A Conceptual Framework of Total Quality Management (TQM) Practices and Organization Performance for Jordanian ICT Companies

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Abstract. The present paper seeks to review the literature regarding the relationship between total quality management practices (TQM) and organization performance (OP) in the information and communication technology sector (ICT) in Jordan. Also, it develops a new conceptual framework for this relationship. This paper has adopted practices of TQM based on the national award in Jordan called "King Abdullah II Award for Excellence" (KAAE). This model would help decision-makers, practitioners, and managers of TQM have a better understanding of the TQM practices and focus on identified practices while applying TQM in the Jordanian ICT companies. Further, it is necessary to test the validity of this model later by collecting the primary data from ICT companies.

Keywords: total quality management, organization performance

Introduction

The ICT sector, over the past decade, has shown that a country's level of economic growth and development is directly proportional to the development of the ICT sector (Teki, Özkale & Ayhan, 2018). This sector operates under constant pressures. Hence, it is continuously seeking to develop its strategies and capabilities to improve its performance (Mustafa & Badarin, 2016). According to the Organization for Economic Co-operation and Development (OECD, 2017), the ICT sector indicates the importance of communication networks and telecommunication services, but telecommunication companies refer to themselves as ICT companies.

In Jordan, ICT companies, face a significant challenge in terms of surviving in an extremely changing environment (Al-Weshah, Al-Manasrah, & Al-Qatawneh, 2018). Other challenges facing this sector include slow growth due to severe competition, globalization, increasing customer demands, government regulations, and substitute services. Thus, telecommunication companies try to have new strategies ensuring the growth and improvement of organization performance (Asha'al, Obeidat, & Alhmoud, 2019). Thus, it is necessary to study significant factors in enhancing organization performance (Willis & Ameen, 2016). The focus of this study is finding a method for improving organization performance, particularly in ICT companies in Jordan.

In previous studies, it was argued that the lack of total quality management (TQM) was the main reason for the low JTCs performance and low service quality that JTCs provided for their clients (Qasrawi, Almahamid, & Qasrawi, 2017). Moreover, the telecommunication sector is considered a dynamic sector that needs continuous improvement. Nevertheless, JTCs face a significant challenge in terms of surviving in an extremely and continually changing environment (Al-Wesha, Al-Manasrah, & Al-Qatawneh, 2018). Thus, research is needed to be undertaken to determine the significant factors enhancing organization performance in this sector (Willis & Ameen, 2016) and with regard to the significant role of TQM (Qasrawi et al., 2017).

Total Quality Management in Jordanian ICT Companies

One of the most important strategies that have had an essential role in obtaining a competitive advantage for the telecommunication sector is TQM (Owusu & Duah, 2018). In

addition, to achieve a competitive advantage in ICT companies, it has to differentiate itself from others by providing high-quality services and products.

There is a number of TQM practices related to service sectors set from 6 to 9, recommended by Talib et al. (2010). In research, ten essential TQM practices were identified in enhancing OP in Jordan ICT sectors (Twaissi, 2008). Iqbal and Asrar-ul-Haq (2018), identified strategy planning, leadership, customer focus, teamwork, information analysis as TQM practices in the ICT sector in Pakistan. Similarly, Qasrawi et al., (2017), identified strategy planning, leadership, customer focus, teamwork as approaches in ICT in the context of Jordan. Khan and Naeem (2016), identified supplier relationship, workforce, shared vision, customer focus, personal training, information analysis, quality system process, quality policy, and continuous improvement as central TQM practices in the ICT sector.

King Abdullah II Award for Excellence (KAAE) of Jordan

According to Abu-Hamatteh, Al-Azab, and El-Amyan (2003), KAAE is the highest level of recognition of quality in Jordan consisting of guidelines such as the role of leadership, employee, and teamwork, customer relationship, information and analysis, strategy planning, and supplier relationship management. In a study, KAAE criteria were chosen in analyzing sectors in Jordan (Qasrawi et al., 2017). The rationale for adopting the King Abdullah II Award for Excellence is that scrutinized on the TQM measurements as it was recognized by previous scholars (Abu-Hamatteh et al., 2003; Qasrawi et al., 2017).

Based on the KAAE, this paper adopted practices of TQM for the following reasons:

(1) These practices adopted by previous studies (Abu-Hamatteh et al., 2003).

(2) Some countries have utilized these practices (Abu-Hamatteh et al., 2003).

(3) ICT companies in Jordan give due consideration to this field (Qasrawi et al., 2017).

In this study, the researcher identified TQM practices based on quality. The view of former practitioners in the telecommunications and information technology sector was considered and the perspectives of previous researchers in the ICT sector were explored. Finally, based on KAAE in Jordan, this study identified leadership and top management commitment, customer focus, teamwork, information analysis, supplier relationship, and strategic planning as a standard for the KAAE.

Literature Review

Total Quality Management (TQM)

According to Hansson, Eriksson, and Hansson (2003), there is no agreement that any definition can capture the whole picture of TQM. Researchers have many different perceptions about the concept of TQM and its effect (Hansson et al., 2003). According to Agus and Hassan (2011), TQM presents endeavor in enhancing organization performance continuously by fulfilling customer's demands, meeting customer's requests by reducing work, improving participation of employees and teamwork. TQM aims to enhance flexibility, keenness, and effectiveness of an institution to achieve the goals of all stakeholders. In the same vein, Flynn, Schroeder, and Sakakilbara (2009), define TQM as a principle that helped to ensure the cooperation and participation between all employees in a firm, improve quality of services and products in order to meet the needs of their consumers. Yusof and Aspinwall (2000), define TQM as a set of critical success factors such as leadership, continuous improvement, training of the employee, human resource development, supplier value management, and process management.

TQM is a technique used to improve process management and achieve a competitive advantage at the overall organization levels (Prajogo & Mcdermott, 2005). According to Aróstegui et al., 2015), TQM is a business-performance way that aims to achieve as much as

possible organization competition. There are several practices of TQM. They differ from sector to sector, company to company, and country to country (Singla et al, 2011; Najeh & Kara-Zaitri, 2007). Hence, in this study, TQM practices are determined in accordance with previous contributions, particularly in ICT sectors. In this study, quality management practices represent standards of King Abdullah II Award for Excellence, which is a national award allocated to the public and private sectors in Jordan. These practices include top management practices, clients focus, teamwork, information and analysis, supplier relationship, implement Strategic planning (Abu-Hamatteh et al., 2003).

There are many practices of TQM to be included in service industries as recommended by (Talib et al., 2010). Following previous studies conducted in the ICT sector (Twaissi, 2008; Iqbal & Asrar-ul-Haq, 2018; Qasrawi 2017; Khan & Naeem, 2016), this study opted for six practices of TQM namely: leadership, customer focus, teamwork, information analysis, supplier relationship and strategy planning.

Prior studies suggest that the success of any quality programs depends on leadership (Jamali et al., 2010; Sharma & Gadenne, 2008), and the most practices important for TQM practices (Amin et al., 2017; Zehir et al., 2012). The failure or success of an institution, to a great extent, depends on its customers' satisfaction (Fečiková, 2004; Sharma & Gadenne, 2008). Customer focus indicates the range to which an institution assess the feedback from its customers to improve performance and quality (Adam-Jr et al., 1997). Customer orientation is a critical factor in accomplishing TQM goals (Miyagawa & Yoshida, 2010; Idris, 2011). All companies need to identify client needs and desires, respond quickly to their needs and confirm that customers are satisfied with the implementation of TQM (Zakuan, Yusof, Laosirihongthong, & Shaharoun, 2010).

TQM makes teamwork the most useful practice used for problem-solving (Mabey & Salaman, 1995). Teamwork is considered a dynamic activity indicating two or more group members who share common objectives, complementary backgrounds, skills, and physical and mental efforts (Xyrichis & Ream, 2008).

The term, information analysis, refers to the combination of people, software/hardware, and procedures (Kartha, 2004), which has a significant role in all quality activities regarding decision-making (Terziovski et al., 1996). As a technical infrastructure, it is used to enhance quality processes and activities. Also, it makes the interaction between organizations and customers much easier to achieve their aims (Mahmood et al., 2015).

Supplier relationship management is a term that indicates the policy between an organization and suppliers. The quality is the most important motivating factor in choosing suppliers more than price. The relationships between organizations and suppliers should be established through their cooperation to improve the quality of services and products (Martıınez-Lorente et al., 2004). Similarly, in TQM, strategic planning and development have an efficient role in implementing quality programs and increasing sustainable performance as proposed by scholars (Feng et al., 2014; Al-Dhaafri et al., 2014; Sabella et al., 2014; Qasrawi et al., 2017). Development and Strategic planning are necessary to examine how a firm develops, refines, and executes its policy and strategy to attain better performance (Prajogo & Sohal, 2004; Khanam et al., 2013).

Organizational Performance (OP)

OP represents an essential part of organization management and occupies a central position in the field of organizational research (Lewin & Minton, 1986). According to Dess and Robinson (1984), many researchers have measured OP through either objective or subjective data (as cited in Croteau & Bergeron, 2001). The objective approach refers to financial performance while the subjective method examines the perception of respondents. There are other methods of performance measurement that have been offered in previous

literature. Sabella et al., (2014), indicated several elements for measuring performance including quality performance, business customer satisfaction, operational performance, organizational growth, and employee satisfaction. In addition, financial performance, innovation performance, market, and social responsibility are elements of organization performance measurement (Sadikoglu & Olcay, 2014). Neely (1999), indicated that performance is a critical measurement in evaluating the failure or success of an organization's strategy. According to Moullin (2007), OP measures both an organization's value and management. It is a measurement method to assess company accomplishment. It also delivers and creates the organization's value to the internal and external customers. Therefore, it is significant for organizations to measure their current performance situation which will assist to improve their organization's performance in the future (Antony & Bhattacharyya, 2010).

This study focuses on the organizational performance in the services sector. Therefore, both performance measures; financial and non-financial, will be included to measure the organizational performance which were adopted from Sadikoglu & Olcay (2014). Sadikoglu and Olcay (2014), in their study has used multiple performance factors, that are operational performance, employee performance, innovation performance, customer results, social responsibility and market and financial performance in order to cover all element of organization performance.

Relationship and Hypotheses Development

This paper seeks to test the relationship between TQM practices (as a multidimensional construct) and organization performance. In this study, practices of TQM involve leadership and top management commitment, customer focus, teamwork, information analysis, and supplier relationship.

TQM and OP

The literature revealed that TQM and OP have been studied from many perspectives. The first perspective showed that the complementarity and strong link between practices of TQM and performance help to improve the level of OP. Therefore, there is a need to investigate the impact of TQM practices as a single construct. This view is supported by some researchers (Karia & Asaari, 2014; Prajogo & Hong, 2008). The second perspective suggests that TQM practices should be examined individually (multidimensional) which is the best method to get a sufficient understanding of each practice with OP (Talib et al., 2011; Salaheldin, 2009). On the one hand, some studies confirmed that there is a significant relationship between TQM practices and organizational performance. On the other hand, some other researches showed that there is a lack of compatibility between TQM practices and firms' performance (Singh et al., 2018). In other words, these studies claim that no significant relationship can be found between these two variables. The conflicting results refer to reasons like the difference in measuring performance and sector context of the study.

Moreover, there are some researches which uncover the failure of TQM procedure to accomplish the ideal results or just show that it has an aberrant impact on firm's performance (Demirbag et al., 2006; Kober, Subraamanniam, & Watson, 2012; Akgün et al., 2014). The research stressed the critical relationship feature that not all the TQM practices have impacts on firms (Jaafreh & Al-abedallat, 2012; Valmohammadi, 2011; Zehir et al., 2012; Talib et al., 2013). The explanations behind the conflicting discoveries concerning the impact of TQM are presumably because of the various techniques, the diverse TQM factors, the distinctive measurements and the various settings in which they were performed.

Earlier experimental researches confirmed that a greater part of TQM practices fundamentally influences management decisions (Abdullah & Bett, 2018; Irfan & Kee, 2013; Talib, Rahman, & Qureshi, 2013). According to some researchers, TQM is profoundly

prescribed to be distinguished for the achievement of TQM (Talwar, 2011; Salaheldin, 2009; Talib, Rahman, & Qureshi, 2010).

Numerous studies have examined the role of leadership in managing the performance of firms. The findings of some studies indicated that it has a significant impact on performance (Amin et al., 2017; Albuhisi & Abdallah, 2018; Androwis et al., 2018). Sidin and Wafa (2014), stressed the role of management in improving firm performance in order to fulfill clients' needs. Previous studies also indicated that leadership has a positive impact on firm performance (Valmohammadi, 2011; Gharakhani et al., 2013; Talib, Rahman, & Qureshi, 2013; Mehmood, Qadeer, & Ahmad, 2014). Later, in another study it was showed that leadership had a weak positive impact on OP (Qasrawi et al., 2017). Given the findings of previous studies, there is a conflicting result about the relationship between leadership and OP.

In terms of the relationship between customer focus and performance, some previous studies examined the role of customer focus as a practice of quality management to improve OP (Sweis et al., 2019; Dedy et al., 2016; Amin et al., 2017; Qasrawi et al., 2017; Talib et al., 2013; Mehmood, Qadeer, & Ahmad, 2014), this study indicates that customer focus does not have any impact on OP. On the contrary, another study found customer focus the main practice that has a significant impact on OP (Androwis et al., 2018). Also or mixed results based on the performance measures as multidimensional (Sadikoglu & Olcay, 2014). In brief, this study includes customer focus as one of the TQM dimensions of ICTs, as it is very necessary to identify the customer focus and meet their needs.

In addition, some researchers find that teamwork has the main effect on organizations, whether industrial or service organizations. It is recommended that to gain competitive advantage teamwork as an approach to organizations must be adopted (Salas et al., 2010). Griffin, Patterson, and West (2001), confirmed that teamwork is a significant factor for the success of organizations because it leads to goals and mission communication, creativity encouragement, and employee empowerment. Similarly, in another study, it was claimed that teamwork is one of the most influential TQM practices that impacted OP (Qasrawi et al., 2017).

Some previous studies examined information analysis as one of the quality management practices that influences OP. For example, Qasrawi et al. (2017), showed information did not relate to the organization. Also, Talib, Rahman, and Qureshi (2013) indicated that information analysis had no important effect on performance while some other researchers confirmed that information analysis is related to the improvement of OP (Lassaˆad Lakhal, Pasin, & Limam, 2005; Hawary & Laimon, 2013; Dali, 2016).

In the TQM model, some previous studies examined the emphasis on supplier relationship as practices of TQM to influence organizational performance and showed mixed results on this relationship. For example, Androwis et al. (2018), Zehir et al. (2012), and Sadikoglu and Olcay (2014) confirmed that supplier relationship contributes positively to OP. While Jaafreh and Al-abedallat (2012) confirmed that supplier relationships have a weak positive relationship and are not significant with organization performance (Talib et al., 2013). And Dow et al. (1999), showed that the implementation of supplier relationships as the practices of TQM is not important.

In general, the literature indicates a significant positive relationship between TQM and OP (Sila & Ebrahimpour, 2002; Nair, 2006; Jiménez-Jiménez et al., 2015). Thus, the following main hypotheses were formulated;

Hypothesis (H1): TQM has a significant positive effect on the OP of the JTC.

And subset hypotheses:

Hypothesis (H1a): leadership and top management commitment have a significant positive effect on the OP.

Hypothesis (H1b): customer focus has a significant positive effect on the OP.

Hypothesis (H1c): teamwork has a significant positive effect on the OP.

Hypothesis (H1d): information analysis has a significant positive effect on the OP.
Hypothesis (H1e): supplier relationship has a significant positive effect on the OP.
Hypothesis (H1f): strategy planning has a significant positive effect on the OP.

Conceptual Framework

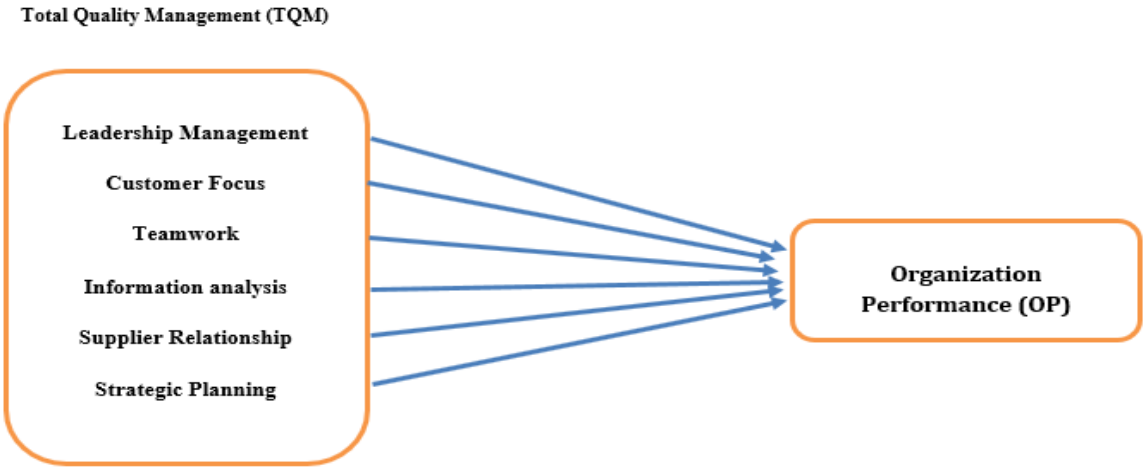

Figure 1. Proposed conceptual framework

The conceptual model demonstrates a direct relationship between TQM and OP. TQM as a multidimensional construct with six practices including top management and leadership, customer focus, teamwork, information and analysis, supplier relationship, strategy planning is an independent variable and OP is a dependent variable (see Figure 1).

Conclusion

This study hypothesized the relationship between TQM and OP in a model consists of six practices of TQM: top management and leadership, customer focus, teamwork, information analysis, supplier relationship, and strategic planning as the independent variable, organization performance as dependent variables. This paper encourages that ICT companies should show more interest to implement TQM programs in all their activities and make it as an important stage of the management critical decision process. Due to the importance of the ICT companies in supporting the economy of Jordan, in the conceptual framework proposed, there is a good chance for decision-makers to choose the quality practices proposed in the model for improving and enhancing the performance of the ICT companies.

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