

Examination the Impact of Total Quality Management Practices in Achieving Strategic Agility: Applied Study on the Jordanian Private Hospitals

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Abstract

Strategic agility enables organizations to respond and react quickly for the continuous and accelerated changes in their business environment and enhance its competitive advantage to survive. Therefore, the main purpose of this study is to determine the impact of quality management practices on achieving the strategic agility in the Jordanian private hospitals that located in Amman city, which amount (40) hospital. The sample of the study included all the study population. The sampling unit and analysis (respondents) composed of (285) managers and chief of divisions working in the target hospitals with concentrate to whom their work relates to quality management and strategic planning. In order to achieve the study objectives, the researcher designed a questionnaire consisting of (27) paragraph to collect the required data from study sample. The multiple regression analysis was used to testing the hypotheses. Empirical results found that the total quality management practices have a positive impact on strategic agility, and the highest impact was for the customer orientation and supplier management. Based on these results the study recommending that the hospitals should focus largely on their customer orientation, managing their supplier's quality, obtain top management support, and involve their employees in its total quality efforts in order to achieve strategic agility and gain sustainable competitive advantage thus maintain their survival. Also the study recommending that conducting more future research and studies on the relationship between total quality management and strategic agility in the different contexts, because the current study and its results limited to the Jordanian private hospitals.

Keywords: Total Quality Management Practices, Supplier Management, Top Management Support, Customer Orientation, Employee Involvement, Strategic Agility

1. Introduction

In the recent years, the environment of business organizations became characterize by the rapid and successive changes because of the great technological development, innovations, globalization, information revolution, and the changing needs of customers and markets. These changes in the business environment created many challenges for the organizations, the most prominent of them increasing the competition, which prompted organizations to look for the best ways to help them enhance their competitive advantage through rapid respond to these accelerated changes in order to maintain its survival and sustainability. Many organizations now consider strategic agility to be essentials for their survival and competitiveness (Sharifi & Zhang, 1999; Lin, Chiu, & Chu, 2006) because the strategic agility enables them to respond flexibly to this dynamic environment (Lewis, Andriopoulos, & Smith, 2014). Most of the organizations adopted new managerial philosophies and practices in order to achieve the strategic agility.

Total quality management considered one of the new managerial philosophies and practices adopted by both service and manufacturing organizations.

The service organizations - especially health care organizations - implemented the total quality management practices after the success of implementation it in manufacturing organizations, and it has led to improve patient satisfaction, and increased productivity and profitability, and improved performance (Alexander et al., 2006; Macinati, 2008). The total quality management practices typically focused on understanding customers' needs and their evolution over time in order to meet their requirements (Costantini & Zanin, 2015).

Most of the scholars and previous studies focused on measuring the impact of total quality management practices on the organization performance like (Flynn et al., 1995; Easton & Jarrel, 1998; Kaynak, 2003; Dubey & Gunasekaran, 2013; Munizu, 2013; Ng Stephen et al., 2014). Moreover, others concentrated on the relationship between total quality management and competitive advantage like (Powel, 1995; Reed et al., 2000; Douglas & Judge, 2001; Tena et al., 2001; AL-Qudah, 2012).

Through reviewing the literature, there are no enough studies focused on testing the impact of total quality management practices on strategic agility to show the role that the total quality management practices may plays in achieving the strategic agility. Therefore, this study aims to enrich the literature and fill this gap in knowledge by examining empirically the impact of total quality management practices on achieving the strategic agility in the Jordanian private hospitals. Thus the study main question is: what is the impact of total quality management practices on strategic agility?.

2. Literature review

2.1 Total Quality Management Practices

The concept of total quality management refers to the process through which the activities of quality adopted as the part of the organization's strategic goals, and applying these activities, and commitment to continuously improvements, and satisfying the customer needs by doing things in truly way from the first time. Many scholars suggested that the total quality management (TQM) is a management philosophy based on the involvement of all levels and functions of the organization in the process of continuous improvements for the quality of products and services (Henderson, Swamidass, and Byrd 2004; Mellat-Parast2013). In addition, it is a comprehensive view of quality assurance in the organization (Evans & Lindsay, 1993; Khanna, 2009; Kumar & Garg, 2009). Vuppapapati (1995) defined Total quality management as both an integrative philosophy of management for the continuous improvement of services and service delivery to achieve customer satisfaction.

From reviewing the literature, the following dimensions of total quality management identified as the most accepted and agreed among the most scholars and practitioners (Yong, 2003; Mitwaniet al., 1996; Sureshehandaret al., 2001): customer orientation, continuous improvements, employee involvement, building team works, focusing on operations, control, employee empowerment, and top management support. According to (Prajogo, 2005) the total quality management practices include customer orientation, leadership, human resource management, strategic planning, processes management, production quality, and information and analysis. While (Anderson & Sohal, 1999) identified the leadership, policies and planning, information and analysis, customer orientation, and processes, services, and products quality as a dimensions of total quality management. Jime'nez-Jime'nez & Marti'nez-Costa (2009) identified the role of top management, employee relationships, managing supplier's quality, training, and processes management as a dimensions of total quality management.

The following dimensions selected for measuring the total quality management practices in the current study based on the literature that reviewed (customer orientation, top management support, employee involvement, and supplier management).

2.1.1 Customer Orientation

Many scholars like (Karuppusami and Gandhinathan, 2006; Tari et al., 2006; Sila, 2007; Al-Khalifa et al.,2008; Arumugam and Mojtahedzadeh, 2011; Zehir et al., 2012) identified customer orientation as a dimension of total quality management practices. The customer orientation is one of the most significant practices in total quality management. It includes the all activities associated to contact with clients directly and gathering of information on their expectations (Nair, 2006).

According to Schonberger (1994) the customer orientation indicates to the extent the organization assess the feedback from its clients in quality improvements. The organization that focus on their customers is distinguishes from the traditional organization because the satisfaction of customer and meeting their needs are the driver of its actions while a traditional organization focus on cost and efficiency to do their actions (Rao et al., 1999; Doll and Vonderembse, 1991). The focus on customer leads to sustains competitive quality. In the organizations that customer oriented their clients identifies and provides the final judgment on the quality. consequently, the organization should monitor its clients first in identifying what it needs to do, by using many means like using the feedback of customer in order to designing new services and products, observing the satisfaction of customers, responding to the complaints of customer, and assessment the success of organizations at doing these things (Schonberger, 1994).

2.1.2 Top Management Support

Top management support identified by (Rahman, 2001; Brah et al., 2002; Prajogo and Sohal, 2003; Karuppusami and Gandhinathan, 2006; Tari et al., 2006; Sila, 2007; Al-Khalifa et al., 2008; Arumugam and Mojtahedzadeh, 2011; Zehir et al., 2012) as a dimension of total quality management practices.

According to Flynn et al. (1994) and Puffer and McCarthy (1996) top management support reflects the important role of management in driving organization-wide efforts of quality management. For achieving successful

quality performance, practitioners and researchers considered the critical role top management plays in driving organization-wide efforts of quality management as one of the key success elements (Flynn et al., 1994; Juran, 1986; Puffer and McCarthy, 1996). According to Puffer and McCarthy (1996) top management is responsible to formalize the organization's values and vision of quality management and encourage the actions and behaviors that lead the organization to achieve success in quality performance.

Previous research in quality management has revealed the importance of top management in effective implementation of TQM (Waldman, 1994). According to Juran (1993), the most decisive element in the success or failure of a quality management initiative is the extent to which top managers provide personal leadership.

2.1.3 Supplier Management

According to Flynn et al. (1994), Supplier's quality reflects the significance role of suppliers play in attaining high levels of quality and quality excellence in an organization. Many scholars like (Leonard and Sasser, 1982) found that the defective incoming materials are a main source for the quality problems of product / process. as a result, the management realized the importance of the quality of the incoming materials, parts and services, and focused on building long term relationships with supplier because it considered it as a main component in achieving competitive advantage through quality improvements (Flynn et al., 1994). Moreover, the knowledge and experience of sellers found a valuable in attaining higher levels of quality and faster response to market needs during the design of new products and services (Crosby, 1979; Garvin, 1984; Ishikawa, 1985; Lascelles and Dale, 1989).

2.1.4 Employee involvement

Talavera (2004) and Zehir et al. (2012) identified employee involvement as a dimension of total quality management practices. According to Oliver (1990), employee involvement relates to the participation of employees indecision-making process, and problem solving at all levels in the organization. It is an essential component of a total quality management program (Rao et al. (1999). Employee involvement includes give them information, empower them, raise their knowledge and reward quality performance (Oliver, 1990). The involvement of employee includes policies like encourage them to suggest improvements, enhance their ability, motivate them, and gives them the authority to improve continuously how the organization operates.

2.2 Strategic Agility

Scholars and researchers suggest a variety of definitions for the concept of agility and apply it to different disciplines, therefore there is no accurately or agreed definition for the concept of agility across different disciplines of business (Kettunen, 2008). According to Gunasekeran (1999) agility defined as the organization ability to react quickly and effectively to the market changes in order to surviving in the hyper-competitive environment that characterized by continuous and unexpected change. while agility refers to the speed with which organizations can detect and respond to environmental threats and opportunities, a true test of agility and its implications for performance lies in how easily and quickly firms can revise their behaviors based on unfolding marketplace events (Hitt et al. 1998; Sambamurthy et al. 2003). One of the successful keys in the rapidly changing and highly competitive environment is a strategic agility, which defined as the organization ability to support and leading the unexpected changes to benefits from available opportunities in the changing markets (Morgan & Page, 2008). From the perspective of (Hamel and Valikangas, 2003; Doz and Kosonen, 2008) strategic agility defined as the organization ability to amendment or reshapes its strategy in dynamic way in the changing business environment by adaptation with customers' needs and orientations without abandon its vision.

Tallon & Pinsonneault (2011) defined the strategic agility as the capability of organization to identify the opportunities and threats in their competitive and unexpected changing environment and responding to it quickly. From the viewpoint of (Ofoegbu & Akanbi, 2012) strategic agility is the ability to cautiously and adequately to adjust and adapt in appropriate time the strategic direction in core business in relation to changing circumstances, by known by sensitivity to the environment. While (Weber & Tarba, 2014) describe the strategic agility as one of the main success factors for the organization in the troubled environment and they defined it as the organization capability to be flexible in confrontation new developments, to continuous alter their strategic direction, and creating value by developing innovative methods. From the previous definitions, we can define the strategic agility as the organization ability to face the changes in their business environment by designing a high flexible strategic system in order to respond quickly for these changes and avoid risks.

In order to measuring strategic agility the scholars and researchers used and employed different constructs and scales. Long (2000) presented a measure of strategic agility and their scale consists of vision clarity, shared

responsibility, clients Knowledge, selecting strategic targets, understanding core capabilities, knowledge of competitors and taking action as a dimensions of strategic agility. Three dimensions of strategic agility namely are strategic sensitivity, resource fluidity, and collective commitment identified by (Doz&Kosonen, 2008). While (Oyedigo, 2012) measured the strategic agility by the planning, organization, people, and technology dimensions. Based on the work of (Sambamurthy et al., 2003) through which they defined the agility in terms of customer responsiveness, business partnerships, and operations Tallon & Pinsonneault (2011) devised a set of eight survey items to assess the ability of firms to easily and quickly change their strategy in each of these three areas. For customer agility, they assess responsiveness to changes in demand, innovation, and pricing. For business partnerships agility, they evaluate the adaptiveness of supplier networks. For operations agility, they evaluate response times to new product launches by rivals, market expansion, changes in product mix, and the adoption of new production technology. The scale was adopted in the study of (Idris& AL-Rubaie, 2013) and it is adopted with some adjustments in the current study because of it is suitability for it is objectives.

3. Study Hypotheses

The main purpose of current study is to examine the impact of total quality management practices on strategic agility. Therefore, the main hypothesis is:

H0: There is no impact with statistical significant at ($\alpha \leq 0.05$) of total quality management practices (customer orientation, top management support, employee involvement, and supplier management) on strategic agility.

4. Methodology

The study aims to testing the impact of total quality management practices on the strategic agility from the perspectives of managers and chief of divisions in the target hospitals, according to this objective the appropriate methodology is the descriptive and field analytical methodology. Therefore, the researcher used the both methodologies by reviewing the literature related to the study variables that includes total quality management practices and strategic agility, and analyzing the data collected through the respondents' answers on the questionnaire items.

4.1 Study Population and Sample

The study population encompasses (40) private hospital located in Amman city. and the study sample included all the study population. The sampling unit and analysis (respondents) consisted of (285) manager and chief of division from the workers in the target hospitals. Table (1) presents the characteristics of the respondents.

Table1.The characteristics of Respondents

Variable	Category	Frequency	Percentage
Gender	Male	165	57.9
	Female	120	42.1
Years of experience	Less than (5) years	12	4.21
	From (5) to less than (10) years	46	16.14
	From (10) to less than (15) years	92	32.29
	From (15) to less than (20) years	89	31.22
	(20) years and above	46	16.14
Age	From (18) to (25) years	4	1.4
	From (26) to (32) years	25	8.78
	From (33) to (40) years	129	45.26
	(41) years and above	127	44.56
Total		285	100%

4.2 study Instrument

The instrument of the study is a questionnaire developed by the researcher through reviewing the theoretical literature related to the total quality management practices and strategic agility. The questionnaire consisted of three parts: The first part includes the demographic variables of respondents in terms of gender, years of experience and age. The second part of the questionnaire includes the paragraphs related to the total quality management practices, which adopted from different studies like (Rahman, 2001; Brah et al., 2002; Prajogo and

Sohal, 2003; Karuppusami and Gandhinathan, 2006; Tari et al., 2006; Sila, 2007; Al-Khalifa et al., 2008; Jime´nez-Jime´nez & Martı´nez-Costa, 2009; Arumugam and Mojtahedzadeh, 2011; Zehir et al., 2012). The third part of the questionnaire includes the paragraphs related to the strategic agility, which adopted from (Tallon & Pinsonneault, 2011; Idris & AL-Rubaie, 2013). The answers to the second and third part of questionnaire relied on a Likert's Scale, ranging from strongly disagree (1); disagree (2); moderately agree (3); I agree (4); and strongly agree (5).

4.3 Instrument Validity

Some academicians and technicians reviewed the study instrument during the preparation phase of the research, according to their opinions the questionnaire suitable to the current study, in addition to that, the researcher conducted a pilot test on a small sample to ensure the clarity of questionnaire items.

4.4 Instrument's Reliability

The reliability of the instrument determined by the Cronbach alpha coefficients which applied by the researcher in order to guarantee the internal consistency between questionnaire items. The alpha values was (0.87) for the total quality management practices items and (0.83) for the strategic agility items and (0.81) for the instrument as a whole. These values higher than the acceptable value (60%) therefore it is acceptable for the purposes of current study.

5. Results and Discussion

5.1 Data Presentation

Table (2) and table (3) present the means and standard deviations for the respondent's answers on the questionnaire items related to total quality management practices and strategic agility. The interpretation and discussion of the results introduced under each table.

Table 2. The means and standard deviations for the respondent's answers on the questionnaire items related to total quality management practices.

Customer Orientation	Means	Standard deviation
1. Our hospital solves patients' complaints quickly.	4.21	0.814
2. Our hospital uses the information from patients in designing services.	3.93	0.839
3. Our hospital assesses patients' satisfaction on regular base.	3.81	0.804
4. Our hospital collects the data on regular base to control the changes in patients' needs.	3.72	0.872
5. Our hospital identifies the current and future needs of patients.	3.67	0.853
Average	3.87	
Top Management Support	Means	Standard deviation
6. The top management executive in our hospital takes responsibility for quality performance.	3.88	0.865
7. The top management of our hospital participates effectively in the quality improvement processes.	3.85	0.833
8. The top management of our hospital holds regular meetings to discuss the quality issues.	3.74	0.871
9. The top management of our hospital has objectives for quality performance.	3.64	0.922
Average	3.78	
Supplier Management	Means	Standard deviation
10. Our hospital evaluates the performance of supplier on regular base.	3.89	0.859
11. Our hospital builds strategic relationship with suppliers.	3.76	0.805
12. Our hospital clarifies precisely the specifications of	4.16	0.870

materials required from suppliers.			
13.	Our hospital selects suppliers based on quality.	3.63	0.853
14.	Our hospital effectively involves suppliers in the activities of quality improvements.	3.71	0.837
Average		3.83	
Employee Involvement		Means	Standard deviation
15.	All of employee in our hospital participates in quality decisions.	3.79	0.894
16.	The participation of employee in the decisions enhances it quality.	3.62	0.987
17.	Our hospital considers the participation of employee in the processes of decision taking effective communication and coordination tool.	3.64	0.840
18.	In our hospital employee are held responsible for the output of their process.	3.96	0.891
Average		3.75	

As shown in table (2) the results indicate that the Jordanian private hospitals applying the total quality management practices with high degree. The results also shown that the highest focus of private hospitals within total quality management practices is on customer orientation and this reflects it is concern in customer satisfaction. Also the results shown that these hospitals focus on supplier management in their quality practices and this reflects it is recognition the importance role of suppliers' quality in quality performance. In addition, the results shown that there is a high support from top management to the quality efforts and this interprets the success of this hospitals in applying their quality programs. Finally the results shown that there is a concern from the target hospitals in participation of employees in quality management activities and this reflects the important role of employees they play in implementing the total quality management activities and to be responsible about the quality performance and take the responsibility to achieve success.

Table 3. The means and standard deviations for the respondent's answers on the questionnaire items related to the strategic agility.

Strategic Agility		Means	Standard deviation
19.	Our hospital responds effectively to changes in aggregate patients demand.	3.60	0.850
20.	Our hospital customizes services to suit individual patients.	3.52	0.881
21.	Our hospital reacts to new services launches by competitors.	3.79	0.893
22.	Our hospital introduces new pricing schedules in response to changes in competitors' prices.	3.66	0.793
23.	Our hospital change (reduce or expand) the variety of services available for patients.	3.71	0.817
24.	Our hospital adopts new technologies to produce better, faster and cheaper services.	3.94	0.951
25.	Our hospital switches suppliers to avail of lower costs, better quality or improved delivery times of services.	3.85	0.927
26.	Our hospital expands into new regional markets.	3.59	0.729
27.	In general, our hospital able to respond rapidly to the changes of business environment.	3.74	0.863
Average		3.71	

As shown in table (4) the results indicate that the Jordanian private hospitals achieved a high level of the strategic agility. In addition, the results shown that the high concern of the target hospitals to adopts and employs the new technologies in order to produce better, faster and cheaper services for the patients. Also the results

shown that a high ability for the target hospitals to change suppliers in order to achieve lower cost, better quality, and improved delivery times of services. Moreover, the results shown that the target hospitals react effectively to new services launches by competitors. Finally, the results reflected the capability of target hospitals to responds effectively to changes in aggregate patients demand, customizes services to suit individual patients, introduces new pricing schedules in response to changes in competitors' prices, change (reduce or expand) the variety of services available for patients, expands into new regional markets, and responds rapidly to the changes of business environment.

5.2 Hypotheses Testing

Before testing the study hypothesis by regression analysis, the researcher conducted many tests to ensure there is no high correlation between the independent variables (Multicollinearity) and to ensure the normal distribution of data, these testes included Variance Inflation Factory (VIF) Test, Tolerance Test and Skewness Test and table (4) presents their results.

Table 4.The results of VIF, Tolerance, and Skewnes tests

Independent Variables	VIF	Tolerance	Skewness
Customer Orientation	3.61	0.368	0.498
Top Management Support	3.49	0.351	0.473
Supplier Management	3.07	0.397	0.428
Employee Involvement	3.27	0.411	0.452

The results in table (4) shown that the values of (VIF) for the study variables less than (10) and the values of (Tolerance) higher than (0.05) which mean there is no high correlation (Multicollinearity) between the independent variables (total quality management practices). In addition, the results shown that the values of Skewness less than (1) and that mean the normal distribution of the data. Based on these results the researcher used a multiple regression analysis to testing the main hypothesis of the study. Table (5) presents the model summary while table (6) presents the ANOVA analysis and table (7) presents the beta and t values for the study hypothesis.

Table 5.The Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of The Estimate
1	0.839	0.735	0.701	0.361

*Predictors: (Constant), Top management support, Customer orientation, Supplier management, Employee involvement

The results in table (5) shown that the value of R square is (0.735) and that means the model explains (0.735) from the variance in the dependent variable (strategic agility) by the total quality management practices.

Table 6.ANOVA Analysis

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	328.401	4	46.119	1019.620	0.000
Residual	24.713	281	0.047		
Total	353.114	285			

*Predictors: (Constant), Top management support, Customer orientation, Supplier management, Employee involvement

**Dependent Variable: Strategic Agility

The results in table (6) shown that the value of (F) is (1019.620) with significant (0.000) which is lower than the specified value (0.05) therefore the model is fit and acceptable.

Table 7. Beta and t values for the main hypothesis

Model	Unstandardized Coefficients		Standardize d Coefficients Beta	t.	Sig.
	B	Std. Error			
1 (Constant)	0.069	0.057			
Customer orientation	0.659	0.049	0.731	22.116	0.000*
Top management support	0.573	0.037	0.622	18.731	0.000*
Supplier management	0.648	0.047	0.719	20.644	0.000*
Employee involvement	0.537	0.029	0.601	17.284	0.000*

*Significant at the level of statistical significance ($\alpha \leq 0.05$)

**Dependent Variable: Strategic Agility

The results of multiple regression analysis in table (7) shown that the total quality management practices has impact on the strategic agility. The values of beta and t-tests show that the customer orientation, top management support, supplier management, and employee involvement has a positive impact on strategic agility at ($\alpha \leq 0.05$). In addition, the results shown that the customer orientation has a highest impact (beta 0.731), then supplier management (beta 0.719), then top management support (beta 0.622), and the lowest impact was for the employee involvement (beta 0.601).

6. Conclusion and Recommendations

The current study examined the impact of total quality management practices that encompass customer orientation, top management support, supplier management, and employee involvement on strategic agility. Empirical results found that the total quality management practices have a positive impact on the strategic agility, and the highest impact was for the customer orientation, while the lowest impact was for the employee involvement. Based on these results the study recommending that the hospitals should focus largely on their customer orientation, managing their supplier's quality, obtain top management support, and involve their employees in its total quality efforts in order to achieve strategic agility and gain sustainable competitive advantage thus maintain their survival. Also the study recommending that conducting more future research and studies on the relationship between total quality management and strategic agility in the different contexts, because the current study and its results limited to the Jordanian private hospitals.

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