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The Relationship Between Critical Success Factors of Total Quality Management Implementation and Individual Readiness for Change among Yemeni Oil Units: the Conceptual Framework Development

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Abstract: There currently exists a wealth of research on Total Quality Management Practices (TQMps) as a multidimensional construct on individual readiness regarding the implementation of TQM. Nevertheless, there exists a dearth of literature detailing the mechanism by which Total Quality Management Practices (TQMps) comes to have an impact on Individual Readiness For Change (IRFC). Questionnaires were self-administered to 360 Yemen Oil Units (YOUs) employees in August and January 2017 with 51% rate of return selected using stratified random sampling methods. The Structural Equation Modelling (SEM) analysis validated Total Quality Management Practices (TQMps) as the greatest indicator of individual readiness for change. TQMps were also found to increase individual readiness for change. This research attempts to further clarify the relationships between TQM practices and individual readiness for change. To increasing individual readiness for change regarding total quality management implementation, organization must understand the six dimension of total quality management. Thus, the study is aimed to show insights in individual readiness for change regarding TQM implementation at oil companies at Yemen. There is a limited empirical studies in Yemen. Therefore, this study is aimed to carried out a conceptual framework for analysing the variables influencing individual readiness for change for implementing of TQM. As the organization responsible for providing revenue of government, oil companies should be the first to increasing employee's readiness for TQM implementation to better provide good and service in the global marketing. Hence, this study may offer many managerial take-away implications for practitioners and policy makers to improve TQM practices level as well as the high level of IRFC regarding TQM implementation.

INTRODUCTION

In today's dynamic business environment, change swiftly influences business practices. This results in novel change ingenuities such as effective quality improvement programmes (sometimes referred to as Total Quality Management or TQM) being used as management strategies. These strategies are being developed to increase organisational effectiveness and competitiveness (Bayazit and Karpak, 2007; Mckay *et al*., 2013; Attafar *et al*., 2016). Both multinational and single-country organizations, need to continually adapt to the various challenges faced in the global economy (Sonenshein and Dholakia, 2012; Choi and Ruona, 2011; Haffar *et al*., 2014). These organizations must strive to assimilate the changes made necessary by these challenges to remain viable. The volatile nature of doing business in this information era puts even the most successful organizations under immense pressure to cope with the evolving challenges of the competitive worldwide marketplace (Lawson and Price, 2003; Fuentes-Henríquez and Del Sol, 2012). Nevertheless, a multitude of studies have demonstrated that during the change implementation stage a high rate of failure occurs (Abdul Rashid *et al*., 2004; Soltani and Wilkinson, 2010; Abdolshah and Abdolshah, 2011; Choi and Ruona, 2011). As of late, Individual Readiness for Change (IRFC) has emerged as essential for the implementation of effective organizational change (Armenakis and Harris, 2002; Weeks *et al*., 2002; Clegg and Walsh, 2004; Jones *et al*., 2005; Holt *et al*., 2007; Sikh, 2011). The low awareness levels of IRFC disrupts TQM strategy (Meirovich *et al*., 2006), management of knowledge (Rusly *et al*., 2012) and management of information systems (Jones *et al*., 2005).

Among different elements, critical success factors as top management commitment, human resource management, learning and training, customer focus and satisfaction, process management and supplier partnership were perceived to be the most vital elements that could either cultivate or diminish individual readiness for change in regards to TQM implementation (Ben Jaber, 2010; Naghshbandi *et al*., 2012; Al-Najem, 2014; Santhidran *et al*., 2013, Adil, 2014; Shah and Shah, 2010; Fugate, 2012; Ehsein, 2014; Nordin, 2011; Maheshwari and Vohra, 2017; Sloan *et al*., 2014). There is an absence of empirical reviews researching the impact of a few practices as gathering on individual readiness for change. Haffar *et al*. (2016) suggest that future studies address the dearth of change management research and the relationships between TQM practices and individual readiness for change. The majority of past research only examined the effect of TQM practices on IRFC in developed countries. Nevertheless, studies that test the impact of TQM practices on IRFC in Arab developing countries, remain rare. Additionally, even fewer studies investigate TQMps as a whole and links to IRFC. Moreover, research is starting to shift its focus on TQMps influence on IRFC (Santhidran *et al*., 2013; Sloan *et al*., 2014; Haffar *et al*., 2016).

In Yemen the need fo TQMps implementation has been identified, well before the country's uprising. However, the Yemeni organisations implementing TQM face significant hurdles which confound TQM implementation (Al-Zamany *et al*., 2002a, b; Aamer *et al*., 2017). According to conceptual, small-scale studies most Yemeni organisations enhance IFRC without identifying their member's organizations and without recognizing the very practices that lead to success. According to above problem, this study showed some of factors related with individual readiness for change regarding TQM implementation issues, especially in Yemen context. However, these studies search to insight how the varied variables that impact individual readiness for change among Yemeni oil companies.

Oil sector in Yemen: The country of Yemen is produced oil and gas. The country of economy was basically dependent by the revenues of oil and gas. The government revenues was nearly between 60 until 70% in 2010 and the earnings of foreign exchange was came greater than 90% by oil and gas sale. At the current time, in yemen, there are found 3 billion barrels from oil and 17 trillion cubic feet from natural gas. These are classified into one basin in the North-west is located in the Marib and Shabwa provinces and the second one in the South-East is exactly located in the Masila basin. Yemen of the local consumption from oil is increasing and stands at 157000 barrels daily (bbl/d) while it is produced approximately 170000 (bbl/d) in 2011 let down from 259,000 (bbl/d) in 2010. The highest of production of oil arrives 440000 in 2001. Being a developing economy, Yemeni business world has been developing their organizations, operations, production and delivery. As known, the Yemeni economy relies on the export of petroleum and is dependent on the world's economy. In other words, Yemen's economy is still underdeveloped in terms of improved quality, product quality and operation methods compared with other developing and developed countries. Thus, there are many internal and external difficulties facing Yemeni oil and gas companies in the local and international market (Al-Zamany *et al*., 2002b). These problems include cost, speed of response and high levels of product quality which are key to challenging the global competition and selling their products in the future. In addition, there are other related factors which could have negative influences upon the progress of these companies. In addition to neglecting the importance of human resources as one of

the most important instruments of change in an organization; poor leadership, lack of clarity of the overall vision and the absence of a scientific approach to managing the organization are considered to be the most important barriers facing most Yemeni organizations. It should be noted that these obstacles are deemed to be the biggest hindrances for the development and progress of the industry. In addition, some Yemeni companies also suffer from the absence of inspection of products whether in the early or final stages, absence of management system review, poor organization and poor production quality. It is perhaps obvious that these problems and difficulties, among others may lead to the deterioration and collapse of some organizations in the near future. Therefore, exploring and determining possible obstacles facing the efficient and effective implementation of quality or TQM is an urgent and crucial matter in the Yemeni Oil and Gas industry. In practical terms, Yemeni oil and gas companies need to fully develop their quality standards, improve production, raise levels of productivity and comply with international requirements. Considering that only a few Yemeni oil and gas companies apply TQM philosophy its study is essential in the case Yemeni oil and gas companies. It should, however, be noted that attempts to apply this philosophy successfully and effectively have become the goal of most oil and gas companies in Yemen. The poor quality of the oil organizations is supported by a report published by Yemen Country Report which criticized the quality of the Yemeni oil sector and expressed concerns about the quality of curriculum content and access to up-to-date knowledge and expertise. Simultaneously, recommended the urgent implementation of TQM in Yemen's oil companies and a year later in summarizing the points of the Ministry of Oil and Minerals (2015), concluded that there was an urgent need for investment and good management in Yemen's oil sector.

Underpinning theories

Organizational change management theory: This theory emphasized the importance of the effective alignment and a good fit between people, organizational structures and culture and the required changes to establish a drastic move towards a desired future state with a better effectiveness (Jones *et al*., 2005). The main goal of any organizational change initiative is to achieve a new position in which the organization can efficiently use its resources and get the full advantages of its capabilities to increase the ability to create value and create its competitive advantage (Jones *et al*., 2005). Moreover, technology, economic factors, legal and socio-political factors are of importance to drive the organizational change. In addition to that, there are many forces for organizational change such as competition, economic situations, political changes and ethical requirements. Any change initiative may be faced by resistance to change from different levels of an organization. As driven by the global competitive business environment, organizational change takes place in manufacturing, service and public organizations (Diefenbach, 2007). Moreover, change according to (Romanelli and Tushman, 1994) can take place in five central domains that significantly affect the organizational activities such as strategy, structure, Organizational Culture (OC), control system and power distributions. Organizational changes are mainly related to human resource and process issues within an organization (McGuire and Hutchings, 2006). Therefore, organizations nowadays are too far extent, focused on human resource-oriented and process-oriented strategies to enable them to survive and grow in the global competitive business environment (Schuler, 2002). In fact, TQM can be thought of as change initiatives aim to produce changes in human behaviours and processes within an organization.

Fig. 1: Lewin's three step change model (Lewin, 1951)

Lewin's theory: Change can be introduced successfully when the conducive factors exist in an organisation's system. According to Lewin (1951), behaviour is the two product of contrasting forces with one force pushing towards status quo (restraining force) while the other force pushes for the change or desired state (driving force). By understanding and analysing these forces, successful change in the organisation can be achieved through the adoption of Lewin's three-step change model (Lewin, 1951). This model explains on initiating, managing and stabilising the change process. It involves a three-step process which are unfreezing, movement and refreezing as in Fig. 1. Based on the Lewin's model, the change process requires elimination of existing behaviour and attitude as well as learning and adoption of new attitude. On top of that in ensuring the change process is effective, the new attitude and behaviour needs to be strengthened in becoming part of the work culture. The first stage in the process of changing behaviour is called unfreezing, arising issues or problems are being explained and communicated to the individuals, so that, the needs and importance of the change is understandable and can be accepted. This phase requires encouraging the individuals to discard old attitudes and behaviours by convincing the individuals that change needs to occur (Robbins, 2013). Unfreezing can be achieved by decreasing the restraining forces and increasing the driving forces towards a new level of equilibrium (desired state).

Lewin's second step in the change process is movement which involves changing to the desired attitude and behaviour. As the old behaviours had been unlearned and discarded, the individuals are ready for a new behaviours and change in perspective. This step is the learning stage where new information, models and values are provided in order to operate effectively in such a situation. Besides that, the new ideas, attitudes and behaviours may be tested and improved throughout the learning of new behaviours is unfreezing which is important for the other two stages to undergo with people making effective change. Lewin believed that the stability of the human behaviours.

Refreezing is the final step in the process of changing behaviour. At this phase, the new attitudes, values and behaviours are stabilised to ensure the new ways of operating are reinforced and sustainable. The compatibility of the new behaviours and organisation tradition need to be ensured as without compatibility, the new behaviours are likely to extinguish. Refreezing can be achieved by reinforcing the new situation through formal mechanisms such as policies, procedures, rules and regulations (Robbins, 2013). Since, Lewin's three-step change model is rational and plan oriented, many studies pertaining resistance and readiness of organisational change are based on this foundation (Kotter and Schlesinger, 1979; Armenakis *et al*., 1993; Holt *et al*., 2007).

Theory of social exchange: Social exchange theory proposes that social relationships are based on mutual reciprocity (Blau, 1964). In other word, it suggests the need for delivering and receiving resources on the expectation of some future returns (Blau, 1964). Top management commitment towards the implementation of TQM will result in favourable employee behaviour at work. As a result of their good behaviour, employees will receive good returns. Social exchange theory has been used to describe the motivation behind employee behaviours and the formation of positive employee attitudes (Etzioni, 1961). This theory has been widely implemented by researchers to explain the motivations behind employee's manners and the development of affirmative employee's mind-sets (Etzioni, 1961). Research findings indicate that the existence of tremendous exchange relationship stimulates positive and favourable accomplishments of employees (Konovsky and Pugh, 1994). TQM practices which consists of top management commitment, human resource management, customer focus and satisfaction, process management, education and training and supplier partnership are functional towards employee readiness for change. Positive employee's perception towards organization will lead to better job attitudes. Every employee is expected to give their acceptance change readiness for implementing or adopting at work and to do so, they will perform as expected by the organization (Cropanzano *et al*., 2002). Organizational culture and commitment based exchange system will provide an optimum return for both employees and their affiliated organizations.

The proposed research model: The proposed framework for this study is based on Holt *et al*. (2007) who worked on the measurement of readiness for change from four perspectives. This framework is used as it can provide a research framework that enables the integration of elements that will examine the employee's readiness for change from one perspective. The research framework in Fig. 2, pictorially demonstrates the relationship of variables under study. Moving from left to the right, the independent variables are TQM practices (change process) and individual readiness for change as a dependent variable. This fresh theoretical framework departs from current theories concerning the direct influence of TQMps on IRFC.

Research hypothesis:

- H_1: human resource management positively has significant impact on individua readiness for change
- H_2: top management commitment significantly has a positive impact on individual readiness for change
- H_3: process management significantly has a positive impact on individual readiness for TQM implementation
- H_4: customer focus and satisfaction significantly has a positive impact on individual readiness for change
- H_5: learning and training positively has significant impact on individual readiness for change
- H_6: supplier partnership significantly has a positive impact on individual readiness for change

Definition of the variables: Listed below are definitions and explanations of terms that are used throughout this proposed model.

Individual readiness for change: According to (Armenakis *et al*., 1993), the readiness for change can be defined as prior knowing to the attitudes either increase to or decrease toward change efforts. Jones *et al*. (2005) established the concept of readiness for change that is viewpoint of employees about necessary for organizational change (i.e., acceptance of change) and also employee's beliefs about the changes that will have achieve benefits for both employees and organizations.

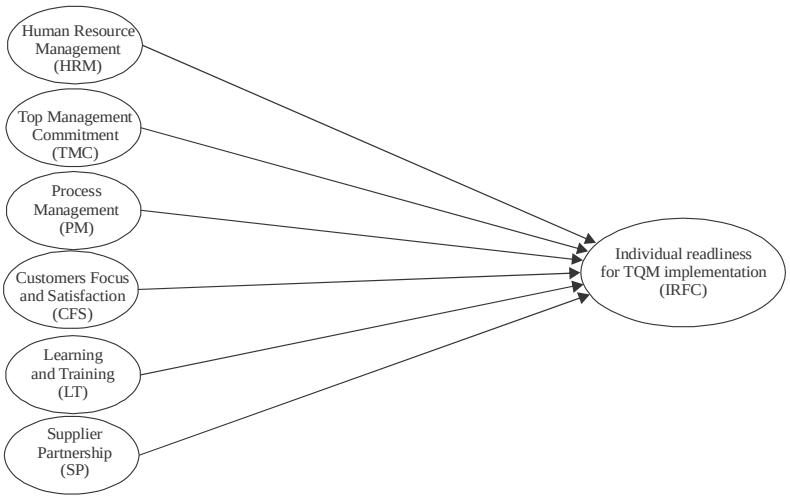

Fig. 2: Research model

Total quality management: According to Kaynak (2003) that defined TQM is as the philosophy of comprehensive management is to aimed for continuous improvement in all activities of an organizations as well as the most essential in accomplished the total quality when used human resources to satisfied customer during and later the sale.

Organizational commitment: State of a psychological that binds the individual to the organization and has implication on the decision to continue membership in the organization (i.e., makes turnover less likely) (Meyer and Allen, 1991).

MATERIALS AND METHODS

Population/sample of research: This study is defined the population that are the individuals in the Yemeni oil and gas sector is its most important sampling for this study including public Yemen oil companies that implement quality and change initiatives. Sana'a in Northern Yemen has the greatest concentration of the 11,761 employees in Yemeni oil companies head offices of all 10 companies at the time this study will conduct as namely. MOM, YPC, YOGC, SEPOC, PEPA, YORCO, YICOM, PTC, YGSMRB and YGC.

Collection of data/measures: In order to accomplish the aims of this study, a questionnaire is a common tool for collecting data. The questionnaire was formed from the past empirical studies as well as several discussions with both professionals and academicians. All the items were assessed via. a 5-point Likert-scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The likert scale and other types of interval-type scales are extensively used in organizational research, since, they lend themselves to more sophisticated data analysis (Sekaran and Bougie, 2013).

RESULTS AND DISCUSSION

Analysis of data: The quantitative method will be used for analysing of data that can be used by the appropriate descriptive analysis. It is used to distribute the population as well as demographic while model using structural equation modeling techniques will be analysed questionnaire validation.

Estimated findings of the study: The findings of this study will be expected to increase level of employee's readiness for change regarding TQM implementation in Yemeni oil units.

CONCLUSION

Finally, in the drawn that was showed the proposed conceptual framework of this study that is contained integrating of three theories as namely, organizational change theory lewin theory social exchange theory overall, the conceptual model consists of six independent variables: human resource management, top management commitment, process management, customer focus and satisfaction, supplier partnership and learning and training and one dependent variable individual readiness for change. The researchers was selected these factors that were a result to on related in Yemen during the conceptual model that mentioned in the study. To improve growth of Yemeni economic as well as ensure of organizations can be based on increasing level of employee's readiness for change regarding TQM implementation in Yemeni oil units in spite of existed obstacles in the country.

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