Approaching the impact of organisational culture on quality management practices using the competing values framework: the case study of Dubai government organisations

Maitha Buhumaid

Approaching the impact of organisational culture on quality management practices using the competing values framework: the case study of Dubai government organisations

Maitha Buhumaid

Dubai Press Club,
P.O. Box 851, Dubai, UAE
Email: maitha.buhumaid@mediaoffice.ae

Abstract: In a rapidly changing and highly competitive world and economy, quality management (QM) is more needed than ever. There is a dearth of research studies in investigating such an influence on government organisations across the MENA region and the UAE. This paper approaches the implementation of QM in Dubai government organisations (DGOs) from an organisational culture lens. Adopting the competing values framework (CVF), four hypotheses were developed and tested to study the influence of each of the organisational culture constituents (group, developmental, hierarchal, and rational) on the implementation of QM practices in DGO. The paper found that a critical interaction and balance between all four organisational cultural constituents are needed to integrate and optimise efforts, ideas, and initiatives among individuals and groups to successfully implement QM practices within DGO. This study can inform future studies about QM practices in government organisations across the UAE and the MENA region.

Keywords: organisational culture; quality management practices; group culture; developmental culture; hierarchal culture; rational culture; competing values framework; CVF; Dubai government organisations; DGOs.

Biographical notes: Maitha Buhumaid is a recent PhD graduate in 'Quality Management' from Hamdan Bin Mohammed Smart University (HBMSU), Dubai. She is a leader in management, marketing, and communication. She enjoys a rich experience of over 20 years, working for major UAE Government entities in the areas of media, strategic marketing, branding, and corporate communication. She is currently the Director of Dubai Press Club, part of the Government of Dubai Media Office. Prior to joining the Government of Dubai Media Office, she was appointed as the Head of Marketing and Corporate Communication Department at The Prime Minister's Office of the UAE and then served as the Executive Director for Marketing and Corporate Communication at Dubai Creative Clusters Authority. Her research interest is interdisciplinary, focusing on quality management, organisational culture, entrepreneurship, innovation and creativity, communication, and sustainable growth in the workplace.

1   Introduction

With ever-increasing changes, complexities, and technological advancements in the global business environment, research and inquiries in quality management systems, approaches, and practices are more needed than ever in the industry 4.0 era (Lee et al., 2019).

Quality management (QM) as a concept has developed for almost a century, commencing through some pioneering work (e.g., Shewhart's) in the USA during the 1920 and 1930s, attracting more attention after World War II (Japan's huge industrial success in the world market during the 1960s and 1970s), and more recently enjoying a set of frameworks and practices that have been widely adopted and implemented (Lagrosen and Lagrosen, 2003).

There is no consensus on the one definition for QM, mainly because different personnel (e.g., employers, CEOs, directors, managers, and employees) approach the concept of 'quality' differently, greatly shaped by their background, experiences, and cultures. Hence QM cannot be derived from a single idea, attributed to a single person, or be informed by a single theory; it needs to be viewed as the collection of ideas and the outcome of integrated efforts of the various personnel within the organisation (Helms, 2009).

According to Flynn et al. (1994, p.339), QM is an approach aimed at producing high-quality products or services, focusing on "the continuous improvement of processes and defect prevention at all levels and in all functions of the organization, in order to meet or exceed customer expectations". Barone (2020) defines QM as the "act of overseeing all activities and tasks that must be accomplished to maintain a desired level of excellence", including the "determination of a quality policy, creating and implementing quality planning and assurance, and quality control and quality improvement". Similarly, the Corporate Finance Institute (2020) asserts that QM is the "act of overseeing different activities and tasks within an organisation to ensure that products and services offered, as well as the means used to provide them, are consistent", contributing to achieving and maintaining a "desired level of quality within the organization". The Chartered Quality Institute (CQI, 2012) views QM as an organisation-wide approach aimed at precisely understanding customers' needs and consistently delivering accurate solutions within the allocated budget and timeframe, while ensuring minimum loss/negative impact on society. Csizmadia et al. (2008, pp.24–25) assert that QM refers to the "policies, systems and processes designed to ensure the maintenance and enhancement of quality within an institution… a means to multiple ends, [including] improving the quality of institutional services, making the operations of organisations more transparent and accountable and improving their performance".

Despite the fact that QM lacks a universal definition, most practitioners and scholars agree that it is an "integration of all functions of a business to achieve high quality of products through continuous improvement efforts of all employees… the whole workforce from the CEO to the line worker must be involved in a shared commitment to improving quality" [Helms, (2009), p.735]. Because achieving high quality is a continuous process, QM should emphasise sustainable progress towards improving quality in a holistic manner that incorporates every single aspect of an organisation: processes, environment, and people (Helms, 2009). Regardless of the numerous notions of viewing it, QM is argued to mainly revolve around customers and service/products,

meeting or exceeding the expectations of the former and continuously improving the quality of the latter (Market Business News, 2019; Drucker, 1999).

As more organisations started adapting and implementing its practices and procedures, QM has come to mean different things to different people (Watson and Korukonda, 1995) and has been assessed and measured across various instruments and approaches, the most prevalent of which is 'total quality management' (TQM) as explored by Powell (1995).

More recent research shows that QM practices go beyond customer satisfaction and best practices in processes and operations to have a significant correlation with safety management, ensuring the safety, health, and wellbeing of the workforce through quality tools and approaches (Ladewski and Al-Bayati, 2019). According to Klochkov and Tveryakov (2020), the success or failure of a QM method depends—to a larger extent—on its adaptability, acquainting their stance with the theory of adaptation.

Wawak et al. (2020) conducted a comprehensive text-mining approach to identify trends in QM literature in the period 2000 to 2019. The authors employed a computer-aided analysis of 4,833 papers from eight journals dedicated to QM. The authors identified 45 trends: 17 long-lasting trends, 4 declining trends, 11 emerging trends and 13 ephemeris trends, where 'knowledge about emerging trends' was deemed "important for those quality managers who strive for improvement of their efficiency" [Wawak et al., (2020), p.417].

The implementation of QM practices does not occur in a vacuum without careful consideration of the organisational culture. Such an important relationship between QM and organisational culture has been highlighted and emphasised by many researchers (Flynn and Saladin, 2006; McGee and Channon, 2021; Nahm et al., 2004). In his study, Ababneh (2020, p.1387) used the "attribution theory to propose a model that presents a differential impact of organizational culture archetypes on quality performance".

Organisational culture influences the actions and behaviours of individuals (Irani et al., 2004) that, in turn, impact their quality of work (Reeves and Bednar, 1994). Hence, to foster quality orientation, an organisation requires a transformation of the internal culture as well as undergoing substantial adjustments (Sandholm, 1999).

Despite the many studies that targeted the impact of organisational culture on QM practices, there are limited studies on how various constituents of organisational culture impact QM systems and practices in governmental organisations (Parker and Bradley, 2000; Claver et al., 1999). To bridge the gap, this research paper approached the implementation of QM practices in Dubai government organisations (DGOs) from an organisational culture lens.

2   Literature review

2.1   Culture and organisational culture

Culture is a complex term and concept. Such a complexity emerges from its wide landscape that covers all of a group's shared values, norms, traditions, customs, meanings, assumptions, attitudes, and behaviours (Laugu, 2019; Ngenzi and Chevalier, 2016; Williams, 1983; Yusof and Esmaeil, 2017). Ottaway (2013) views the culture of a

certain community as its social heredity. In 'interdependent cultures', such as those in most of Asia, South America, and Africa, individuals tend to view themselves as members of larger groups or categories, and employment relationships may last a lifetime [Smith et al., (2015), p.209]. On the other hand, individuals who live in 'individualistic cultures', such as those in Northern Europe, the USA and Canada, tend to focus more on individual goals and are more at ease with switching employers [Smith et al., (2015), p.209].

Previously, organisations were either unaware of the importance of culture and cultural considerations within the organisation or believed that it was too difficult and challenging to manage up until scholars, through decades of empirical research, have established strong links between organisational culture and organisational performance (Tharp, 2009). Hence, it becomes valid to assume that the culture, social heredity, of the workforce, including executive managers, middle-level managers, and employees, will impact the workplace and will interact with and shape the various organisational operations and practices. It is at no surprise that scholars assert that organisational culture is a complex topic and field of inquiry (Gurusinghe et al., 2021; Muscalu, 2014; Whelan, 2016). Nonetheless, it is inevitable for any company to understand its culture in order to survive, develop, and grow in such a rapidly changing world and market (Tharp, 2009).

Organisational culture is one of the most popular, yet ambiguous and elusive, concepts, and it has various definitions (Silvester et al., 1999). According to past researchers like Trice and Beyer (1984), organisational culture is referred to the collectedly held system of beliefs and meanings by a particular group at a particular point in time. On the other hand, for Schein (2010), it is a pattern of core assumptions that are developed by a group or an organisation in order to adjust to its environment. Thus, it can be stated that there are certain basic beliefs and values of the committed organisational members, and having such members is one of the necessary conditions for the effectiveness of the organisation (Blunt, 1990). Organisational culture serves as a point of distinction from one category of people to the other, and it programs a collective mindset (Hofstede and Bond, 1988). The shared values and agreements over what is right or wrong, good or bad, acceptable or unacceptable, and desirable or undesirable are the underlying essence of organisational culture (Blunt, 1991). Such shared values and agreements directly impact employees' ethical behaviours and actions and reflect their commitment to quality service, innovation, trust, openness, and helpfulness to other members of the organisation (Morgan, 1986). The authors state that when an organisation develops a strong organisational culture, it creates a distinctive atmosphere across the entire organisation. Blunt (1991) argues that organisational culture has the ability to create a positive climate that influences the employees to strive to attain organisational goals, quality enhancements, and commitment in their approach. Every organisational culture is unique, and each form of organisational culture has a different impact on the employees and the organisation as a whole. Blunt and Popoola (1985) note that a fragmented organisational culture is not beneficial for an organisation where the collective system of values and beliefs is loose and where individual motives and personal gains receive precedence over the collective goals. In contrast, apex organisational culture emphasises the development of a solid positive organisational culture at the top management levels that are percolated to the bottom-level employees (Blunt, 1991).

The concept of organisational culture has been considered to be the fundamental aspect of organisational systems that lays the foundations of management for employees by means of sharing values, beliefs, and meanings, thereby defining the firm's way of doing business (Saffold, 1998; Schein, 1992; Barney, 1986).
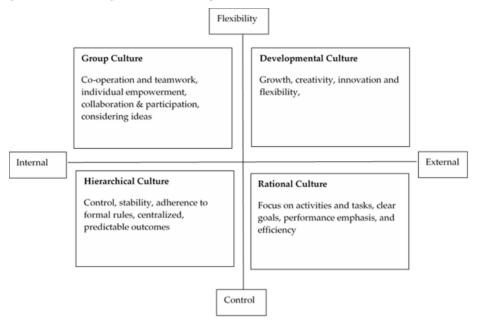
The presence of a strong organisational culture prompts the efficiency and quality of the products and services that are developed by a firm, thus positioning organisational culture at the core of all activities (Klein et al., 1995). The shared values and agreements within an organisational culture directly impact employees' ethical behaviours and actions and reflect their commitment to quality service, innovation, trust, openness, and helpfulness to other members of the organisation (Morgan, 1986).

2.2   *QM from the lens of the four constituents of organisational culture*

As previously emphasised, there is no consensus on defining 'quality management' (QM) as a concept, strategy, and set of practices. QM is viewed differently by various scholars and managers worldwide. Numerous empirical studies have attempted to investigate QM practice–performance relationships in different contexts (Ebrahimi and Sadeghi, 2013). The main challenge is how to authentically recognise, prompt, sustain, and map quality practices and performance to a holistic and inclusive QM approach. The resolution to such a challenge – as asserted by a number of scholars – is to view and approach QM practices from an organisational culture lens (Hafeez and Ruzevicius, 2011; Martin, 1992; McGee and Channon, 2021; Najeh and Kara-Zaitri, 2007).

The competing values framework (CVF) is the theoretical framework that has informed this study. The CVF concept was founded by Quinn and Rohrbaugh (1981, 1983) to address organisational culture and the types of management styles that contribute to various organisational culture constituents. The initial CVF model was further developed by Denison and Spreitzer (1991) and adapted (Figure 1) by Prajogo and McDermott (2005), where the CVF four quadrants were conceptualised in terms of group, developmental, hierarchal, and rational cultures. The developed framework has been further elaborated by Prajogo and McDermott (2011) and Cameron and Quinn (2011). The framework serves as a powerful tool for understanding, approaching, and characterising organisational behaviours and beliefs (Cameron and Quinn, 2011). Each of the four quadrants of the CVF (group, developmental, hierarchal, and rational cultures) serves as an indicator of effectiveness in terms of an organisation's performance (Cameron and Quinn, 2011). Additionally, the relationship between these four organisational culture constituents (group, developmental, hierarchal, and rational cultures) and an organisation's performance (product quality, process quality, product innovation, and process innovation) has been further investigated by Prajogo and McDermott (2011). The study found that quality management among organisations depends on certain cultural traits, bearing in mind that different organisations possess different organisational cultures that need to be taken into consideration/be harmonised for an effective QM approach (Prajogo and McDermott, 2011). Hence, this paper will approach the influence of organisational culture on QM through the lens of these four cultural constituents: group, developmental, hierarchal, and rational cultures.

Figure 1 The four organisational culture quadrants

Source: Prajogo and McDermott (2005) adapted from Denison and Spreitzer (1991)

3 The research gap and the context of this study

In the private sector, QM practices have been widely adopted, studied, and attributed to the success of such a sector (Al-Qahtani and Ibn-Methheb, 1999). Such a prominence of QM was not equally enjoyed in government organisations. In light of the global and rapid changes across various industries, government organisations are required to modernise their operations and place more emphasis on QM practices (Pal and Ireland, 2009). In order to compete with the private industry, government organisations have started improving their QM practices (Maran, 2008). In government organisations, the primary goal of QM is to enhance the quality of public services and products offered to residents (Linderman et al., 2003).

Organisational culture and QM have been well-researched worldwide in the private sector, with little attention given to governmental organisations, as evident in Table 1. In the MENA region, a few studies investigated such a relationship but only for the private sector (Al-Khalifa and Aspinwall, 2001; Biswas, 2013; Sayyad, 2017). In the UAE, very few studies tackled organisational culture and TQM, particularly in the private sector (Jabnoun and Sedrani, 2005). In Dubai, no prior studies have been conducted on organisational culture and QM in government organisations, with the exception of the study conducted by Aburayya et al. (2020), which was purely a TQM study.

The research problem that this study is focusing on is investigating the relationship between the various organisational culture constituents and QM practices in the public sector, particularly in DGOs.

Table 1   An overview of organisational culture and QM studies worldwide

Locus	Focus	Reference
Worldwide	Private sector (Microsoft, Nike and Coca-Cola)	Cameron et al. (2006)
Lativa	Private sector (a private university)	Lapina et al. (2015)
USA	Private sector (223 private hospitals)	Knapp (2015)
Spain	Private sector (451 private companies)	Gimenez-Espin et al. (2013)
Nigeria	Private sector (TQM for 364 SMEs)	Eniola et al. (2019)
Vietnam	Private sector (TQM for 410 SMEs)	Ma and Cheok (2022)
MENA-Kuwait	Private sector (30 ISO certified private companies)	Biswas (2013)
MENA-Palestine	Private sector (57 private firms)	Sayyad, 2017
MENA-Qatar	Private sector (141 private organisations)	Al-Khalifa and Aspinwall (2001)
MENA-UAE	Private sector (manufacturing firms)	Jabnoun and Sedrani (2005)
MENA-UAE (Dubai)	Public sector (a TQM study on public hospitals)	Aburayya et al. (2020)

Government organisations' adoption of QM practices will support the transition of such organisations in a highly competitive environment and will address developmental obstacles (Al-Qahtani and Ibn-Methheb, 1999). To compete with the private industry (Maran, 2008) and to operate more effectively in an information-driven economy and rapidly changing world, government organisations are compelled to modernise their operations (Pal and Ireland, 2009), maximising societal benefits within a balanced budget (MacCarthaigh et al., 2012) and enhancing the quality of public services by measuring and assessing results (Linderman et al., 2003). Additionally, the proper implementation of QM practices within government organisations will ensure administrative efficiency and streamline governmental procedures to be more customer-centric (Scharitzer and Korunka, 2000).
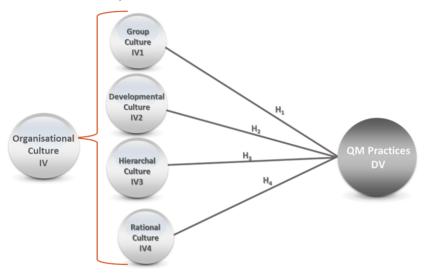
As an understudied research area, the researcher chose UAE as the context of this research and has conducted a detailed review of the various cultural dimensions and their effect on quality management in DGOs. The choice of UAE, in general, and Dubai, in particular, is due to the strong emphasis of the Federal Government in the UAE and Dubai Government on continuously improving and developing quality across both the public and private sectors (Abdulla et al., 2019; Sarker and Al Athmay, 2018).

This paper aims to help close the gap in the dearth of research on organisational culture and QM practices in the public sector by providing valuable insights into how government organisations can effectively manage the implementation of QM practices and foster a favourable cultural atmosphere conducive to organisational change. Such changes are expected to increase the productivity of these organisations and improve public service delivery in the UAE, in general, and in Dubai, in particular. A thorough understanding of the impact of the various organisational culture constituents on QM practices in DGOs will serve the best interest of multiple stakeholders: Dubai residents, Dubai public servants, Dubai Government, UAE private companies in their dealings with the public sector, and international organisations/bodies with their interaction with DGOs.

4 Formulating the study's hypotheses

The CVF model has been adopted as the informing theoretical framework, where the impact of the four organisational culture constituents (group, developmental, hierarchal, and rational) on QM was tested. To do so, four hypotheses were developed, where each hypothesis addressed the impact of one of the organisational culture constituents on QM at a time. The impact of each of the four organisational culture constituents, as independent variables, was tested against QM practices, as the dependent variable, as displayed in Figure 2.

Figure 2 Developing the study's hypotheses informed by the adapted CVF model (see online version for colours)

The implementation of QM practices does not occur in a vacuum, without careful consideration of the various constituents and attributes of organisational culture. Some scholars argue that by implementing proper organisational culture attributes, organisations can derive significant, quality business achievements (Kanji and Yui, 1997; Swaffin-Smith et al., 2003). Each organisation is different, and the cultural elements of each organisation vary widely. It is also tied to the national culture of the countries (Lapiņa et al., 2015). Since the study is based on government organisations, it will also be important to analyse how the culture of government organisations influences quality management practices in the UAE in general and in Dubai in particular.

4.1   Hypothesis 1

Patyal and Koilakuntla (2018) assert that group culture is one of the most supportive culture types for the implementation of QM practices. Zu et al. (2010) assert that group culture facilitates QM practices by being a supportive one and depicting concerns for the ideas of the employees within the organisation. Similar results emphasising the positive impact of group culture on QM practices were reported by Dellana and Hauser (1999), Haffar et al. (2013) and Prajogo and McDermott (2005).

Members of organisations with an established group culture are more likely to adopt and implement QM practices (Naor et al., 2008). There have been considerable initiatives by the Dubai Government for the implementation of QM across various industries (Yazeen and Okour, 2012; Taher et al., 2015); nonetheless, there have been no studies that specifically investigate the influence of group culture on QM within the context of Dubai. Hence, this paper will attempt to generate understandings about this topic. Informed by the discussion above, the below hypothesis was formulated.

H1 Group culture has a positive influence on quality management practices in the government sector of Dubai.

4.2   Hypothesis 2

According to Jabnoun and Sedrani's (2005) approach to organisational culture and QM, developmental culture remains one of the most important organisational culture constituents in this regard. Patyal and Koilakuntla (2018) assert that developmental culture is one of the most supportive culture types for the implementation of QM practices. Additionally, numerous studies have highlighted the effectiveness of developmental culture on the implementation of QM practices as it fosters a tolerant work environment for flexibility in implementing such practices (Bou-Llusar et al., 2009; Kumar and Sankaran, 2007; Prajogo and McDermott, 2005; Naor et al., 2008; Yeo and Neal, 2004; Zu et al., 2011; Gimenez-Espin et al., 2013). The orientation of this kind of culture toward creativity, innovation, and continuous growth and development enables it to positively impact QM practices within an organisation (Fredendall et al., 2006; Knapp, 2015)

Despite the several studies that have focused on customer-centricity in Dubai as part of the governmental dedication towards QM, there are hardly any studies that address developmental culture within DGOs. Accordingly, the below hypothesis was formulated.

H2 Developmental culture has a positive influence on quality management practices in the government sector of Dubai.

4.3   Hypothesis 3

In their study, Valmohammadi and Roshanzamir (2015) identified a negative impact of hierarchal culture on the implementation of QM practices. Hierarchal culture is often characterised by control and strict adherence to formal policies, procedures, and rules, with the main focus being on maintaining structure and stability, which is why such a culture does not correspond well with the implementation of QM systems (Cameron and Quinn, 2011). Organisations depicting a hierarchal culture often fail to promote innovation and creativity among their members (Zammuto et al., 2000); this makes employees working in such organisations less likely to adapt to the change or apply QM practices (Haffar et al., 2013).

In the MENA region, Naoum et al. (2013) note that cultural values and belief systems have a significant influence on the social organisations of the region, especially in countries like Iraq, Syria and Libya. Different macro-political and social events have shaped the culture of these countries towards an authoritarian ideology that emphasises control (Naoum et al., 2013). An authoritarian culture, as described by Naoum et al. (2013), is similar to the concept of hierarchical culture as described by Fredendall et al.

(2006) and Gimenez-Espin et al. (2013). According to Karimi and Kadir (2012), hierarchical culture stresses stability, uniformity, and adherence to rules and regulations. However, such cultural aspects are shown to have no influence or negative influence on the implementation of QM practices. Several studies across the Arab world have examined the impact of the hierarchical culture on the implementation of QM practices (Al-Khalifa and Aspinwall, 2000; Haffar et al., 2013). For instance, Al-Khalifa and Aspinwall (2001) assert that the implementation of QM practices in Qatar is dominated by a number of organisational culture constituents, the most major of which is the hierarchical culture. Additionally, Al-Khalifa and Aspinwall (2000) found that the hierarchal culture was significantly unsupportive of the implementation of QM practices. Similarly, the study conducted by Haffar et al. (2013) in Syria confirmed the same findings.

As evident by the above discussion, previous research studies reveal mixed results related to the impact of hierarchical culture on QM practices in the Arab world, with a clear inclination toward a negative impact. The present study attempts to evaluate the influence of the hierarchical constituent within organisational culture on quality management in DGOs. Hence, the following hypothesis was derived.

H3 Hierarchical culture has a negative influence on quality management practices in the government sector of Dubai.

4.4   Hypothesis 4

A number of studies identified a positive relationship between a rational culture within an organisation and consistency in the implementation of QM practices (Baird et al., 2011; Maroofi, 2012; Naor et al., 2008). Whereas other studies, such as Al-Khalifa and Aspinwall (2001) in Qatar, have revealed that the organisations experienced challenges in the implementation of QM practices as they were dominated by a rational culture.

Tata and Prasad (1998) argue that rational culture, being a controlled type of culture, negatively impacts QM practices by being less flexible and people-oriented. Similar studies have found that rational culture is not conducive to the improvement of QM practices (Fredendall et al., 2006; Knapp, 2015; Shortell et al., 1995).

Several scholars have asserted that the hierarchical and rational cultures are the most dominating constituents of organisational culture in the Arab world, highlighting a more negative impact of rational culture on QM practices (Anwar and Chaker, 2003; Al-Khalifa and Aspinwall, 2000; Jaber and Simkin, 2017). Hence, informed by this review of literature, the fourth hypothesis was derived.

H4 Rational culture has a negative influence on quality management practices in the government sector of Dubai.

5   Methodology

To achieve the research objective, four hypotheses (as detailed in the previous section) were formulated to test the relationship between each of the four organisational culture constituents (group, developmental, hierarchical, and rational cultures), as independent variables, with QM, as the dependent variable. Hence, a quantitative approach is suitable to numerically measure and statistically test these hypotheses (Hopkins, 2008), providing

descriptive and inferential statistical analysis to determine the relationship between organisational culture and QM. Additionally, a quantitative method is inevitable to test research hypotheses and analyse the developed framework (Neuman, 2011). Moreover, a quantitative method will identify trends and produce generalisations (Creswell and Plano-Clark, 2017) about the relationship between organisational culture and QM through an 'essentially empirical-analytic' lens [Mills et al., (2009), p.760].

This method enabled the researcher to assign numbers to the observational variables (constituents of organisational culture and QM) and create tools to quantify them (Mohajan, 2017). Additionally, such a quantitative approach will ensure the accuracy required in data collection and analysis within a research setting (Mohajan, 2017).

The data required to measure and test the hypotheses were collected through a survey. An online questionnaire was designed to target a representative sample of 402 respondents across employees from managerial and non-managerial positions in DGOs. A survey is a powerful tool to collect data in a manner that allows for generalisations via appropriate statistical analysis within an overall quantitative framework (Collis and Hussey, 2009). This study demanded a large volume of data, and according to Neuman (2011), a quantitative method is the most powerful and appropriate for collecting, managing, and analysing such a large volume of data. The multi-item questionnaire (12 items for organisational culture and 18 items for QM) was formulated on a five-point Likert scale and addressed people as well as process-related quality management practices. Cronbach's alpha score for each of the dimensions showed high reliability.

The minimum threshold for the Cronbach's alpha measure is 0.6, although scores greater than 0.7 are preferred. The reliability scores for group culture ($\alpha = 0.840$), developmental culture ($\alpha = 0.879$), hierarchical culture ($\alpha = 0.856$), and rational culture ($\alpha = 0.890$) were greater than 0.7. Therefore, this indicates that there is a good extent of internal consistency present in the data related to the constructs of organisational culture.

A similar analysis was conducted for the dimensions of the quality management practices constructs. Top management support ($\alpha = 0.939$), employee involvement ($\alpha = 0.867$), customer focus ($\alpha = 0.906$), and process management ($\alpha = 0.930$) had a Cronbach's alpha score of greater than 0.7. Therefore, all of the QM practices constructs possessed a good internal consistency.

6   Data analysis

Regression analysis was conducted to test the relationship between the constituents of organisational culture and QM in DGOs. Starting with the relationship of group culture, as the first constituent of organisational culture, with QM, the first hypothesis (H1) was tested:

- Null hypothesis: Group culture does not have a positive influence on quality management practices in DGOs.

- Alternative hypothesis: Group culture has a positive influence on quality management practices in DGOs.

SPSS results revealed a significant influence of group culture on quality management in the organisation at $F_{(1, 402)} = 534.842$, $p < 0.01$. Thus, we accept the alternative

hypothesis and reject the null. Hence, we can conclude that group culture positively influences quality management by an unstandardised beta factor of 2.637, supporting the first hypothesis (H1) of the study.

Similarly, regression analysis was conducted to test the relationship between the developmental culture, the second constituent of organisational culture, and QM in DGOs. The second hypothesis (H2) was tested:

- Null hypothesis: Developmental culture does not have a positive influence on quality management practices in DGOs.

- Alternative hypothesis: Developmental culture has a positive influence on quality management practices in DGOs.

SPSS results revealed a significant influence of development culture on the quality management in the organisation at $F_{(1, 402)} = 508.655$, $p < 0.01$. Thus, we accept the alternative hypothesis and reject the null. Therefore, it can be inferred that developmental culture positively influences quality management by an unstandardised beta factor of 2.442. These results support the second hypothesis (H2) of the study.

Regression analysis was also conducted to test the relationship between the hierarchical culture, the third constituent of organisational culture, and QM in DGOs. The third hypothesis (H3) states as follows: Hierarchical culture has a negative influence on quality management in DGOs.

To ensure consistency, H3 was tested in the same manner as H1 and H2, i.e., the null hypothesis representing the lack of positive influence of hierarchal culture on QM, while the alternative hypothesis confirming this positive relationship. In this context, the null hypothesis would be supporting H3, whereas the alternative would be contradicting it. The null and alternative hypotheses are as follows:

- Null hypothesis: Hierarchical culture does not have a positive influence on quality management practices in DGOs.

- Alternative hypothesis: Hierarchical culture has a positive influence on quality management practices in DGOs.

As noted, there is a significant, positive influence of hierarchical culture on quality management in the organisation at $F_{(1, 402)} = 487.924$, $p < 0.01$. Thus, we accept the alternative hypothesis and reject the null, where hierarchical culture proved to positively influence quality management by an unstandardised beta factor of 2.557. Hence, there is no support for the third hypothesis (H3) of the study.

Finally, regression analysis was conducted to test the relationship between the rational culture, the fourth constituent of organisational culture, and QM in DGOs. The fourth hypothesis (H4) states as follows: Rational culture has a negative influence on quality management in DGOs.

To ensure consistency, H4 was tested in the same manner as H1, H2, and H3. In other words, the null hypothesis represents the lack of positive influence of rational culture on QM, while the alternative hypothesis confirms such a positive relationship. In this context, the null hypothesis would be supporting H4, whereas the alternative would be contradicting it. The null and alternative hypotheses are as follows:

- Null hypothesis: Rational culture does not have a positive influence on quality management practices in DGOs.

- Alternative hypothesis: Rational culture has a positive influence on quality management practices in DGOs.

There is a significant, positive influence of rational culture on quality management in the organisation at $F_{(1, 402)} = 821.038$, $p < 0.01$. Thus, we accept the alternative hypothesis and reject the null, where rational culture proved to positively influence quality management by an unstandardised beta factor of 2.828. Hence, it can be noted that there is no support for the fourth hypothesis (H4) of the study.

7   Discussion

Quantitative data analysis revealed that group culture has a significant positive influence on the implementation of quality management in DGOs, accepting the alternative hypothesis and rejecting the null one and revealing a significantly high positive influence factor of group culture on QM of 2.637. Such a finding complements prior research studies in this context, where Knapp (2015) argues that group culture focuses primarily on the internal aspects of cohesion and flexibility in an organisation, emphasising togetherness, teamwork, and participation between various organisational levels. Additionally, the work of Zu et al. (2010) stresses that group culture prompts QM practices within the organisation by embracing and showing concern for employees' ideas and initiatives. In this respect, one of the important studies was carried out by Prajogo and McDermott (2005), who have inquired into various organisational traditions and their effect on QM and found a positive correlation between group culture and QM practices. Several other researchers, such as Haffar et al. (2013), Naor et al. (2008) and Dellana and Hauser (1999), have also obtained similar findings.

In terms of the second hypothesis, data analysis proved that developmental culture has a positive influence on the implementation of quality management in DGOs, accepting the alternative hypothesis and rejecting the null one and revealing a remarkable positive influence factor of developmental culture on QM of 2.442. This finding is in line with previous studies. Most notably, the research conducted by Jabnoun and Sedrani (2005), which stressed that developmental culture substantially affects the success of QM practices in organisations in the private sector in UAE. Additionally, the literature indicates positive links between developmental culture and quality management (Knapp, 2015; Prajogo and McDermott, 2005; Fredendall et al., 2006; Al-Khalifa and Aspinwall, 2000).

Informed by literature review and previous studies, it was hypothesised that hierarchical culture has a negative influence on the implementation of quality management in DGOs. For instance, the research studies carried out by Mohammad Mosadeghrad (2006), Tata and Prasad (1998), Karimi and Kadir (2012) and Alhwairini and Foley (2012) have highlighted the negative impact of hierarchal culture on the implementation of QM practices, including limiting individual autonomy and hindering innovation and creativity, giving more attention to governance and performance management at the expense of an inclusive organisational approach towards QM practices. However, data analysis did not support H3, contradicting the common scholarly stance about the negative influence of hierarchical culture on QM. Quantitative analysis showed that such a negative impact was not supported in DGOs. Such distinction between the literature review and this study's results strongly invites cultural

considerations and contexts when implementing QM practices, meaning what might be (e.g., hierarchy) negatively perceived in certain cultures might not be applicable or replicable to other cultures and contexts. This assumption made by this study is further supported by the fact that there have been some mixed results concerning the impact of hierarchical culture on QM (Germain and Spears, 1999; Fredendall et al., 2006; Gimenez-Espin et al., 2013).

Informed by literature review, it was hypothesised that rational culture has a negative influence on the implementation of quality management in DGOs. Several scholars have asserted that, at best, the influence of rational culture on QM remains unconfirmed and ambiguous, and at worst, the impact of such a culture on QM is a negative one (Fredendall et al., 2006; Knapp, 2015; Page and Curry, 2000; Patyal and Koilakuntla, 2016; Prajogo and McDermott, 2005; Naor et al., 2008; Zu et al., 2010). Conversely, quantitative data analysis did not support H4, disagreeing with the common stance adopted by many researchers about the unconfirmed and negative influence of rational culture on QM practices. This study showed that such a negative impact was not supported in DGOs.

Culture is a complex term and concept to approach, and such a complexity emerges from its landscape that covers all of a group's shared values, norms, meanings, traditions, customs, attitudes, behaviours, and assumptions. Hence, it is reasonable when approaching QM, to view organisational culture holistically, mapping employees' social norms, values, beliefs, and assumptions to those of the workplace and the organisation as a whole.

Dubai, the context of this study, is a very international and multicultural city that values diversity, prompts inclusiveness, and strives for internationalisation in terms of quality practices. Nonetheless, when it comes to Smith et al.'s (2015) broad categorisation of cultures, the culture in Dubai tends to be culturally more 'interdependent' than 'individualistic'. Hence, what applies in terms of perceptions and attitudes towards QM approaches in individualistic cultures might not necessarily apply to the cultural context of Dubai.

The disagreement between the literature review and the quantitative findings for H3 and H4 asserts that the cultural context of Dubai plays a vital role in shaping employees' views about what negatively or positively impacts the implementation of QM practices in their government organisations. Naoum et al. (2013) reflect such a stance by asserting that the cultural traditions, as well as belief systems in the Middle East region, have a considerable effect on various areas in the organisations and that power and hierarchy in this region is not as negatively 'connotated' as is the case across western countries. Similarly, Chatman et al. (2014) assert that the success of a group culture demands management intervention to ensure setting the expectations about the behaviours and conduct, consulting employees about the norms related to group work, and prompting group members to actively and ethically comply towards achieving the set goals.

In the context of DGOs, group culture and developmental culture positively impact and influence QM practices, where the former hosts a work environment of collaboration, teamwork, and inclusiveness, whereas the latter culture supports creativity, innovation, growth, and flexibility within the organisation. Nonetheless, group and developmental cultures cannot exist in a vacuum. Other cultural constituents are needed to synchronise and harmonise efforts, plans, and ideas towards meeting the continuous demands of QM. In this regard, attributes and elements from the hierarchical culture are much needed in the context of DGOs to support each of the group culture and developmental culture and

minimise the associated challenges with each of these cultures. Hence, constructive intervention from top management is needed to promote awareness, prompt staff participation, and facilitate continuous improvement programs and quality training within the organisation.

Similarly, rational culture, in the context of DGOs, is required to support group and developmental culture. Rational culture's emphasis on setting goals and outcomes orients the work of the groups towards achieving organisational targets towards QM.

We can confidently argue that in DGOs, the influence of hierarchical and rational cultures on the implementation of QM is not perceived as a negative but rather a positive one, conditioned by an important – yet complex – interaction and balance between the four constituents of organisational culture.

8   Conclusions

This paper found that the context of DGOs demands contributions from all four constituents of organisational culture to ensure a positive and sustained influence on QM. Despite the confirmed positive influences of the group and developmental cultures, such cultures cannot operate in isolation from the other cultural constituents (i.e., hierarchical and rational cultures), let alone the challenges associated with the adoption of each culture. Hence, elements from the hierarchical culture, in terms of top management intervention, support, and empowerment, and elements from the rational culture, in terms of clear goals, targets, and outcomes, are required to support group and developmental cultures. Such a critical and complex interaction and balance between all four organisational cultural constituents will integrate and optimise efforts, ideas, and initiatives among individuals and groups and across non-managerial and managerial positions to successfully implement and sustain QM practices within DGOs. Findings from this study are limited by the fact that this study strictly focuses on investigating and researching DGOs, where findings may not be generalised to other sectors in the UAE. Another limitation is that the study has been conducted in a cross-sectional manner. The development of organisational culture and the implementation of QM practices are long-term, dynamic processes that require longitudinal research. Hence, the full causality between organisational culture and quality management can neither be confirmed nor guaranteed. Despite these limitations, the approach employed (framework and methods) and the results generated in this paper can be used to replicate similar future studies in government organisations across the UAE cities and the MENA region. This study serves as another demonstration of the effectiveness and efficiency of the CVF as one of the major frameworks that needs to be considered when approaching topics related to organisational culture.

References

Ababneh, O.M.A. (2020) 'The impact of organizational culture archetypes on quality performance and total quality management: the role of employee engagement and individual values', *International Journal of Quality & Reliability Management*, Vol. 38, No. 6, pp.1387–1408.

Abdulla, S.A.M., Khalifa, G.S., Abuelhassan, A.E. and Ghosh, A. (2019) 'Antecedents of Dubai revisit intention: the role of destination service quality and tourist satisfaction', *Restaurant Business*, Vol. 118, No. 10, pp.307–316.

Aburayya, A., Alshurideh, M., Al Marzouqi, A., Al Diabat, O., Alfarsi, A., Suson, R. and Salloum, S.A. (2020) 'An empirical examination of the effect of TQM practices on hospital service quality: an assessment study in UAE hospitals', *Syst. Rev. Pharm*, Vol. 11, No. 9, pp.347–362.

Alhwairini, A. and Foley, A. (2012) 'Working towards total quality management in Saudi Arabia', *Education, Business and Society: Contemporary Middle Eastern Issues*, Vol. 5, No. 3, pp.187–199.

Al-Khalifa, K.N. and Aspinwall, E.M. (2000) 'The development of total quality management in Qatar', *The TQM Magazine*, Vol. 12, No. 3, pp.194–204.

Al-Khalifa, K.N. and Aspinwall, E.M. (2001) 'Using the competing values framework to investigate the culture of Qatar industries', *Total Quality Management*, Vol. 12, No. 4, pp.417–428.

Al-Qahtani, S.S. and Ibn-Methheb, M.M. (1999) 'Implementation of total quality management in some Saudi public sector organizations', *Economics and Administration*, Vol. 13, No. 2, pp.23–38.

Anwar, S.A. and Chaker, M.N. (2003) 'Globalisation of corporate America and its implications for management styles in an Arabian cultural context', *International Journal of Management*, Vol. 20, No. 1, pp.43–52.

Baird, K., Hu, K.J. and Reeve, R. (2011) 'The relationships between organizational culture, total quality management practices and operational performance', *Int. J. Oper. Prod. Manage.*, Vol. 31, No. 7, pp.789–814.

Barney, J.B. (1986) 'Organizational culture: can it be a source of sustained competitive advantage?', *Academy of Management Review*, Vol. 11, No. 3, pp.656–665.

Barone, A. (2020) *Quality Management: An Inside Look*, 28 July, Investopedia [online] from https://www.investopedia.com/terms/q/quality-management.asp (accessed 11 June 2021).

Biswas, B.B. (2013) 'The Effect of changing organizational culture on TQM practices in ISO certified companies', *CLEAR International Journal of Research in Commerce & Management*, Vol. 4, No. 5, pp.24–29.

Blunt, P. (1990) 'Strategies for enhancing organizational effectiveness in the third world', *Public Administration and Development*, Vol. 10, No. 3, pp.299–313.

Blunt, P. (1991) 'Organizational culture and development', *Journal of the History of Economic Thought*, Vol. 2, No. 1, pp.55–71.

Blunt, P. and Popoola, O.E. (1985) *Personnel Management in Africa*, Longman, London.

Bou-Llusar, J.C., Escrig-Tena, A.B., Roca-Puig, V. and Beltrán-Martín, I. (2009) 'An empirical assessment of the EFQM excellence model: evaluation as a TQM framework relative to the MBNQA Model', *Journal of Operations Management*, Vol. 27, No. 1, pp.1–22.

Cameron, K. and Quinn, R. (2011) *Diagnosing and Changing Organizational Culture: Based on the Competing Values Framework*, Jossey-Bass, San Francisco.

Cameron, K., Quinn, R., Degraff, J. and Thakor, A. (2006) *Competing Values Leadership – Creating Value in Organizations*, Edward Elgar Publishing, Cheltenham.

Chartered Quality Institute (CQI) (2012) *What is Quality?* [online] http://www.thecqi.org/Knowledge-Hub/What-is-quality/ (accessed 12 September 2021).

Chatman, J.A., Caldwell, D.F., O'Reilly, C.A. and Doerr, B. (2014) 'Parsing organizational culture: How the norm for adaptability influences the relationship between culture consensus and financial performance in high-technology firms', *Journal of Organizational Behavior*, Vol. 35, No. 6, pp.785–808.

Claver, E., Llopis, J., Gascó, J.L., Molina, H. and Conca, F.J. (1999) 'Public administration: from bureaucratic culture to citizen-oriented culture', *International Journal of Public Sector Management*, Vol. 12, No. 5, pp.455–464.

Collis, J. and Hussey, R. (2009) *Business Research: A Practical Guide for Undergraduate and Postgraduate Students*, 3rd ed., Palgrave Macmillan, Hampshire.

Corporate Finance Institute (2020) *Quality Management*, 8 July [online] https://corporatefinanceinstitute.com/resources/knowledge/strategy/quality-management/ (accessed 6 November 2021).

Creswell, J.W. and Plano-Clark, V.L.P. (2017) *Designing and Conducting Mixed Methods Research*, 3rd ed., SAGE Publications, Thousand Oaks.

Csizmadia, T., Enders, J. and Westerheijden, D.F. (2008) 'Quality management in Hungarian higher education: organisational responses to governmental policy', *Higher Education*, Vol. 56, No. 4, pp.439–455.

Dellana, S.A. and Hauser, R.D. (1999) 'Toward defining the quality culture', *Engineering Management Journal*, Vol. 11, No. 2, pp.11–15.

Denison, D.R. and Spreitzer, G.M. (1991) 'Organizational culture and organizational development: a competing values approach', *Research in Organizational Change and Development*, Vol. 5, No. 1, pp.1–21.

Drucker, P.F. (1999) 'Knowledge-worker productivity: the biggest challenge', *California Management Review*, Vol. 41, No. 2, pp.79–94.

Ebrahimi, M. and Sadeghi, M. (2013) 'Quality management and performance: an annotated review', *International Journal of Production Research*, Vol. 51, No. 18, pp.5625–5643.

Elsbach, K.D. and Stigliani, I. (2018) 'Design thinking and organizational culture: a review and framework for future research', *Journal of Management*, Vol. 44, No.6, pp.2274–2306.

Eniola, A.A., Olorunleke, G.K., Akintimehin, O.O., Ojeka, J.D. and Oyetunji, B. (2019) 'The impact of organizational culture on total quality management in SMEs in Nigeria', *Heliyon*, Vol. 5, No. 8 [online] https://doi.org/10.1016/j.heliyon.2019.e02293.

Flynn, B.B. and Saladin, B. (2006) 'Relevance of Baldrige constructs in an international context: a study of national culture', *Journal of Operations Management*, Vol. 24, No. 5, pp.583–603.

Flynn, B.B., Schroeder, R.G. and Sakakibara, S. (1994) 'A framework for quality management research and an associated measurement instrument', *J. Oper. Manag.*, Vol. 11, No. 4, pp.339–366.

Fredendall, L.D., Robbins, T.L. and Xingxing, Z. (2006) 'Organizational culture and quality practices in Six Sigma', *Academy of Management Proceedings*, Vol. 2006, No. 1, pp.F1–F6, Academy of Management, Briarcliff Manor.

Germain, R. and Spears, N. (1999) 'Quality management and its relationship with organizational context and design', *International Journal of Quality & Reliability Management*, Vol. 16, No. 4, pp.371–392.

Gimenez-Espin, J.A., Jiménez-Jiménez, D. and Martinez-Costa, M. (2013) 'Organizational culture for total quality management', *Total Quality Management & Business Excellence*, Vol. 24, Nos. 5–6, pp.678–692.

Gurusinghe, R.N., Arachchige, B.J. and Dayarathna, D. (2021) 'Predictive HR analytics and talent management: a conceptual framework', *Journal of Management Analytics*, Vol. 8, No. 2, pp.195–221.

Hafeez, K. and Ruzevicius, J. (2011) 'Total quality management and excellence: a framework for managing governance and corporate social responsibility', *Current Issues of Business and Law*, Vol. 6, No. 1, pp.7–10.

Haffar, M., Al-Karaghouli, W. and Ghoneim, A. (2013) 'An analysis of the influence of organisational culture on TQM implementation in an era of global marketing: the case of Syrian manufacturing organisations', *International Journal of Productivity and Quality Management*, Vol. 11, No. 1, pp.96–115.

Helms, M.M. (2009) *Encyclopedia of Management*, 6th ed., Gale Cengage, Farmington Hills.

Hofstede, G. and Bond, M.H. (1988) 'The Confucius connection: from cultural roots to economic growth', *Organizational Dynamics*, Vol. 16, No. 4, pp.5–21.

Hopkins, D. (2008) *A Teacher's Guide to Classroom Research*, 4th ed., Open University Press, McGraw-Hill Education, Maidenhead.

Irani, Z., Beskese, A. and Love, P.E. (2004) 'Total quality management and corporate culture: constructs of organisational excellence', *Technovation*, Vol. 24, No. 8, pp.643–650.

Jaber, F. and Simkin, L. (2017) 'Unpicking antecedents of CRM adoption: a two-stage model', *Journal of Strategic Marketing*, Vol. 25, Nos. 5–6, pp.475–494.

Jabnoun, N. and Sedrani, K. (2005) 'TQM, culture, and performance in UAE manufacturing firms', *Quality Management Journal*, Vol. 12, No. 4, pp.8–20.

Kanji, G.K. and Yui, H. (1997) 'Total quality culture', *Total Quality Management*, Vol. 8, No. 6, pp.417–428.

Karimi, Y. and Kadir, S.L.S.A. (2012) 'The impact of organisational culture on the implementation of TQM: Empirical study in the Iranian oil company', *American Journal of Industrial and Business Management*, Vol. 2, No. 4, pp.205–216.

Klein, R.L., Bigley, G.A. and Roberts, K.H. (1995) 'Organizational culture in high reliability organizations: An extension', *Human Relations*, Vol. 48, No.7, pp.771–793.

Klochkov, Y.S. and Tveryakov, A.M. (2020) 'Approaches to the improvement of quality management methods', *International Journal of System Assurance Engineering and Management*, Vol. 11, No. 2, pp.163–172.

Knapp, S. (2015) 'Lean Six Sigma implementation and organizational culture', *International Journal of Health Care Quality Assurance*, Vol. 28, No. 8, pp.855–863.

Kumar, M.R. and Sankaran, S. (2007) 'Indian culture and the culture for TQM: a comparison', *The TQM Magazine*, Vol. 19, No. 2, pp.176–188.

Ladewski, B.J. and Al-Bayati, A.J. (2019) 'Quality and safety management practices: the theory of quality management approach', *Journal of Safety Research*, Vol. 69, pp.193–200.

Lagrosen, S. and Lagrosen, Y. (2003) 'Quality configurations: a contingency approach to quality management', *International Journal of Quality & Reliability Management*, Vol. 20, No. 7, pp.759–773.

Lapiņa, I., Aramina, D. and Kairiša, I. (2015) 'Influence of organizational culture on the continuous improvement: empirical study at university', *Proceedings of the 19th World Multi-Conference on Systemic, Cybernetics and Informatics (WMSCI 2015)*, Orlando, FL, Vol. 1, pp.76–81.

Lapiņa, I., Kairiša, I. and Aramina, D. (2015) 'Role of organizational culture in the quality management of university', *Procedia-Social and Behavioral Sciences*, December, Vol. 213, pp.770–774.

Laugu, N. (2019) 'Ideology contestation in management of university library development', *JSW (Jurnal Sosiologi Walisongo)*, Vol. 3, No. 2, pp.179–194.

Lee, S.M., Lee, D. and Kim, Y.S. (2019) 'The quality management ecosystem for predictive maintenance in the Industry 4.0 era', *International Journal of Quality Innovation*, Vol. 5, No. 1, pp.1–11.

Linderman, K., Schroeder, R.G., Zaheer, S. and Choo, A.S. (2003) 'Six Sigma: a goal-theoretic perspective', *Journal of Operations Management*, Vol. 21, No. 2, pp.193–203.

Ma, C. and Cheok, M.Y. (2022) 'The impact of financing role and organizational culture in small and medium enterprises: developing business strategies for economic recovery', *Economic Analysis and Policy*, September, Vol. 75, pp.26–38, https://doi.org/10.1016/j.eap.2022.04.009.

MacCarthaigh, M., Roness, P.G. and Sarapuu, K. (2012) 'Mapping public sector organizations: an agenda for future research', *International Journal of Public Administration*, Vol. 35, No. 12, pp.844–851.

Maran, A. (2008) 'Reassessment of the application of TQM in the public sector', *International Public Management Review*, Vol. 9, No. 1, pp.194–212.

Market Business News (2019) *What is Quality Management? Definition and Examples*, 18 September [online] https://marketbusinessnews.com/financial-glossary/quality-management/ (accessed 5 November 2021).

Maroofi, F. (2012) 'Link between organisational culture and TQM practices', *International Journal of Intelligent Enterprise*, Vol. 1, Nos. 3–4, pp.327–346.

Martin, J. (1992) *Cultures in Organizations: Three Perspectives*, Oxford University Press, New York.

McGee, J. and Channon, D.F. (2021) *The Blackwell Encyclopedia of Management: Strategic Management*, Blackwell Publishing Ltd, Malden.

Mills, A.J., Durepos, G. and Wiebe, E. (Eds.) (2009) *Encyclopedia of Case Study Research*, SAGE Publications, Thousand Oaks.

Mohajan, H.K. (2017) 'Two criteria for good measurements in research: validity and reliability', *Annals of Spiru Haret University. Economic Series*, Vol. 17, No. 4, pp.59–82.

Mohammad Mosadeghrad, A. (2006) 'The impact of organizational culture on the successful implementation of total quality management', *The TQM Magazine*, Vol. 18, No. 6, pp.606–625.

Morgan, G. (1986) *Images of Organization*, SAGE Publications, Thousand Oaks.

Muscalu, E. (2014) 'Organizational culture change in the organization', *Land Forces Academy Review*, Vol. 19, No. 4, pp.392–396.

Nahm, A.Y., Vonderembse, M.A. and Koufteros, X.A. (2004) 'The impact of organizational culture on time-based manufacturing and performance', *Decision Sciences*, Vol. 35, No. 4, pp.579–607.

Najeh, R.I. and Kara-Zaitri, C. (2007) 'A comparative study of critical quality factors in Malaysia, Palestine, Saudi Arabia, Kuwait and Libya', *Total Quality Management & Business Excellence*, Vol. 18, Nos. 1–2, pp.189–200.

Naor, M., Goldstein, S.M., Linderman, K.W. and Schroeder, R.G. (2008) 'The role of culture as driver of quality management and performance: Infrastructure versus core quality practices', *Decision Sciences*, Vol. 39, No. 4, pp.671–702.

Naoum, S.G., Alyousif, A.R.T. and Atkinson, A.R. (2013) 'Impact of national culture on the management practices of construction projects in the United Arab Emirates', *Journal of Management in Engineering*, Vol. 31, No. 4, [online]: https://doi.org/10.1061/(ASCE)ME.1943-5479.0000265.

Neuman, W.L. (2011) *Social Research Methods: Qualitative and Quantitative Approaches*, 7th ed., Pearson, London.

Ngenzi, J.C. and Chevalier, P (2016) *Intercultural Management: What advantages can Jtekt Torsen in Belgium get from the Japanese culture of Jtekt Corporation?*, Master thesis. Louvain School of Management, Belgium [online] https://dial.uclouvain.be/memoire/ucl/en/object/thesis%3A7079 (accessed 2 November 2021).

Ottaway, A.K.C. (2013) *Education and Society*, Taylor and Francis, Hoboken.

Page, R. and Curry, A. (2000) 'TQM – a holistic view', *The TQM magazine*, Vol. 12, No. 1, pp.11–17.

Pal, L.A. and Ireland, D. (2009) 'The public sector reform movement: mapping the global policy network', *Intl Journal of Public Administration*, Vol. 32, No. 8, pp.621–657.

Parker, R. and Bradley, L. (2000) 'Organisational culture in the public sector: evidence from six organisations', *International Journal of Public Sector Management*, Vol. 13, No. 2, pp.125–141.

Patyal, V.S. and Koilakuntla, M. (2016) 'Relationship between organisational culture, quality practices and performance: conceptual framework', *International Journal of Productivity and Quality Management*, Vol. 19, No. 3, pp.319–344.

Patyal, V.S. and Koilakuntla, M. (2018) 'Impact of organizational culture on quality management practices: an empirical investigation', *Benchmarking: An International Journal*, Vol. 25, No. 5, pp.1406–1428.

Powell, T.C. (1995) 'Total quality management as competitive advantage: a review and empirical study', *Strategic Management Journal*, Vol. 16, No. 1, pp.15–37.

Prajogo, D.I. and McDermott, C.M. (2005) 'The relationship between total quality management practices and organizational culture', *International Journal of Operations & Production Management*, Vol. 25, No. 11, pp.1101–1122.

Prajogo, D.I. and McDermott, C.M. (2011) 'The relationship between multidimensional organizational culture and performance', *International Journal of Operations & Production Management*, Vol. 31, No. 7, pp.712–735.

Quinn, R.E. and Rohrbaugh, J. (1981) 'A competing values approach to organizational effectiveness', *Public Productivity Review*, Vol. 5, No. 2, pp.122–140.

Quinn, R.E. and Rohrbaugh, J. (1983) 'A spatial model of effectiveness criteria: towards a competing values approach to organizational analysis', *Management Science*, Vol. 29, No. 3, pp.363–377.

Reeves, C.A. and Bednar, D.A. (1994) 'Defining quality: alternatives and implications', *Academy of Management Review*, Vol. 19, No. 3, pp.419–445.

Saffold, G.S. (1998) 'Culture traits, strength and organizational performance: moving beyond strong culture', *The Academy of Management Review*, Vol. 13, No. 4, pp.546–558.

Sandholm, L. (1999) 'Trendy versus effective quality strategies', *The TQM Magazine*, Vol. 11, No. 6, pp.437–444.

Sarker, A.E. and Al Athmay, A.A.A.R.A. (2018) 'The changing facets of public administration in the United Arab Emirates', *International Journal of Public Administration*, Vol. 41, No. 10, pp.832–844.

Sayyad, N. (2017) 'The relationship between total quality management practices and their effects on firms performance in Palestine', *Business & Entrepreneurship Journal*, Vol. 6, No. 2, pp.35–51.

Scharitzer, D. and Korunka, C. (2000) 'New public management: Evaluating the success of total quality management and change management interventions in public services from the employees' and customers' perspectives', *Total Quality Management*, Vol. 11, No. 7, pp.941–953.

Schein, E.H. (1992) *How Can Organizations Learn Faster? The Problem of Entering the Green Room*, MIT Sloan School of Management [online] https://dspace.mit.edu/bitstream/handle/1721.1/2399/SWP-3409-45882883.pdf (accessed 2 November 2021).

Schein, E.H. (2010) *Organizational Culture and Leadership*, 4th ed., Jossey-Bass, San Francisco.

Shortell, S.M., O'Brien, J.L., Carman, J.M., Foster, R.W., Hughes, E.F., Boerstler, H. and O'Connor, E.J. (1995) 'Assessing the impact of continuous quality improvement/total quality management: concept versus implementation', *Health Services Research*, Vol. 30, No. 2, pp.377–401.

Silvester, J., Anderson, N.R. and Patterson, F. (1999) 'Organizational culture change: an inter-group attributional analysis', *Journal of Occupational and Organizational Psychology*, Vol. 72, No. 1, pp.1–23.

Smith, E.R., Mackie, D.M. and Claypool, H.M. (2015) *Social Psychology*, 4th ed., Psychology Press, Philadelphia.

Swaffin-Smith, C., Barnes, R. and Townsend, M.C. (2003) 'Culture surveys: monitoring and enhancing the impact of change programs', *Quality Control and Applied Statistics*, Vol. 48, No. 3, pp.273–276.

Taher, N.A.B., Krotov, V. and Silva, L. (2015) 'A framework for leading change in the UAE public sector', *International Journal of Organizational Analysis*, Vol. 23, No. 3, pp.348–363.

Tata, J. and Prasad, S. (1998) 'Cultural and structural constraints on total quality management implementation', *Total Quality Management*, Vol. 9, No. 8, pp.703–710.

Tharp, B.M. (2009) 'Four organizational culture types', *Haworth Organizational Culture* [online] https://www.academia.edu/1588713/Four_Organizational_Culture_Types (accessed 5 November 2021).

Trice, H.M. and Beyer, J.M. (1984) 'Studying organizational cultures through rites and ceremonials', *Academy of Management Review*, Vol. 9, No. 4, pp.653–669.

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

Watson, J.G. and Korukonda, A.R. (1995) 'The TQM jungle: a dialectical analysis', *International Journal of Quality & Reliability Management*, Vol. 12, No. 9, pp.100–109.

Wawak, S., Rogala, P. and Dahlgaard-Park, S.M. (2020) 'Research trends in quality management in years 2000–2019', *International Journal of Quality and Service Sciences*, Vol. 12, No. 4, pp.417–433.

Whelan, C. (2016) 'Organisational culture and cultural change: a network perspective', *Australian & New Zealand Journal of Criminology*, Vol. 49, No. 4, pp.583–599.

Williams, R. (1983) *Culture and Society, 1780–1950*, Columbia University Press, New York.

Yazeen, Z. and Okour, A. (2012) 'Managing organizational change: decision's maker perceptions in the UAE manufacturing industry', *International Journal of Research Studies in Management*, Vol. 1, No. 1, pp.97–108.

Yeo, G.B. and Neal, A. (2004) 'A multilevel analysis of effort, practice, and performance: effects of ability, conscientiousness, and goal orientation', *Journal of Applied Psychology*, Vol. 89, No. 2, pp.231–247.

Yusof, N.M. and Esmaeil, Z.J. (2017) 'Reconstructing multiculturalism in Malaysia through visual culture', *Mediterranean Journal of Social Sciences*, Vol. 8, No. 4, S1, pp.99–105.

Zammuto, R.F., Gifford, B. and Goodman, E.A. (2000) 'Managerial ideologies, organization culture and the outcomes of innovation: A competing values perspective', In Ashkanasy, N.M., Wilderom, C.P. and Peterson, M.F. (Eds.): *The Handbook of Organizational Culture and Climate*, pp.263–280, SAGE Publications, Thousand Oaks.

Zu, X., Robbins, T.L. and Fredendall, L.D. (2010) 'Mapping the critical links between organisational culture and TQM/Six Sigma practices', *International Journal of Production Economics*, Vol. 123, No. 1, pp.86–106.

Zu, X., Zhou, H., Zhu, X. and Yao, D. (2011) 'Quality management in China: the effects of firm characteristics and cultural profile', *International Journal of Quality & Reliability Management*, Vol. 28, No. 8, pp.800–821.