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Total Quality Management and Performance: Selected Cases from Jordan

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□ ABSTRACT □

The current study investigated the relationship between Total Quality Management (TQM) and organizational performance by comparing different cases in private and public sectors in Jordan. The cases represented several sectors such as banking, health care management, and manufacturing. The findings suggested that TQM is a critical approach of management to achieve high performance, efficiency, and effectiveness of organizations. It showed that the field that the organization belongs to influences the types of indicators (measures) used for both TQM and performance. Though the number of cases was small, the study can be practically significant to illustrate the strong relationship between TQM and performance. Moreover, the investigated cases indicated that the TQM is critical approach to achieve the efficiency, effectiveness and performance within organizations, and showed that the specialization of the organizations influence the type of indicators used for both TQM and performance.

Keywords: Total Quality Management, Performance, Banking, Manufacturing, Jordan.

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ادارة الجودة الشاملة والاداء: حالات مختارة من الأردن

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□ ملخّص □

تهدف هذه الورقة البحثية الى بحث العلاقة بين مؤشرات ادارة الجودة الشاملة ومقاييس الاداء وذلك بمقارنة حالات مختلفة في القطاعين العام والخاص في الأردن. شملت الحالات التي أختيرت في هذه الورقة قطاعات متعددة مثل القطاع البنكي، وادارة الخدمات الصحية، والقطاع الانتاجي. وعلى الرغم من العدد القليل من تلك الحالات، فأن هذه الدراسة يمكن ان تكون دليلا" هام التبرير العلاقة القوية بين تطبيق الجودة الشاملة والأداء.

الكلمات المفتاحية: أدارة الجودة الشاملة، الأداء، القطاع البنكي، قطاع الأنتاج، الأردن

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Introduction

Several studies emphasized the importance of incorporating Total Quality Management [TQM] into the strategic planning process (e.g., Garvin, 1988; Teboul, 1991; &Omachonu& Ross, 1994). TQM is a comprehensive philosophy usually it based on continuous improvement in order to provide the service and product with high quality and standard and to satisfy the customers. (Hill, 2008). Firms that integrate TQM would consider the following (as stated by Marquardt, 1994):

1. continuous improvement to achieve improved customer satisfaction,
2. clarifying goals, targets and priorities to all employees,
3. having quality strategies as part of the organization's mission/vision statements,
4. setting goals to be quantifiable, having measurement / benchmarking process with clear indicators of progress towards these goals,
5. recognizing different segments of customer in current and potential markets,
6. having competitor benchmarking as a continuing activity with information fed into the goal and strategy setting process, involving employees at all levels of planning process and revised goals and targets according to continuous measurement.

Chapman, et al., (1997) stated that several indicators can be used to measure the quality within the organisational context; Firstly, alignment between quality plans and strategic planning. Secondly, employee involvement at all level in organisation. Thirdly, customer-focused planning where goals and targets are consistent with the overall aim of improved customer satisfaction. Fourthly, benchmarking processes are an accepted part of the organization's activities (including the planning and goal-setting processes), innovation and continuous improvement which have strategic importance and are included in the organization's broad objectives.

Garvin (1988) found a strong association between productivity (labor and capital) and quality as well as between profitability – return on investment and quality. Both productivity and profitability are part of the overall performance of any organization. Azizan (2007) suggested eight factors to measure the performance of TQM in an organization: customer focus, leadership, employee involvement, process approach, systems approach to management, continual improvement, factual approach to decision making, and mutually beneficial supplier relationship. Sila & Ebrahimpour (2005) mentioned that TQ indicators are: people management, customer focus, process management, information and analysis leadership, supplier management, and strategic planning.

Edmondson and Wheelwright (1989) explained that new skills, new knowledge, and new methods for doing things are required at all organizational levels. Porter (1990) pointed out that the relationships between producers' suppliers (or suppliers and customers) were identified as vital processes for creating horizontal linkage in the value chain as manufacturers and their suppliers, through strong communication and participation, continually add value by refining processes and innovations.

Besides, strong relationships were found between organizational success and some of the previously mentioned factors as customer satisfaction, product quality improvement, and reduction in waste and strategic quality improvement (Sohal, *et. al.,* 1991; Burns and Smith, 1992; Hayes and Clark, 1985; and Schmenner and Cook, 1985).

Prabhu *et. al.* (2000) found that companies which systematically adopt best practice starting with ISO 9000 and continuing with quality management practices are achieving significantly higher performance levels. Besterfield *et. al*. (2003) pointed out that there is a strong link between quality management and financial performance and that the adoption

of quality management principles improves productivity and profitability. Very few studies attempted to link TQM indicators and businesses performance in Jordan (e.g. Chapman&Al-Khawaldeh, 2002; Al-Khawaldeh & Abu Tayeh, 2004; Al-Marsumi, 2009; Rawashdeh 2014; El-Tohamy& Al Raoush, 2015; Al-Ettayyem & Al-Zu'bi, 2015).

The importance and objective of the study

The importance of this study lies in the viewed literature related to TQM and Performance in different sectors. Moreover, the paper investigated the TQM dimensions that affect the performance in these sectors. This paper is an attempt to take advantage of the development done in the studied sectors and at the same time draw a more comprehensive view for different dimensions together that were studied separately before. Additionally, this makes this paper differ from the previous studies.

However, this paper can contribute to knowledge as an attempt to address the gaps in the literature by reviewing the literature concerning the link between the TQM dimensions and performance in private and public organizations. The aim of this paper is to investigate the link between Total Quality Management (TQM) indicators and performance measures by comparing different cases in private and public sectors in Jordan.

The Selected Cases

First: Banking and Financial Sector

(Jaafreh & Al- Abedallat, 2012) study conducted on the banking sector in Jordan. In more specific,this research oriented to managers of bank branches in Jordan; where 164 cases were analyzed, the results have confirmed that TQM practices have positive and significant impacts both on bank performance and competitive advantages. The study investigated delivery dependability, cost or price, time to market, and product innovation as competitive advantage dimensions.

Results of the study served both theoretical and managerial viewpoints. From the theoretical side, the findings obtained by the study consistent with the concepts and the former literature which aligned with these concepts by providing practical proof leading to enhancement the quality management knowledge field. On the other hand, from the managerial standpoint, the outcomes of this study indicated that there is a major and an important relationship between quality management and organizational performance. This means that the leaders must be concerned about these factors to improve the organizational performance. (Rawashdeh,2014)

This study targeted the managers of bank branches in Jordan; where 164 cases were analyzed, the results have confirmed that TQM practices have positive and significant impacts both on bank performance and competitive advantages. The study investigated delivery dependability, cost or price, time to market, and product innovation as competitive advantage dimensions.

(Al-Ettayyem and Al-Zu'bi, 2015)

The study examined the effect of TQM practices namely, (customer satisfaction, education and training, continuous improvement, teamwork, and top management commitment) on organizational performance (financial and non-financial) in the Jordanian banking sector (11 commercial banks). The study showed that the TQM practices have a significant effect on the financial performance in the investigated organizations.

Health Care Management Sector

(El-Tohamy& Al Raoush, 2015)

The study focused on the importance of applying TQM to organizational effectiveness in hospitals that were accredited from Health Care Accreditation Council (HCAC). The study population included 1290 professionals working in five HCAC accredited governmental hospitals. TQM principles discussed were: leadership commitment to quality, customer focus, continuous improvement, teamwork, employee involvement, education and training. Research findings revealed a strong effect of the applications of TQM principles on the HCAC accredited governmental hospital in Jordan.

Manufacturing Sector

(Chapman, & Al-Khawaldeh, 2002)

This research examined the link between labor productivity and eight recognized elements of TQM: employee participation, education and training, organizational communication, customer focus, scientific approach to decision making, statistical methods for quality control, organizational commitment to quality and continuous improvement, and unity of purpose. The population of the study included 90 Jordanian shareholding corporations listed in 1998 under the industrial category in Amman Financial Market, now called "Amman Stock Exchange". The study findings showed that mean labour productivity measurements for high-TQM corporations were significantly higher than for low-TQM ones. Additionally, mean growth ratios of labour productivity for corporations with high-TQM were higher than for those with low-level TQM.

(Al-Khawaldeh& Abu Tayeh, 2004)

This study investigated the link between quality management indicators and financial performance in manufacturing corporations in Jordan. The quality management indicators were: strategic integration; deployment/involvement; customer-focused planning; measurement and benchmarking; and innovation and continuous improvement, were measured through questionnaire.The selected financial performance measures were: return on equity, return on assets, and labor productivity). The population of the study included all Jordanian shareholding corporations listed under the industrial category in Amman Stock Exchange. In late 2001, this consisted of a total of 89 companies. The study findings showed that there are significant relationships between quality management principles and the investigated companies' financial performance.

(Marsumi, 2009)

This study investigated the extent of application and the impacts of TQM on performance in the Jordan dairy industry. The sample consists of six companies. The TQM factors discussed were: instilling quality culture, employee participation, training and motivation, continuous improvement, focus on customers and strategic competitive management. The study indicated that there is a direct and positive relationship between the extent of the TQM application and the values of the performance indicator.

Public sector

(Aladwan, 2016)

This study aims to fill the gap in the TQM and government service management by providing a more sophisticated understanding of the relationship between TQM, employee satisfaction and service quality within the context of Jordanian public sector organizations. Findings from Structural Equation Modeling (SEM) reveal the direct impact of TQM on ES, whereas TQM was found to have an indirect impact on service quality (mediated by employee satisfaction). At the same time, employees' satisfaction has a direct impact on dimensions of service quality, namely reliability, responsiveness, assurance and empathy. The variance of service empathy can be highly predicted by employee satisfaction levels

(71%). Interestingly, the outcomes of this research revealed that service employees in the public sector play four roles: enabler, mediator, complementary and collaborator.

Statistical Findings of the Cases

The previously mentioned cases conducted different statistical analyses to test the strength degrees of the relationships between TQM indicators / factors and performance in different organizations; these are presented in the table below:

Table 1: Studies that discussed Implementing TQM in Jordanian selected sectors and their relation to Performance.

Citation	Case	TQM critical factors	Indicators of Performance	Analyses and Results
(Jaafreh& Al-abedallat, 2012)	Banking & Financial Sector	Customer Focus, Top Management commitment (leadership), Strategic Planning, employee relation, Supplier quality, process management	Organizational performance	Multiple regression analysis. Results of this study showed that there is a significant relationship between quality management dimensions (leadership, strategic planning, customer focus, and employee relation) and Organizational performance.
(Rewashed, 2014)		Supplier management, customer focus, leadership, process management, information and analysis, people management, and strategic planning	return on investment, sales, and market share delivery dependability, cost or price, time to market, and product innovation	Multiple linear regression analysis total quality management explains 82 % of the variance of corporate performance TQM explains 76 % of the variance of competitive advantage.
(Al-Ettayyem& Al-Zu'bi, 2015)		customer satisfaction, continuous improvement, teamwork, top management commitment	Organizational performance: (financial and non-financial).	Multiple linear regression The independent variable (TQM practices) explained (40.8%) of the dependent variable (organizational performance, financial). TQM practices explained (52.8%) in the (organizational performance, non-financial).
(El-Tohamy& Al Raoush, 2015)	Medical Sector	Commitment to quality, customer focus, continuous improvement, teamwork, employee involvement, education and training.	Hospital effectiveness	the regression equation predicted almost 66.9% contribution of TQM to Hospital effectiveness in the accredited governmental hospitals in Jordan

(Chapman, and Al-Khawaldeh, 2002)	Industrial Sector	employee participation (EP), education and training (E&T), organizational communication (OC), customer focus (CF), scientific approaches to decision making (SATDM), statistical methods for quality control (SMFQC), organizational commitment to quality and continuous improvement (OCTQ&CI), and unity of purpose (UOP)	Labor productivity	Multiple linear regression analysis Percentages of prediction by the regression equation: With ISO 9000 EP 40.1% E&T 45.5% OC 13.6% CF 45.7% SATDM 22.3% SMFQC 51% OCTQ&CI 44.6% UOP 31.1% Without ISO 9000 EP 69.1% E&T 69.1% OC 73.7% CF 67.4% SATDM 60.1% SMFQC 64.3% OCTQ&CI 62.8% UOP 54.2%
(Abu Tayeh, 2004)		Strategic Integration (SI) Deployment/ Involvement (D/I) Customer-Focused Planning (CFP) Measurement and Benchmarking (M&B) Innovation and Continuous Improvement (I&CI)	Return on equity (ROE) Return on assets (ROA) Labor productivity (LP)	Correlation There are statistically positive relationships between quality management indicators and financial performance measures (All ranged between 0.40-0.80)
(Marsumi, 2009)		Overall TQM	(Tons of milk processed per year)	The correlation coefficient was 0.94, indicating a direct and consistent linear relationship

In light of the above table, we can conclude the following points:

- There is a significant positive relationship between TQM practices and performance.
- The differences in the specialization of the organizations affected the type of indicators used for both TQM and performance (for example: the industrial sector focused on labor productivity, while health care management sector considered effectiveness).
- Some TQM indicators /factors were most commonly focused on as customer focus, teamwork, and continuous improvements, while benchmarking was the least to be considered.

Conclusions and recommendations

As mentioned before, this paper aimed to investigate the relationship between TQM and performance in several cases from Jordan. First: Overall, all cases indicated that the TQM is critical philosophy to achieve the efficiency, effectiveness and performance within organizations.

Employee involvement and quality teams are vital for daily operations and work development, which will consequently improve productivity and performance (Chapman

et. al., 1997; Sluti *et. al.,* 1995; and Al-khalifa and Aspinwall, 2000). Second: For customer focused planning, when focusing on customer satisfaction, it means that the company concentrates on maximizing customer value through better quality or/and low cost. This leads to improving performance (Prabhu *et. al.* 2000; Curry and Kadasah 2002). This explains that the relationships between customer-focused planning and financial performance measures are statistically positive relationships.
Third: One of the TQM indicators that were less to be implemented is benchmarking. Benchmarking is about selecting a demonstrated standard of products, services, costs, or practices that represent the very best performance for processes or activities very similar to your own. Measurement and benchmarking activities contribute to the achievement of competitive advantage, and thereby performance improvement (Chapman *et. al.,* 1997; Sluti *et. al.,* 1995; Prabhu *et. al*. 2000; and Besterfield *et. al.,* 2003).
Benchmarking is the continuous process of measuring products, services and practices against the toughest competitors and/or recognized industry leaders (Canada, 1993 and Ettorre, 1993).
For innovation and continuous improvement, producing new products, and never-ending process improvement lead to less re-work, reduced throughput time, lower cost, then greater productivity and performance (Marquardt, 1994; Chapman *et. al*., 1997; Sluti*et. al.,* 1995; Prabhu*et. al.* 2000; and Besterfield*et. al.,* 2003).

For successful implementation of the TQM, the following suggestions can be provided:
- The quality concept must be an integral part of the company vision and mission, and well communicated and broadly understood by all employees. In this regards, the management of the company shall enhance the communication channels within the company in addition to let employees participate in decision making process and organize annual meetings between the company's management and employees in the different levels in the company.
- Top management commitment and support, specifically, quality teams should have formal support from top management.
- Customer satisfaction is the highest priority in the organizations. Translating customer requirements into product and process definitions or specifications should be mostly considered as outcomes. This can be achieved by involving customers in designing the products through obtaining feedbacks from them.
- Considering more the concept of Benchmarking, where comparisons are made between the company's performance and successful local and international companies in the same or different field. This can be achieved by many means such as allowing the quality supervisors working in these organizations to make visits to the organizations which have high standards in implementing the TQM approach
- Moreover, the author suggests further studies on the barriers may face the organizations in public and private sectors to implement the TQM approach.
- It could be recommended that those dimensions which have not been covered by this paper could be addressed by further research.

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