model.

5. DISCUSSION

This study aimed to examine: 1) the effect of TQM on competitive advantage, 2) the effect of TQM on quality performance, 3) the effect of quality performance on competitive advantage, and 4) the mediation role of quality performance between TQM and competitive advantage in the Jordanian banking sector. To achieve these goals, the study hypotheses were tested using SmartPLS.

The results indicated that TQM has a positive impact on the competitive advantage. This result can be explained by encouraging senior management in Jordanian banks and their commitment to quality programs, good management of bank employees and spreading teamwork, speed of response to the demands and needs of customers, focus on continuous improvement of all banking activities. These are some of the objective reasons that contributed to improving the competitive advantage of Jordanian banks. The results of this study are in agreement with the findings of previous studies, for example, Ahmed and Ferdousi's (2020), Abimbola et al.'s (2020), Ferdousi et al.'s (2018), Mawarti's (2016), Kafetzopoulos et al.'s (2015).

Meanwhile, the results also indicated that TQM has a positive impact on quality performance. This result can be interpreted by the attention of the top management in Jordanian banks to quality issues and spreading a culture that encourages improving the quality of services that are provided to customers, integrating workers in quality programs, and enabling them to participate effectively in decisions related to quality issues, and the attention to issues raised by customers and considering them as a basis in improved services. These are possible and reasonable reasons for improving the quality of performance in Jordanian banks. This result is consistent with what was stated by previous studies, such as Alshourah (2021), Basu et al. (2018), Soares et al. (2017), Sarwar (2017), Barros et al. (2014), and Sadikoglu and Olcay (2014); all these studies indicated the direct positive effect of TQM on quality performance.

The results also indicated that quality performance has a positive impact on the competitive advantage. This result can be interpreted that the increase in the bank's customers constantly, the decrease in the complaints of customers with the bank, the high level of the quality of services provided by the bank to its customers, and the workers doing their work correctly from the first time, are reasonable reasons to improve the quality of performance in Jordanian banks. The results of this study agreed with those of previous studies, such as Zehir et al. (2012), Wang et al. (2012), Zakuan et al. (2012), Evans and Lindsay (2011), Agus and Hassan (2011); all these studies confirm the existence of an important effect of quality performance on competitive advantage.

Similarly, the results also indicated that quality performance is a mediator in the relationship between TQM and competitive advantage. This result can be interpreted that the quality of performance appears when providing high-quality services to the bank's customers, when the employees perform their work correctly the first time, the increase in the number of dealers with the bank, and the decrease in their complaints. The keenness of the senior management and bank employees to pay attention to quality and translate it on the ground, all of this will improve the competitive advantage. The result of this study is in agreement with the results of previous studies, especially such studies as Ferdousi et al. (2018), Bandiyono and Augustine (2019), Molina-Azorín et al. (2015), Patyal and Koilakuntla (2016), all of which indicated that performance quality acts as a mediator between many different variables.

6. CONCLUSION

The current study examined the relationship between TQM, quality performance, and competitive advantage in the Jordanian banking sector. This study provided a comprehensive understanding and empirical evidence for the direct impact of TQM on competitive advantage, as well as the indirect impact through quality performance as a mediating variable in the relationship between TQM and competitive advantage. This study provides contributions from the theoretical concept, in which, it provides a comprehensive understanding of the dimensions of TQM and its role in improving competitive advantage in the Jordanian banking sector. The study also provides a theoretical framework that will help academics to build strategies that may maximize their impact on improving quality performance and competitive advantage. From a practical perspective, this study is likely to draw the attention of top management in banks to the importance of top management, customer focus,

continuous improvement, process management, personnel management, and quality performance, as potential sources of competitive advantage.

This study has some limitations that need to be addressed in future studies. First, this study relied on the cross-sectional design, and the causal relationships may change in the long term. Therefore, conducting a longitudinal study would help address this limitation and confirm the results. Second, the questionnaire was translated from the English edition but used in the Arabic context.

Future studies may create a data collection tool based on Arab culture. Third, in this study, the results were based on an examination of the relationship between structures in the Jordanian banking sector. Further studies in other contexts are needed to provide a clearer picture of the relationships between these constructs. Future research may explore in more depth and accuracy the relationship between the study variables when evaluating the effect of mediate variables, such as bank size, bank age, and bank type.

REFERENCES

1. Abdulameer, O. A. (2021). The role of total quality management in achieving competitive advantage. *Psychology and Education Journal, 58*(4), 2919–2935. Retrieved from http://psychologyandeducation.net/pae/index.php/pae/article/view/5116
2. Abimbola, B. O., Oyatoye, E. O., & Oyenuga, O. G. (2020). Total quality management, employee commitment and competitive advantage in Nigerian tertiary institutions. A study of the University of Lagos. *International Journal of Production Management and Engineering, 8*(2), 87–98. https://doi.org/10.4995/ijpme.2020.12961
3. Abu Wadi, R. M., & Saqfalhait, N. I. (2017). Determinants of Jordanian banking industry performance. *Jordan Journal of Business Administration, 13*(2), 181–199. Retrieved from https://journals.ju.edu.jo/JJBA/article/view/15269
4. Addae-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. Retrieved from https://archive.aessweb.com/index.php/5007/article/view/2494
5. Agus, A., & Hassan, Z. (2011). Enhancing production performance and customer performance through total quality management (TQM): Strategies for competitive advantage. Procedia — *Social and Behavioral Sciences, 24,* 1650–1662. https://doi.org/10.1016/j.sbspro.2011.09.019
6. Ahmad, M. F., Zakuan, N., Jusoh, A., Yusof, S. M., & Takala, J. (2014). Moderating effect of Asean Free Trade Agreement between total quality management and business performance. *Procedia — Social and Behavioral Sciences, 129,* 244–249. https://doi.org/10.1016/j.sbspro.2014.03.673
7. Ahmed, A., & Ferdousi, F. (2020). TQM components as a source of competitive advantage in a beverage organization: A resource based view. *International Journal of Business Strategy and Automation (IJBSA), 1*(2), 25–36. https://doi.org/10.4018/IJBSA.2020040103
8. Ali, K., & Johl, S. K. (2021). Soft and hard TQM practices: Future research agenda for industry 4.0. *Total Quality Management & Business Excellence.* Advance online publication. https://doi.org/10.1080/14783363.2021.1985448
9. Alshourah, S. (2021). Assessing the influence of total quality management practices on innovation in Jordanian manufacturing organizations. *Uncertain Supply Chain Management, 9*(1), 57–68. https://doi.org/10.5267/j.uscm.2020.12.001
10. Alshourah, S. (2021). Total quality management practices and their effects on the quality performance of Jordanian private hospitals. *Management Science Letters, 11*(1), 67–76. https://doi.org/10.5267/j.msl.2020.8.029
11. Alsmadi, S. A., Zurigat, Z. M., & Benshaib, M. A. (2013). Analysis of the competitiveness of Jordanian commercial banks for the period 2000–2009. *Jordan Journal of Business Administration, 9*(1), 97–118. Retrieved from https://journals.ju.edu.jo/JJBA/article/view/3681
12. Anil, A. P., & Satish, K. (2019). TQM practices and its performance effects: An integrated model. *International Journal of Quality and Reliability Management, 36*(8), 1318–1344. https://doi.org/10.1108/IJQRM-10-2018-0266
13. Arumugam, V., Ooi, K. B., & Fong, T. C. (2008). TQM practices and quality management performance: An investigation of their relationship using data from ISO 9001: 2000 firms in Malaysia. *The TQM Journal, 20*(6), 636–650. https://doi.org/10.1108/17542730810909383
14. Bandiyono, A., & Augustine, Y. (2019). Organizational performance as a mediation on the effect of levers of control and learning organization on tax compliance. *International Journal of Business, Economics and Law, 19*(5), 65–78. Retrieved from https://www.ijbel.com/wp-content/uploads/2019/09/K19_234.pdf
15. Barros, S. A., Sampaio, P., & Saraiva, P. (2014). Quality management principles and practices impact on the companies' quality performance. In *1st International Conference on Quality Engineering and Management (ICQEM 2014)* (pp. 237–247). Retrieved from https://hdl.handle.net/1822/36188
16. Basu, R., Bhola, P., Ghosh, I., & Dan, P. K. (2018). Critical linkages between quality management practices and performance from Indian IT enabled service SMEs. *Total Quality Management & Business Excellence, 29*(7–8), 881–919. https://doi.org/10.1080/14783363.2016.1252259
17. Bathaei, A., Awang, S. R., & Ahmad, T. (2021). An overview of organizational performance and total quality management. *Journal of Review in Science and Engineering, 2021,* 1–7. Retrieved from https://jms.procedia.org/archive/RSE_376/procedia_2021_2021_jrse-2107082112367.pdf
18. Budaj, P., Klencová, J., Daňková, A., & Piteková, J. (2018). Economic aspects of the mining industry in the Slovak Republic. *Acta Montanistica Slovaca, 23*(1), 1–9.
19. Central Bank of Jordan. (2016). *Annual Report of the Central Bank of Jordan 2016.* Retrieved from http://www.cbj.gov.jo/
20. Cheah, J.-H., Sarstedt, M., Ringle, C. M., Ramayah, T., & Ting, H. (2018). Convergent validity assessment of formatively measured constructs in PLS-SEM: On using single-item versus multi-item measures in redundancy analyses. *International Journal of Contemporary Hospitality Management, 30*(11), 3192–3210. https://doi.org/10.1108/IJCHM-10-2017-0649
21. Chen, R., Lee, Y.-D., & Wang, C.-H. (2018). Total quality management and sustainable competitive advantage: Serial mediation of transformational leadership and executive ability. *Total Quality Management & Business Excellence, 31*(5–6), 1–18. https://doi.org/10.1080/14783363.2018.1476132

22. Chen, R., Lee, Y.-D., & Wang, C.-H. (2020). Total quality management and sustainable competitive advantage: Serial mediation of transformational leadership and executive ability. *TQM & Business Excellence, 31*(5–6), 451–468. https://doi.org/10.1080/14783363.2018.1476132

23. Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods for business research* (pp. 295–336). Lawrence Erlbaum Associates Publishers. Retrieved from https://www.researchgate.net/publication/311766005_The_Partial_Least_Squares_Approach_to_Structural_Equation_Modeling

24. Chin, W. W. (2010). How to write up and report PLS analyses. In V. Vinzi, W. W. Chin, J. Henseler, & H. Wang (Eds.), *Handbook of partial least squares* (pp. 655–690). Springer. https://doi.org/10.1007/978-3-540-32827-8_29

25. Cooper, D. R., & Schindler, P. (2014). *Business research methods*. New York, NY: McGraw-Hill Education.

26. Davis, P. J., & Simpson, E. (2017). Resource-based theory, competition and staff differentiation in Africa: Leveraging employees as a source of sustained competitive advantage. *American Journal of Management, 17*(1), 19–33. Retrieved from http://t.www.na-businesspress.com/AJM/DavisPJ_Web17_1_.pdf

27. Draper, S. (2018). *Effect size*. Retrieved from https://www.psy.gla.ac.uk/~steve/best/effect.html

28. Duh, R.-R., Hsu, A. W.-H., & Huang, P.-W. (2012). Determinants and performance effect of TQM practices: An integrated model approach. *Total Quality Management and Business Excellence, 23*(5–6), 689–701. https://doi.org/10.1080/14783363.2012.669555

29. Elshaer, I. A., & Augustyn, M. M. (2016). Direct effects of quality management on competitive advantage. *International Journal of Quality & Reliability Management, 33*(9), 1286–1310. https://doi.org/10.1108/IJQRM-07-2014-0086

30. Evans, J. R., & Lindsay, W. M. (2011). *The management and control of quality* (8th ed.). Mason, Ohio: South-Western Cengage Learning.

31. Felsenstein, J. (1985). Confidence limits on phylogenies: An approach using the bootstrap. *Evolution, 39*(4), 783–791. https://doi.org/10.1111/j.1558-5646.1985.tb00420.x

32. Ferdousi, F., Baird, K., Munir, R., & Su, S. (2018). Associations between organizational factors, TQM and competitive advantage: Evidence from an emerging economy. *Benchmarking: An International Journal, 25*(3), 854–873. https://doi.org/10.1108/BIJ-05-2017-0110

33. Fornell, C., & Bookstein, F. L. (1982). Two structural equation models: LISREL and PLS applied to consumer exit-voice theory. *Journal of Marketing Research, 19*(4), 440–452. https://doi.org/10.2307/3151718

34. Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50. https://doi.org/10.1177/002224378101800104

35. Hair, J. F., Jr, Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Upper Saddle River, NJ: Prentice Hall.

36. Hair, J. F., Jr, Hult, G. T. M., Ringle, C., & Sarstedt, M. (2014). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Washington, DC: SAGE Publications.

37. Hair, J. F., Jr, Hult, G. T. M., Ringle, C., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modelling (PLS-SEM)*. SAGE Publications. https://doi.org/10.15358/9783800653614

38. Hair, J. F., Jr, Wolfinbarger, M. F., & Ortinall, D. J. (2008). *Essential of marketing research*. Boston, MA: McGraw Hill/Irwin.

39. Hilman, H., Ali, G. A., & Gorondutse, A. H. (2019). The relationship between TQM and SMEs' performance. *International Journal of Productivity and Performance Management, 69*(1), 61–84. https://doi.org/10.1108/IJPPM-02-2019-0059

40. Jayamana, J., & Choi, S.-L. (2021). Evaluation of the TQM dimensions of customer focus, top management support and employee involvement on organizational performance: A review. In *Business Law, and Management (BLM2): International Conference on Advanced Marketing (ICAM4), An International Joint e-Conference-2021 Department of Marketing Management, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka* (pp. 74–75). Retrieved from http://repository.kln.ac.lk/handle/123456789/23367

41. Kafetzopoulos, D., Gotzamani, K., & Gkana, V. (2015). Relationship between quality management, innovation, and competitiveness. Evidence from Greek companies. *Journal of Manufacturing Technology Management, 26*(8), 1177–1200. https://doi.org/10.1108/JMTM-02-2015-0007

42. Kamal, T. (2021). *Assessing impact of strategic human resource practices and sustainable competitive advantage on organizational performance: An empirical exploration*. Retrieved from http://dspace.uiu.ac.bd/bitstream/handle/52243/2301/Tasnim%20Project%20Article%202021.pdf?sequence=1&isAllowed=y

43. Kamukama, N., Kyomuhangi, D. S., Akisimire, R., & Orobia, L. A. (2017). Competitive advantage. *African Journal of Economic and Management Studies, 8*(2), 221–234. https://doi.org/10.1108/AJEMS-10-2016-0142

44. Kharub, M., & Sharma, R. (2018). An integrated structural model of QMPs, QMS and firm's performance for competitive positioning in MSMEs. *Total Quality Management & Business Excellence, 31*(3–4), 312–341. https://doi.org/10.1080/14783363.2018.1427500

45. Kulenović, M., Folta, M., & Veselinović, L. (2021). The analysis of total quality management critical success factors. *Quality Innovation Prosperity/Kvalita Inovácia Prosperita, 25*(1), 88–103. https://doi.org/10.12776/qip.v25i1.1514

46. Liao, S.-H., Hu, D.-C., & Ding, L.-W. (2017). Assessing the influence of supply chain collaboration value innovation, supply chain capability and competitive advantage in Taiwan's networking communication industry. *International Journal of Production Economics, 191,* 143–153. https://doi.org/10.1016/j.ijpe.2017.06.001

47. Liu, W., & Atuahene-Gima, K. (2018). Enhancing product innovation performance in a dysfunctional competitive environment: The roles of competitive strategies and market-based assets. *Industrial Marketing Management, 73,* 7–20. https://doi.org/10.1016/j.indmarman.2018.01.006

48. Masrom, N. R., Daut, B. A. T., Rasi, R. Z., & Lo, W. K. (2022). Innovation as mediating factor between total quality management and competitive advantage among manufacturers. *International Journal for Quality Research, 16*(1), 243–260. https://doi.org/10.24874/IJQR16.01-17

49. Mawarti, A. R. (2016). Effect of external environment organization and application of total quality management (TQM) and performance of the company and its effect on competitive advantage in Ptism Bogasari Flourmills, Jakarta. *JRMSI — Jurnal Riset Manajemen Sains Indonesia, 7*(1), 22–40. https://doi.org/10.21009/JRMSI.007.1.02

50. Mehralian, G., Nazari, J. A., Zarei, L., & Rasekh, H. R. (2016). The effects of corporate social responsibility on organizational performance in the Iranian pharmaceutical industry: The mediating role of TQM. *Journal of Cleaner Production, 135,* 689–698. https://doi.org/10.1016/j.jclepro.2016.06.116

51. Miller, D. (1986). Configurations of strategy and structure: Towards a synthesis. *Strategic Management Journal, 7*(3), 233–249. https://doi.org/10.1002/smj.4250070305

52. Molina-Azorín, J. F., Tarí, J. J., Pereira-Moliner, J., Lopez-Gamero, M. D., & Pertusa-Ortega, E. M. (2015). The effects of quality and environmental management on competitive advantage: A mixed methods study in the hotel industry. *Tourism Management, 50,* 41–54. https://doi.org/10.1016/j.tourman.2015.01.008

53. Nguyen, M. H., Phan, A. C., & Matsui, Y. (2018). Contribution of quality management practices to sustainability performance of Vietnamese firms. *Sustainability, 10*(2), 375. https://doi.org/10.3390/su10020375

54. Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory.* New York, NY: McGraw-Hill.

55. Obeidat, U., Obeidat, B., Alrowwad, A., Alshurideh, M., Masadeh, R., & Abuhashesh, M. (2021). The effect of intellectual capital on competitive advantage: The mediating role of innovation. *Management Science Letters, 11*(4), 1331–1344. https://doi.org/10.5267/j.msl.2020.11.006

56. Owusu, P. A., & Duah, H. K. (2018). Evaluating total quality management as a competitive advantage tool in mobile telecommunication services in Ghana. *European Journal of Research and Reflection in Management Sciences, 6*(1), 9–22. Retrieved from https://www.idpublications.org/wp-content/uploads/2017/12/Full-Paper-EVALUATING-TOTAL-QUALITY-MANAGEMENT-AS-A-COMPETITIVE-ADVANTAGE.pdf

57. Pantouvakis, A., & Karakasnaki, M. (2017). Role of the human talent in total quality management — Performance relationship: An investigation in the transport sector. *Total Quality Management & Business Excellence, 28*(9–10), 959–973. https://doi.org/10.1080/14783363.2017.1303873

58. Patyal, V. S., & Koilakuntla, M. (2016). Relationship between organizational culture, quality practices and performance: Conceptual framework. *International Journal of Productivity and Quality Management, 19*(3), 319–344. Retrieved from https://www.inderscienceonline.com/doi/pdf/10.1504/IJPQM.2016.079779

59. Patyal, V. S., & Koilakuntla, M. (2017). The impact of quality management practices on performance: An empirical study. *Benchmarking: An International Journal, 24*(2), 511–535. https://doi.org/10.1108/BIJ-11-2015-0109

60. Pereira-Moliner, J., Pertusa-Ortega, E. M., Tarí, J. J., López-Gamero, M. D., & Molina-Azorín, J. F. (2016). Organizational design, quality management and competitive advantage in hotels. *International Journal of Contemporary Hospitality Management, 28*(4), 762–784. https://doi.org/10.1108/IJCHM-10-2014-0545

61. Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*(3), 879–891. https://doi.org/10.3758/BRM.40.3.879

62. Qasarou, S. T., ALmahamid, A. M., Maghraby, K. M., & Qasaroi, A. T. (2016). The impact of competitive priorities on organizational performance: Testing the mediating role of enterprise resource planning system (ERP) usage and e-business adoption: An empirical study: In Arab bank's branches in Amman City. *Jordan Journal of Business Administration, 12*(3), 347–375. https://doi.org/10.12816/0033354

63. Ramlawati, R., & Putra, A. H. P. K. (2018). Total quality management as the key of the company to gain the competitiveness, performance achievement and consumer satisfaction. *International Review of Management and Marketing, 8*(4), 60–69. Retrieved from https://www.econjournals.com/index.php/irmm/article/download/6932/pdf

64. Rashwan, A. R. M. S., & Kassem, Z. A.-E. A. (2021). The role of digital transformation in increasing the efficiency of banks' performance to enhance competitive advantage. In *The big data-driven digital economy: Artificial and computational intelligence* (SCI, Vol. 974, pp. 325–335). Springer. https://doi.org/10.1007/978-3-030-73057-4_25

65. Reed, R., Lemak, D. J., & Mero, N. P. (2000). Total quality management and sustainable competitive advantage. *Journal of Quality Management, 5*(1), 5–26. https://doi.org/10.1016/S1084-8568(00)00010-9

66. Respatiningsih, H. (2021). The impact of e-commerce on the marketing performance of MSMEs during the COVID-19 pandemic mediated by competitive advantage. In *3rd International Conference of Banking, Accounting, Management and Economics (ICOBAME 2020)* (pp. 166–169). Atlantis Press. https://doi.org/10.2991/aebmr.k.210311.032

67. Rousan, M. A. (2007). The relationship between competitive advantage and environmental analysis is an applied study in the Jordanian banking sector. *Journal of Administration and Economics, 63,* 137–157. Retrieved from https://www.iasj.net/iasj/article/26394

68. Rousan, M. A. (2007). The relationship between competitive advantage and environmental analysis is an applied study in the Jordanian banking sector. *Journal of Administration and Economics, 63,* 137–157. Retrieved from https://www.iasj.net/iasj/article/26394

69. Rowland, C. A., Hall, R. D., & Altarawneh, I. (2017). Training and development: Challenges of strategy and managing performance in Jordanian banking. *EuroMed Journal of Business, 12*(1), 36–51. https://doi.org/10.1108/EMJB-01-2016-0001

70. Sadikoglu, E., & Olcay, H. (2014). The effects of total quality management practices on performance and the reasons of and the barriers to TQM practices in Turkey. *Advances in Decision Sciences, 2014,* 537605. https://doi.org/10.1155/2014/537605

71. Samsir, S. (2018). The effect of leadership orientation on innovation and its relationship with competitive advantages of small and medium enterprises in Indonesia. *International Journal of Law and Management, 60*(2), 530–542. https://doi.org/10.1108/IJLMA-01-2017-0005

72. Sarstedt, M., Hair, J. F., Jr, Cheah, J. H., Becker, J. M., & Ringle, C. M. (2019). How to specify, estimate, and validate higher-order constructs in PLS-SEM. *Australasian Marketing Journal (AMJ), 27*(3), 197–211. https://doi.org/10.1016/j.ausmj.2019.05.003

73. Sarwar, H. (2017). Total quality management and innovation performance: An empirical evaluation of quality and innovation in Dubai Islamic Bank Pakistan. *Advances in Social Sciences Research Journal, 3*(13), 275–295. Retrieved from https://journals.scholarpublishing.org/index.php/ASSRJ/article/view/3127

74. Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach.* Hoboken, NJ: John Wiley & Sons.

75. Shafiq, M., Lasrado, F., & Hafeez, K. (2017). The effect of TQM on organizational performance: Empirical evidence from the textile sector of a developing country using SEM. *Total Quality Management & Business Excellence, 30*(1–2), 31–52. https://doi.org/10.1080/14783363.2017.1283211

76. Singh, V., & Sharma, S. K. (2016). Analyzing the moderating effects of respondent type and experience on the fuel efficiency improvement in air transport using structural equation modeling. *European Transport Research Review, 8,* 12. https://doi.org/10.1007/s12544-016-0199-3

77. Singjai, K., Winata, L., & Kummer, T. F. (2018). Green initiatives and their competitive advantage for the hotel industry in developing countries. *International Journal of Hospitality Management, 75,* 131–143. https://doi.org/10.1016/j.ijhm.2018.03.007

78. Soares, A., Soltani, E., & Liao, Y. Y. (2017). The influence of supply chain quality management practices on quality performance: An empirical investigation. *Supply Chain Management: An International Journal, 22*(2), 122–144. https://doi.org/10.1108/SCM-08-2016-0286

79. Summers, D. C. S. (2006). *Quality* (5th ed.). Hoboken, NJ: Pearson Prentice Hall.

80. Talib, F., Rahman, Z., & Qureshi, M. N. (2013). An empirical investigation of relationship between total quality management practices and quality performance in Indian service companies. *International Journal of Quality & Reliability Management, 30*(3), 280–318. https://doi.org/10.1108/02656711311299845

81. Tan, Y. (2017). The impacts of competition and shadow banking on profitability: Evidence from the Chinese banking industry. *The North American Journal of Economics and Finance, 42,* 89–106. https://doi.org/10.1016/j.najef.2017.07.007

82. Tsou, Y. H., Huang, Y. F., Liu, S. C., & Do, M. H. (2021). The effects of total quality management and corporate social responsibility on firm performance: A future research agenda. *The Journal of Asian Finance, Economics and Business, 8*(4), 277–287. https://doi.org/10.13106/jafeb.2021.vol8.no4.0277

83. Valmohammadi, C., & Roshanzamir, S. (2015). The guidelines of improvement: Relations among organizational culture, TQM and performance. *International Journal of Production Economics, 164,* 167–178. https://doi.org/10.1016/j.ijpe.2014.12.028

84. Wall, W. P. (2021). The comparison of the TQM practices and quality performance between manufacturing & service sectors. *Polish Journal of Management Studies, 23*(1), 436–452. https://doi.org/10.17512/pjms.2021.23.1.27

85. Wang, C.-H., Chen, K.-Y., & Chen, S.-C. (2012). Total quality management, market orientation and hotel performance: The moderating effects of external environmental factors. *International Journal of Hospitality Management, 31*(1), 119–129. https://doi.org/10.1016/j.ijhm.2011.03.013

86. Wei, J. T., Chang, Y. W., Zhang, X., Wu, H. H., & Tang, Y. T. (2019). Performance measurement systems, TQM and multi-level firm performance: A person-organization fit perspective. *Total Quality Management & Business Excellence, 30*(15–16), 1578–1595. https://doi.org/10.1080/14783363.2017.1384311

87. World Economic Forum. (2019). *The Global Competitiveness Report 2019.* Retrieved from https://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

88. Wright, P. M., & McMahan, G. C. (1992). Theoretical perspectives for strategic human resource management. *Journal of Management, 18*(2), 295–320. https://doi.org/10.1177/014920639201800205

89. Zakuan, N., Muniandy, S., Saman, M. Z. M., Ariff, M. S. M., Sulaiman, S., & Jalil, R. A. (2012). Critical success factors of total quality management implementation in higher education institution: A review. *International Journal of Academic Research in Business and Social Sciences, 2*(12), 19–32. Retrieved from https://hrmars.com/papers_submitted/9370/critical-success-factors-of-total-quality-management-implementation-in-higher-education-institution-a-review.pdf

90. Zehir, C., Ertosun, Ö. G., Zehir, S., & Müceldilli, B. (2012). Total quality management practices' effects on quality performance and innovative performance. *Procedia — Social and Behavioral Sciences, 41,* 273–280. https://doi.org/10.1016/j.sbspro.2012.04.031