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Total quality management, entrepreneurial orientation and organizational performance: The role of organizational culture

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The new and challenging structure of the global business environment has been forcing organizations, including banks, to adopt innovative strategies to seek a better performance and sustain their competitive advantage. However, it has been widely emphasized in the literature that quality alone in the current transforming economies cannot attract the educated and technology-driven customer demands. Therefore, highly competitive leading organizations have to integrate various innovative strategies to attract and maintain their critical customers. Moreover, strategies should be looked at as means towards an end and they must be aligned with other organizational variables. Regarding the Yemeni banking system, it has been reported to have been suffering from many problems as a result of the lack of efficiency and customer and market focus. Furthermore, Yemeni banks lack the entrepreneurial capabilities to seize and take the advantage of the available business opportunities. This paper, however, tried to examine to what extent the relationship between total quality management (TQM), entrepreneurial orientation (EO) and performance is affected by the organizational culture by using the data collected from the Yemeni banking industry. The findings of this study supported the premises of the contingency and organizational change theories by confirming the significant role of organizational culture.

Key words: TQM practices, entrepreneurial orientation (EO), organizational culture (OC), the Yemeni banking system, organizational performance of a bank.

INTRODUCTION

Total quality management (TQM) and entrepreneurial orientation (EO) have been among the most popular universal strategies for survival and growth of many organizations in the current competitive environment (El Shenawy et al., 2007; Escrig-Tena, 2004; Kaynak, 2003; Reed et al., 2000; Sila and Ebrahimpour, 2002; Zahra, 1991; Zahra et al., 1999). Because of their strategic importance, TQM and EO have been attracting a growing attention by both academics and practitioners during the last few decades.

Empirically, many studies supported the significant impact of TQM (Arawati, 2005; Li et al., 2003; Yasin et al., 2004) and EO (Barrett and Weinstein, 1998; Covin and Miles, 1999; Covin and Slevin, 1991; Lumpkin and Dess, 1996; Zahra et al., 1999; Zahra and Covin, 1995) on the organizational performance. Unfortunately, some other studies argued that not all TQM initiatives were successful (Samson and Terziovski, 1999; Sanchez-Rodriguez and Martinez-Lorente, 2004; Sohal and Terziovski, 2000) while others questioned the appropriateness of entrepreneurial orientation strategy for organizational effectiveness (Li et al., 2009; Wiklund and Shepherd, 2005).

This experience of unsuccessful organizational strategy implementation worldwide was not surprising. Kaplan and

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Norton (2000) reported that 70 to 90% of organizations experienced failure organizational strategic implementation worldwide. To explain the unsuccessful organizational strategy, the literature of contingency theory and organizational change theory proposed that the misfit or mismatch between the strategy and the organizational culture to be one of the main reasons for failure. It was commonly argued that, unless organizational culture fits the intended strategy, the reflected results will not be satisfactory.

To resolve the inconsistency of the findings regarding the relationship between TQM, EO and organizational performance, many researchers suggested that many influential organizational variables should be investigated. Ehigie and McAndrew (2005) and Douglas and Judge (2001) suggested that future research should pay more attention to some organizational variables to better examine TQM and organizational performance relationship. Similarly, Wiklund and Shepherd (2005) suggested that other variables should be incorporated in the EO and organizational performance relationship to resolve the inconclusive results.

As the organizational culture variables is one of the main factors to explain the organizational outcomes (Prajogo and McDermott, 2005), it has been attracting an increasing scholar attention to explain the organizational strategy outcomes in the light of contingent and organizational change theories. In other words, the existing literature on the role of organizational culture (OC) in organizational strategy implementation is not fully explored and at its infancy phases (Prajogo and Sohal, 2001). Given these facts, the role of organizational culture (OC) on the strategy implementation is still calling for more empirical studies to be conducted. Thus, this study was an attempt to bridge this gap in the literature.

This paper aims to examine the influential role of the organizational culture (OC) on the relationship between total quality management (TQM) practices, entrepreneurial orientation (EO) and the organizational performance of banks in the Yemeni context. In order to achieve the aforementioned objectives, the data were collected from the Yemeni banking system through a self-administered questionnaire. Our findings provide insights into how far the organizational culture (OC) can be the catalyst of any successful quality management and entrepreneurial initiative. In addition, we emphasized the importance of bank branches to the overall success of any quality initiative at the corporate bank level. However, the limitations of this research provide some future research directions that can be deeply investigated to get valid and reliable results.

TQM practices and organizational performance

In the literature of quality management, although there has been a consensus among the literature about the

universal importance of TQM practices, there is no hard and fast definition of the TQM construct (Reed et al., 1995). However, the majority of the proposed definitions are built on the fact that TQM covers the entire organization. For example, Flynn et al. (1994) defined TQM as the integrated approach that employs and sustain a continuous improvement approach that results in high quality outcomes to meet the customers' demand go beyond their expectations. Kumar et al. (2009) defined the TQM as the holistic management philosophy that integrates all the organizational activities to satisfy customers' needs and meet their expectations culminating in achieving overall organizational objectives.

Due to its strategic importance, TQM has been extensively studied as a critical determinant of a better performance and competitive advantage for manufacturing and service organizations as well (Douglas and Judge, 2001). In the literature of quality management, many researchers examined the effect of TQM on the performance of different types of organizations such as manufacturing, service, SMEs, higher education, and public service sector organizations (Arawati, 2005; Al-Swidi and Mahmood, 2011; Das et al., 2008; Sohal and Terziowski, 2000; Saravanan and Rao, 2006; Yasin et al., 2004; Demirbag et al., 2007; Mohd Nizam and Tannock, 2005; Sohail and Hoong, 2003; Cruickshank, 2003; Dahar et al., 2010; Nor Hazilah, 2004).

As revealed by the literature of quality management, while the majority of the research conducted regarding the TQM and performance was on manufacturing organizations (Douglas and Judge, 2001; Kaynak, 2003; Lakhal et al., 2005; Sila and Ebrahimpour, 2005), it has been growing in popularity in other business settings. Fening et al. (2008), Bayati and Taghavi (2007), Lewis et al. (2005, 2006a, b), Temtime and Solomon (2002), and Rahman (2001a, b) extended their research to examine the TQM and SMEs' performance. Notwithstanding the limited research work examining the impact of TQM on SMEs' performance, it has been emphasized that TQM strategy can enhance SMEs' market-focus, human resource management practices, and competitive advantage creation (Salaheldin, 2009; Demirbag et al., 2006; Rahman, 2001).

It was also argued by El Shenawy et al. (2007) and Escrig-Tena (2004) that the unique characters of TQM can not only generate a better performance for an organization but also allow for a competitive advantage creation. The importance of TQM strategy can be explained from two perspectives. The first perspective is that TQM strategy can help in establishing an effective direct contact with the customers and thus resulting in satisfied and hence loyal customers. The second perspective is the ability of TQM to help in nurturing employees' problem-solving capabilities, continuous improvement, and empowered and then committed employees (Wruck and Jensen, 1994). Essentially, TQM

strategy with its combination of soft and hard critical factors can be flexible and able to withstand in the face of many challenges. As previously discussed, the emphasis of TQM strategy on the human resource management factor can ensure that the employees will be continuously trained and empowered to enhance their involvement and consequently to gain their commitment. The culmination of that will be the effective socialization network and knowledge sharing environment that results in sustained competitive advantage (Al-Swidi and Mahmood, 2011c; El Shenawy et al., 2007). In the light of the previous arguments, and other supporting arguments, the following hypothesis is proposed:

H₁: TQM practices positively impact the organizational performance in banks.

Entrepreneurial orientation and organizational performance

As argued by George and Marino (2011) and further discussed by Dess et al. (2011), despite the popularity and the scholarly attention given to the entrepreneurial orientation (EO) construct, there has been no clear, agreed-upon definition for the construct and there has been a continuous debate in the literature regarding the nature of the construct and its dimensionality (Knight, 1997; Lumpkin and Dess, 1996; Zahra, 1993). In addition to that, there has been no agreement regarding the interdependence of its dimensions (Dess et al., 1999; Lumpkin and Dess, 1996), and how this construct theoretically related to its antecedent and consequence constructs.

EO construct have gained acceptance due to development of Covin and Slevin (1989, 1990) on the Miller and Khandwala's (1977) and Miller's (1983) work. That is, the concept of entrepreneurial firm was established. This conceptualization of EO and the associated measurement have been used in 200 studies in a variety of fields ranging from management, to marketing (Luo et al., 2005) to health care (Davis et al., 2006).

Remarkably, notwithstanding the wide acceptance of the EO construct in the field, there has been a lack of consistency in defining it (George and Marino, 2011). For example, while Miller's (1983) definition of the construct applied to a wide of organizational processes; other authors (Lumpkin and Dess, 1996) constrained the construct to new entry. More specifically, Lumpkin and Dess (1996) defined the entrepreneurial orientation (EO) as the process and decision-making activities that lead to new businesses or developments. Similarly, Covin et al. (2006) defines EO to be the construct representing the organizational entrepreneurial abilities. From another perspective, Miller and Friesen (1982) named the differentiation of organization over its rivals and superior

growth as the clear and immediate results of EO.

As a result of the massive technological revolution, the business environment has become very challenging and all the methods used earlier to solve customers' problems are no longer effective (Ramachandran et al., 2006). This challenging business environment with stiff competition implies that becoming entrepreneurial is a necessity to the survival (Dess et al., 1999).

As a response to the increasing importance of the EO concept, there has been an increasing attention given by the literature to the entrepreneurial orientation impact of the organizational performance. This attention is justified by the fact that fostering innovation, proactiveness, and tolerating risk might help organizations to lead the market and attract and retain loyal and excited customers (Zahra, 1991; Zahra et al., 1999). Banks, like other types of organizations, have been challenged by their ability to institutionalize entrepreneurship and to encourage entrepreneurial behaviors among all their employees towards exploring and exploiting the available business opportunities (Ramachandran et al., 2006).

A comprehensive review of the entrepreneurship literature showed that EO has been operationalized through five dimensions namely: innovativeness; proactiveness; risk taking; autonomy; and competitive aggressiveness. However, the majority of the EO relevant studies focused only on innovativeness, proactiveness, and risk-taking as the dominant dimensions to explain the variance in the EO construct (George and Marino, 2011; Morris and Sexton, 1996; Zahra, 1993).

Moreover, it has been widely argued in the entrepreneurship literature that innovativeness of the organization, its proactiveness nature, and its readiness to tolerate risks, as EO dimensions, are very crucial factors for organizational competitiveness (Al-Swidi and Mahmood, 2011b, c). The need for EO strategy is becoming more serious as it can be seen as one of the main capabilities for organizations to cope with various challenges in the ever-changing, turbulent, and uncertain business environment (Barrett and Weinstein, 1998; Covin and Miles, 1999; Covin and Slevin, 1991; Lumpkin and Dess, 1996; Zahra et al., 1999; Zahra and Covin, 1995).

Despite the fact that the majority of the literature concerning the effect of EO on organizational performance confirmed the positive effect, some studies reported opposite results (Li et al., 2009; Wiklund and Shepherd, 2005). More importantly, it has also been pointed out by some researchers (Keh et al., 2007) that organizations with high level of entrepreneurial capabilities have the ability to explore and exploit the available business opportunities and are more likely to create the competitive advantage compared with their rivals.

For banks, the core business is based on satisfying the customers by offering high quality and innovative products and services. This argument implies that EO

as the pillar of innovative environment leads to sustainable growth of an organization (Miller, 1983; Lumpkin and Dess, 1996) and wealth generation (Drucker, 1985). Moreover, it has also been confirmed by many researchers (Al-Swidi and Mahmood, 2011b; Ramachandran, 2003) that entrepreneurial orientation (EO) adds value to organizations due to its emphasis on identifying the causes of customers' dissatisfaction to develop proper solutions that eliminate them.

Additionally, it has been confirmed that entrepreneurial orientation (EO) can improve the competitive strategic position of an organization in the marketplace by taking the advantage of the available business opportunities (Lumpkin and Dess, 1996). More importantly, entrepreneurial orientation (EO) is critical for the overall performance since it implies the adoption of a combination of new other strategies to be able to get the full advantage of the available business opportunities (Dess et al., 1999; Hamel and Prahalad, 1989). Based on the previous arguments and other supporting ones, the following hypothesis is to be empirically tested:

H₂: EO has a significant impact on the organizational performance of banks.

Organizational culture (OC)

In the light of the resource-based view (RBV) theory, organizational culture can be considered as a unique and inimitable capability that contributes to the competitive advantage creation of an organization (Barney, 1986, 1991; Hall, 1993; Peteraf, 1993; Wernerfelt, 1984). Therefore, according to the contingency theory premises, prominent leaders should be able to shape their organizational cultures to fit the effective intended strategies (Kuratko and Welsch, 2004).

Notwithstanding the growing attention given to organizational culture (OC) construct, there has been no universal agreed upon definition for the construct (Lewis, 2002). Apparently, there has been almost consensus among most of the proposed definitions of OC that it represents the shared system of values, beliefs, and attitudes that are common among the organizational individuals and influence their perceptions and judgments (Deal, 1986; Deshpande and Webster, 1989; Kilman et al., 1985; Mckinnon et al., 2003; O'Reilly and Chatman, 1996; Schein, 1990; Uttal, 1983).

In the literature of strategic management, the role of organizational culture (OC) has been widely acknowledged as critical factor to explain how organizations work and how strategies could be effective (Prajogo and Sohal, 2001). In addition to that, the uniqueness of OC, its inimitability, and rareness characterized it as critical factor of a sustainable competitive advantage (Kilman et al., 1985; Ouchi, 1985; Owens, 1987; Schein, 1990; Zheng et al., 2010).

As it has been indicated earlier, not all the TQM and

EO initiatives were successful and fruitful. In other words, the findings regarding the TQM (Sila and Ebrahimpour, 2002), EO (Li et al., 2009; Wiklund and Shepherd, 2005) and organizational performance relationships were found to be inconclusive. To explain these discrepancies in the findings other variables were suggested to be incorporated in the TQM, EO and organizational performance relationships. Ehigie and McAndrew (2005), and Douglas and Judge (2001) suggested that future research concerning the impact of TQM should pay more attention to some organizational variables such as organizational culture (OC). Due to the same reasoning, Wiklund and Shepherd (2005) suggested that other variables should be incorporated in the EO and organizational performance relationship to resolve the inconclusive results.

In conclusion, the importance of OC in TQM implementation has been acknowledged and empirically supported. To provide potential reasons for TQM initiative failure, Brah and Lim (2005) argued that the lack of supportive organizational culture affects the successful implementation of TQM strategy as a change strategy towards improving the overall organizational performance. On the other hand, successful EO strategy requires that the entrepreneurial capabilities of an organization should be part of its culture so that all the employees will participate effectively towards a better performance. In other words, the various challenges stemmed from the complex business environment might have been impossible to overcome unless the organization successfully created the entrepreneurial culture to seize the survival and growth opportunities (Dess et al., 1999). Therefore, in the light of these arguments, the following two hypotheses can be postulated:

H₃: Organizational culture (OC) moderates the relationship between TQM practices and organizational performance of banks.

H₄: Organizational culture (OC) moderates the relationship between EO and organizational performance of banks.

Figure 1 depicts the research framework.

RESEARCH METHODS

Sample and data collection

The data for this study were collected from the bank branches in the Yemeni banking industry. However, the branches of a bank are the connecting points between the bank and its customers, the overall performance of the bank as a whole is based on the operations of the network of bank branches (Das et al., 2009). In addition to that, some other researchers (Al-Swidi and Mahmood, 2011a; Dwairi, 2004) suggested that bank branches can be deemed as the level of strategic execution of the corporate bank and the best level to describe the level and consequences of strategies' implementation.

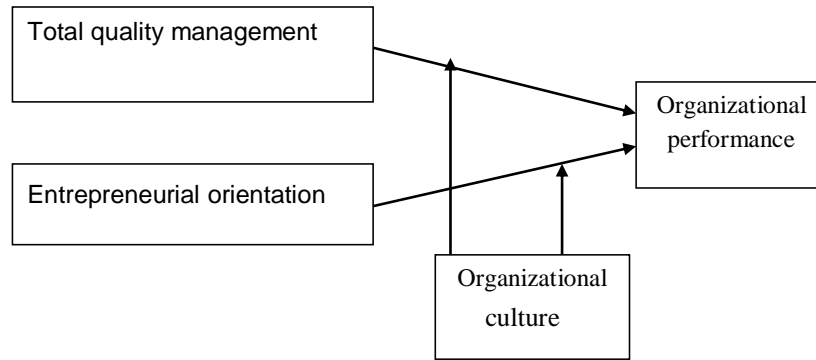


Figure 1. Research framework.

Initially, the original version of the questionnaire was in English. Since the respondents of this study were the branch managers of the banks in Yemen, the questionnaire was translated to the Arabic language. This was done by following the recommendations of Brislin (1970, 1986). More specifically, the questionnaire was first translated into Arabic language by a bilingual individual without telling him the objective of study. Next, another bilingual individual was asked to back translate the Arabic version into English without having access to the original version. Finally, the two English versions of the questionnaires were carefully compared to detect the minor changes and the modifications were made accordingly. In other words, this process ensured the conceptual equivalence of the two original English versions.

For the purpose of this study, self-administered survey questionnaire was distributed to the 287 bank branches representing the whole population to ensure a good representative sample (Zikmund, 2003). Of the 287 distributed questionnaires, 201 were returned, representing a response rate of 70%. Due to the self-administration approach and repeated visits by the individuals, there were no missing values in the collected data.

Variables and measures

This study employed the measures available in the existing literature to measure the variables of the study. Organizational performance measure was derived from the literature. However, the deployed measure used in this study is based on the adaption of the measure used by Narver and Slater (1990) and Jaworski and Kohli (1993) which was used to measure the performance and profitability in the SBU level of the organization. In addition to that, some items were also adapted from the work of Chan (2004), Fuentes-Fuentes (2004), and Kaplan and Norton (1993). The internal consistency of this measure was measured by Cronbach's alpha as 0.893.

However, the categorization and measurement of TQM practices has been a subject of debate among the researchers (Samson and Terziovski, 1999a). Originally, the Malcolm Baldrige National Quality Award (MBNQA) has been the most popular framework and used as a reliable measure of TQM (Curkovic et al., 2000; Lee et al., 2003). Based on reviewing the literature of quality management in the service sector organizations, some TQM factors have been commonly studied and investigated. Therefore, this study employed the measure of TQM used by Brah et al. (2000) to measure the TQM effectiveness in the service industry. However, the Cronbach's alpha measure of reliability was found to be 0.904.

The first scale developed to measure the entrepreneurial orientation (EO) was introduced by (Khandwalla, 1977) followed by

the five-item scale proposed by Miller and Friesen (1983). Later, extensive research has been done by many researchers to develop these measures such as the work of Covin and Slevin (1986, 1989) and Smart and Conant (1994). It was argued by George and Marino (2011) that the majority of studies on EO have used variations of the Covin and Slevin (1989) scale. Therefore, this study for the purpose of achieving its objectives has used the measure by Covin and Slevin (1989) since it best fits the purpose of this study. The internal consistency of EO measure was 0.660 which is acceptable according to Hair et al. (2010).

Through the literature of organizational culture (OC), Denison theory of organizational culture (OC) has been very popular and commonly used to examine the performance implications of organizational culture (OC) (Denison, 1990, 2000; Denison et al., 2000; Denison and Mishra, 1995). Moreover, his theory has focused on four cultural traits namely, involvement, consistency, adaptability, and mission. However, Denison (2000) argued that these four cultural dimensions explain the organizational efforts to establish the balance between many contradictions in the environment in which the organization operates. To achieve the objectives of this study, the Denison's (2000) was employed to collect the respondents' opinions regarding the OC. The internal consistency of this OC measure was indicated to be 0.856 which is acceptable level.

RESULTS

To test the hypotheses of the study, moderated regression using ordinary least square was employed. The adequacy of the model was confirmed by checking the regression assumptions such as linearity, normality, homoscedasticity, and error independence. In addition, the data revealed that the data had no issue of the multicollinearity and there were no outlier observations.

The mean, standard deviation, and the correlations among the variables of the study are illustrated in Table 1 providing initial support of the model framework.

As evidenced in Table 1, TQM, EO, and OC are significantly associated with the organizational performance at the 0.01 level of significance with the indicators ($r=0.454$, $p<0.01$), ($r=0.413$, $p<0.01$), and ($r=0.356$, $p<0.01$) respectively. As illustrated in Table 1, the correlations between EO and TQM ($r=0.774$; $p<0.01$), EO and OC ($r=0.752$; $p<0.01$), and OC and TQM

Table 1. Descriptive statistics and correlations.

Variable	Mean	SD	1	2	3	4	5	6
Branch age	17.806	11.639						
No. of employees	28.294	18.155	0.414**					
No. of customers	5829.687	8136.817	0.328**	0.722**				
Organizational performance	3.429	0.686	0.055	0.124	0.249**			
TQM	3.877	0.665	-0.035	-0.036	-0.054	0.454**		
EO	4.038	0.658	-0.148*	-0.025	-0.054	0.413**	0.744**	
OC	3.954	0.736	-0.184**	-0.098	-.152*	0.356**	0.829**	0.752**

Table 2. Collinearity analysis.

Variable	Collinearity statistics	
	Tolerance	VIF
Total quality management	0.279	3.586
Entrepreneurial orientation	0.388	2.579
Organizational culture	0.272	3.683

($r=0.829$; $p<0.01$) were above 0.70 indicating high level of correlation. This situation requires the investigation of the issue of multicollinearity. To assess the multicollinearity issue, the procedures of Hair et al. (2010) were followed. More specifically, the tolerance and variance inflation factors (VIF) were used as measures that identify the presence of multicollinearity issue. As defined in the multivariate literature, tolerance measure is the amount of the variance of the variable that is not explained by other variables. Similarly, VIF is the inverse of tolerance value. Table 2 demonstrated that all the tolerance values were higher than 0.1 and the VIF values were lower than 10 indicating that the issue of multicollinearity was not serious issue (Hair et al., 2010). In conclusion, these results showed that TQM, EO, and OC even highly correlated yet distinct in measuring their own concepts.

Prior to undertaking the regression analysis, all the variables were standardized as suggested by Frazier et al. (2004); Aiken and West (1991). Specifically, before proceeding to get the interaction terms to measure the moderating effect, all the variables meant to be used were standardized. This means that the mean of each variable was subtracted from all the values of that variable and subsequently all the values of the variable were divided by its standard deviations.

Following the suggestion of Baron and Kenny (1986), the regression analyses were performed in several blocks. The first block includes only the control variables and the dependent variable. In the second block, the independent variables were included to examine their predictive power against the dependent variable. The third block includes the moderator variable while the fourth block includes the interaction terms. This implies that the fourth block includes all the variables and the

interaction terms. The results of the regression analysis are reported through four-model fashion as presented in Table 3.

Model 1

In the first model, only the controlling variables, namely, the branch age; the number of employees and the number of customers were introduced. As revealed by the results in Table 2, this model was significant since F value was significant ($F=4.823$, $p<0.01$). Also, the results in Table 2 showed that only the number of customers of a branch was found to be significant predictor of the organizational performance ($\beta=0.333$, $t=3.348$, $p<0.01$). However, the variance in the dependent variable that was accounted for by these controlling variables was only 5.4% as indicated by adjusted R^2 .

Model 2

In this model, the two predictors namely, TQM and EO were introduced to the model. This model was found to be significant at the 0.001 level of significance with an adjusted R^2 of 28.5% and significant F change at the 0.001 level of significance as illustrated in Table 2. In addition to that, the number of customers and the two predictors were found to be significantly different from zero. More specifically, the number of customers ($\beta=0.364$, $t=4.199$, $p<0.001$) had a positive impact on the organizational performance. Similarly, while TQM was a powerful predictor of the organizational performance of banks with the indicators ($\beta=0.329$, $t=3.637$, $p<0.001$), EO ($\beta=0.189$, $t=2.065$, $p<0.05$) was found to be significant at the 0.05 level of significance.

Model 3

The organizational culture as a moderator variable was introduced to this. This model was reported to be significant ($F=14.069$, $P<0.001$) and accounted for 28.2% of the variance in the organizational performance. On the other hand, this model showed no significant R change

Table 3. Results of the regression analysis.

Variables in the model	Model 1: Controlling variables	Model 2: Predictors	Model 3: Moderators	Model 4: Interactions
Branch age	-0.007	0.031	0.026	-0.006
No. of employee	-0.113	-0.134	-0.132	-0.145
No. of customers	0.333**	0.364***	0.359***	0.350***
TQM		0.329***	0.357**	0.301*
EO		0.189*	0.201*	0.233*
OC			-0.045	-0.147
TQM *OC				(-)0.335**
EO* OC				0.166
F value	4.823	16.930	14.069	12.013
F Sig.	0.003	0.000	0.000	0.000
R ²	0.068	0.303	0.303	0.334
Adjusted R ²	0.054	0.285	0.282	0.306
R ² change	0.068	0.234	0.000	0.03
Significant F change	0.003	0.000	0.710	0.014

*p< 0.05; **p< 0.01; ***p<0.001.

indicating that introducing OC to the model did not increase the predictive power of the model (Hair et al., 2010). Moreover, the introduction of OC to the model did not affect the predictive power of the number of customers ($\beta=0.359$, $t=4.090$, $p<0.001$) and EO ($\beta=0.201$, $t=2.068$, $p<0.05$). On the other hand, the predictive effect of TQM even reduced by OC introduction, yet still significant at the 0.01 level of significance ($\beta=0.357$, $t=3.042$, $p<0.01$).

According to the hierarchical regression performed and its results reported in Table 2, it can be concluded that both TQM ($\beta=0.329$, $t=3.637$, $p<0.001$) and EO ($\beta=0.189$, $t=2.065$, $p<0.05$) have significant positive impact of the organizational performance at the 0.001 and 0.05 levels of significance respectively.

Model 4

The interaction between TQM, EO and the Organizational Culture (OC) had been introduced to this model that was found to be significant at the 0.001 level of significance with an adjusted R² of 30.6%. It was worth noting here that the F change of this model was significant at the 0.05 level meaning that the introduction of the interactive terms had explained more variance in the organizational performance than that explained in the previous models. Furthermore, the results in Table 2 also revealed that the number of customers remained a powerful prediction of the organizational performance of banks ($\beta=0.350$, $t=4.059$, $p<0.001$). Moreover, TQM ($\beta=0.301$, $t=2.531$, $p<0.05$) and EO ($\beta=0.233$, $t=2.353$, $p<0.05$) were reported to be significant at the 0.05 level of significance. Hence, H₁ and H₂ are supported by the findings of this study.

To examine the moderating effect of the organizational culture (OC) on the relationships between TQM, EO and

the organizational performance of banks, this paper tested for the significance of the interaction terms. However, results in Table 2 showed that the interaction term between OC and TQM was found to be negatively significant at the 0.01 level of significance ($\beta= - 0.335$, $t= - 2.789$, $p<0.01$). This result supported H₃ regarding the moderating effect of the organizational culture (OC) on the TQM and organizational performance relationship at the 0.01 level of significance. In contrast, it was found that Organizational Culture (OC) is not a significant moderator on the relationship between EO and organizational performance of banks ($\beta= 0.166$, $t= 1.419$, $p>0.05$), thus H₄ is not supported. However, graphs 2 and 3 illustrated the moderating effect results.

The moderating effects of organizational culture (OC) had been illustrated in the graphs in Figures 2 and 3, and indicated that when the organization has high organizational culture (OC), high implementation of TQM strategy leads to an increased performance but not to the high level produced in an organization with low OC. In other words, the implementation of TQM strategy can benefit the organization through enhancing its overall performance. However, organization with low OC can benefit from TQM implementation more than the benefits gained by high OC counterpart.

DISCUSSION AND CONCLUSIONS

The findings of this study are consistent with that of the previous studies (Escrig-Tena, 2004; Flynn et al., 1995; Douglas and Judge, 2001; Kaynak, 2003; Montes and Jover, 2004; Molina-Azorin et al., 2009; Sila and Ebrahimpour, 2005; Terziovski and Samson, 1999; Zhang, 2000). These findings, however, confirmed that TQM ($\beta=0.301$, $t=2.531$, $p<0.05$) has a critical role in enhancing overall organizational performance. As it has

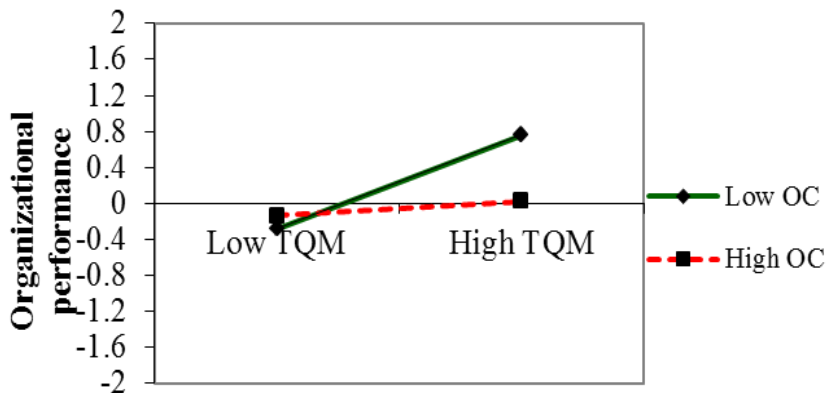


Figure 2. The moderating effect of OC on the TQM and performance relationship.

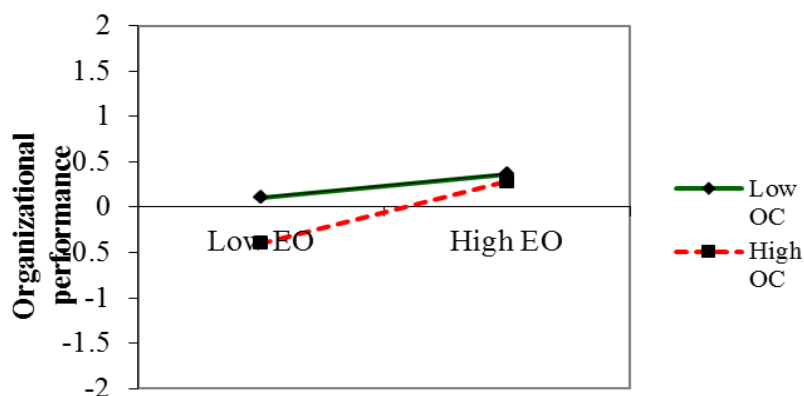


Figure 3. The moderating effect of OC on the EO and performance.

been widely discussed in the literature, TQM strategy is the management philosophy that aims to satisfy the customers through continuous improvements (Kumar et al., 2009). Therefore, a successful TQM implementation can help banks to maintain high levels of customers' satisfaction and loyalty (Al-Mansour, 2007). In other words, TQM implementation ensures that the services offered by the banks should always be designed according to the comprehensive knowledge about the customers' needs, requirements, and expectations.

Similarly, the results of this study have revealed that entrepreneurial orientation (EO) ($\beta=0.189$, $t=2.065$, $p<0.05$) has a positive significant impact on the organizational performance at the 0.05 level of significance. These results confirmed the importance of EO to the organizational performance as acknowledge in the existing literature (Keh et al., 2007; Li et al., 2009; Miller, 1983; Wiklund and Shepherd, 2005; Wiklund, 1999; Zahra and Covin, 1995; Zahra and Gravis, 2000). This result also indicated the importance of entrepreneurial orientation (EO) in enhancing the overall organizational performance of banks. Without being

entrepreneurial, banks in a turbulent and unsecure business environment cannot grow or even survive (Dess et al., 1999).

The results of this study showed that organizational culture (OC) negatively moderates the relationship between TQM and the organizational performance with indicators ($\beta= - 0.335$, $t= - 2.789$, $p<0.01$). As these results indicated the crucial role of organizational culture (OC) as the most important base of any strategy implementation, they revealed the lack of fit between the current cultural practices and the TQM initiatives. Moreover, the same tables revealed that the organizational culture (OC) ($\beta= 0.166$, $t= 1.419$, $p>0.05$) had no significant moderating effect on the relationship between EO and the organizational performance of the Yemeni banks.

One plausible reason behind these findings is that the cultural practices in the Yemeni banking sector are not supportive for the products and service's quality and all the quality issues have not been given the deserved attention in the regular meeting and various review sessions (Al-Zamany et al., 2002). Additionally, in the

Yemeni banking sector, there has been a lack of employees' training. As a result of that, there is no fit between the strategy and skills of the individuals to effectively implement these strategies. The situation is made worse, as argued by Salaheldin (2003), by the lack of competent management, the lack of technological-related training for the employees, inadequate educational base, and the organizational. These obstacles do not only impede strategy implementation, but may also generate negative results.

More importantly, the organizational culture in the Yemeni banking industry has been not supportive for any quality initiatives. In other words, the majority of the banks are family-owned business, all the strategic decisions are made by the owners and the employees, and in many cases the managers, are not involved in the decision making processes. This overemphasis on the hierarchical culture produced very poor performance and low quality work life of employees (Zu et al., 2010). This perception is consistent with the premise of the contingency theory that the organizational culture of the organization must fit the organizational strategy to ensure the success. As it has been widely acknowledged in the literature, the appropriate organizational culture is necessary of successful innovative strategies such as TQM strategy (Prajogo and McDermott, 2005).

Managerial implications

This study has many useful implications. First, it justifies the resources and time invested in TQM and EO initiatives to enhance the overall organizational performance. Secondly, this study confirms the importance of the development of supporting organizational culture as the first step to be ensured prior to any organizational strategy implementation. The findings of this study suggested that organizations should develop the quality and entrepreneurial culture for the effective implementation of TQM and EO. Without such cultures, the TQM and EO implementation outcomes might be frustrating or even negative.

Finally, policy-makers of Yemen should plan to incorporate the quality principles and entrepreneurial orientation behaviors in the curriculum of the tertiary education to ensure capable graduates for local and international marketplace.

LIMITATIONS AND CONCLUSIONS

The contribution of any study should be considered in the light of the study limitations. The main limitation of this study is the use of a subjective measure to measure the organizational performance from the managers' perspective. This measure is likely to reflect the respondent biasness in the score (Thornton, 1968). Another major limitation of this study is due to the cross sectional

research design that allows for the examination of the postulated relationship at one point of time. In other words, the cross sectional research design cannot detect the dynamic and the changing nature of the relationship due to the interaction among various variables.

Future research directions

This study suggests that future research should focus on longitudinal and case study research design to better examine the impact of strategy implementation like TQM and EO. Future studies may also measure the organizational performance using both perceptual and objective measures.

Notwithstanding the limitations discussed earlier, this study provided insights into the importance of some organizational variables, such as organizational culture, in any organizational strategy implementation. Therefore, future research should further exert more efforts to explore other influential organizational variables that build the ground for the fit between strategy and organizational environment in the light of contingency theory.

In the current turbulent, uncertain, ever-changing and challenging business environment, an increasing scholar attention should be given to integrate the contingency and the organizational change theories to explain the lack of fit and the organizational change required to reach the fit between the strategy and the organizational context.

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REFERENCES

- Aiken LS, West SG (1991). Multiple regression: Testing and interpreting interactions. Newbury Park, CA, Sage.
- Al-Mansour AH (2007). Application of TQM to financial services. Retrieved December 19, 2010, from, <http://faculty.kfupm.edu.sa/CEM/bushait/cem515/term-papers/TQM-Finance.pdf>
- Al-Swidi AK, Mahmood R (2011a). Fostering the performance of banks through Total Quality Management (TQM) practices: A bank branches perspective. *Eur. J. Soc. Sci.*, 19(2): 268-285.
- Al-Swidi AK, Mahmood R (2011b). How does Organizational Culture shape the relationship between Entrepreneurial Orientation and the organizational performance of banks? *Eur. J. Soc. Sci.*, 20(1): 28-46.
- Al-Swidi AK, Mahmood R (2011c). Enhancing a bank's competitive advantage through the integration of TQM practices, entrepreneurial orientation (EO), and organizational culture. *Eur. J. Soc. Sci.*, 20(2): 299-313.
- Al-Swidi AK, Mahmood R (2011d). Yemeni banking system: Critical issues and future recommended strategies. *Eur. J. Soc. Sci.*, 20(4): 637-655.

- Al-Zamany Y, Hoddell SEF, Savage BM (2002). Understanding the difficulties of implementing quality management in Yemen. *TQM Mag.*, 14(4): 240-247.
- Arawati A (2005). The structural linkages between TQM, product quality performance, and business performance: Preliminary empirical study in electronics companies. *Sing. Manag. Rev.*, 27(1): 87-105.
- Barney JB (1986). Organizational Culture (OC): can it be a source of sustained competitive advantage? *Acad. Manag. Rev.*, 11: 656-665.
- Barney JB (1991). Firm resources and sustained competitive advantage. *J. Manag.*, 17(1): 99-120.
- Baron RM, Kenny DA (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *J. Personal. Soc. Psychol.*, 51(6): 1173-1182.
- Barrett H, Weinstein A (1998). The effect of Marketing Orientation and Organizational Flexibility on Corporate Entrepreneurship. *Entrep. Theory Pract.*, 23(1): 57-70.
- Bayati A, Taghavi A (2007). The Impacts of Acquiring ISO 9000 Certification on the Performance of SMEs in Tehran. *TQM Mag.*, 19(2): 140-149.
- Brah SA, Lim HY (2005). The effects of technology and TQM on the performance of logistics companies. *Int. J. Phy. Dist. Log. Manag.*, 36(3): 192-209.
- Brah SA, Wong JL, Rao BM (2000). TQM and buisness performance in the service sector: a Singaporean study. *Int. J. Oper. Prod. Manag.*, 20(11): 1293-1312.
- Brislin R (1986). The wording and translation of research instruments. In: Lonner WJ, Berry JW (Eds.), *Field methods in cross-cultural research*, 137-201, Beverly Hills, CA, Sage.
- Brislin RW (1970). Back-translation for cross-cultural research. *J. Cross Cult. Psychol.*, 1(3): 185-216.
- Covin JG, Green KM, Slevin DP (2006). Strategic process effects on the entrepreneurial orientation-sales growth rate relationships. *Entrep. Theory Pract.*, 30(1): 57-81.
- Covin JG, Slevin DP (1986). The Development and Testing of an organizational level Entrepreneurship Scale. Wellesley, MA, Babson College.
- Covin JG, Slevin DP (1989). Strategic management of small firms in hostile and benign environments. *Strat. Manag. J.*, 10: 75-87.
- Covin JG, Slevin DP (1991). A conceptual mode of entrepreneurship as firm behavior. *Entrep. Theory Pract.*, 16(1): 7-25.
- Cruikshank M (2003). Total Quality Management in the higher education sector: A literature review from an international and Australian perspective. *TQM Bus. Exc.*, 14(10): 1159-1167.
- Curkovic S, Melnyck S, Calantone RJ, Handfield RB (2000). Validating the Malcolm Baldrige National Quality Award framework through structural equation modelling. *Int. J. Prod. Res.*, 38(4): 765-791.
- Dahar MA, Faize FA, Niwaz A (2010). A case study of the university college of education Chiniot Punjab (Pakistan) with reference to total quality management. *Eur. J. Soc. Sci.*, 16(4): 511-525.
- Das A, Paul H, Swierczek FW (2008). Developing and validating total quality management (TQM) constructs in the context of Thailand's manufacturing industry. *Bench: Int. J.*, 15(1): 52-72.
- Deal TE (1986). Cultural change: opportunity, silent killer or metamorphosis. In R. H. Kilmann, M. J. Saxton, R. Serpa and associates (Eds), *Gaining control of the corporate culture*, Jossey-Bass, San Francisco, CA.
- Demirbag M, Koh SCL, Tatoglu E, Zaim S (2006a). TQM and market orientation's impact on SMEs' performance. *Ind. Manag. Data Syst.*, 106(8): 1206-1228.
- Demirbag MT, Tatoglu E, Tekinus M, Zaim S. (2006b). An analysis of the relationship between TQM implementation and organizational performance: evidence from Turkish SMEs. *J. Man. Technol. Manag.*, 17(6): 829-847.
- Denison DR (1990). *Corporate culture and organizational effectiveness*. New York, John Wiley and Sons.
- Denison DR (2000). Organizational Culture (OC): Can it be a key lever for driving organizational change. In Cartwright S, Cooper C (Eds.), *The handbook of Organizational Culture (OC)*, London: John Wiley and Sons.
- Denison DR, Cho HJ, Young J (2000). Diagnosing Organizational Culture (OC)s: validating a model and method. Working paper. International Institute for Management Development, University of Michigan, Ann Arbor, MI.
- Denison DR, Mishra AK (1995). Toward a theory of Organizational Culture (OC) and effectiveness. *Organiz. Sci.*, 6(2): 204-223.
- Deshpande R, Webster FE (1989). Organizational culture and marketing: defining the research agenda. *J. Mark.*, 53: 3-14.
- Dess GG, Lumpkin GT, McGee JE (1999). Linking Corporate Entrepreneurship to Strategy, Structure, and Process: Suggested Research Directions. *Entrep. Theory Pract.*, 24(1): 85-102.
- Dess GG, Pinkham BC, Yang H (2011). Entrepreneurial Orientation: Assessing the Construct's Validity and Addressing Some of Its Implications for Research in the Areas of Family Business and Organizational Learning. *Entrep. Theory Pract.*, 35(5): 1077-1090, DO - 10.1111/j.1540-6520.2011.00480.x
- Douglas TJ, Judge J (2001). Total Quality Management and competitive advantage; the role of structural control and exploration. *Acad. Manag. J.*, 44: 158-169.
- Drucker PF (1985). *Innovation and Entrepreneurship: Practice and Principles*, New York, Harper and Row.
- Ehigie BO, McAndrew EB (2005). Innovation, diffusion, and adoption of total quality management (TQM). *Manag. Decis.*, 43(6): 925-940.
- El Shenawy E, Baker T, Lemak DJ (2007). A meta-analysis of the effect of TQM on competitive advantage. *Int. J. Qual. Rel. Manag.*, 24(5): 442-471.
- Escrig-Tena AB (2004). TQM as a competitive factor: A theoretical and Empirical Analysis. *Int. J. Qual. Rel. Manag.*, 21(6): 612-637.
- Fening F, Pesakovic G, Amaria P(2008). Relationship between quality management practices and the performance of small and medium size enterprises (SMEs) in Ghana. *Int. J. Qual. Rel. Manag.*, 25(7): 694-708.
- Flynn BB, Schroeder RC, Sakakibara S (1994). A framework for quality management research and an associated measurement instrument. *J. Oper. Manag.*, 11: 339-405.
- Frazier PA, Tix AP, Barron KE (2004). Testing moderator and mediator effect in counseling research. *J. Counsel. Psychol.*, 51(1): 115-134.
- Fuentes-Fuentes MM, Albacete-Saez CA, Liorens-Montes FJ (2004). The impact of environmental characteristics on TQM principles and organizational performance. *Int. J. Manag. Sci.*, 32: 425-442.
- George BA, Marino L (2011). The Epistemology of Entrepreneurial Orientation: Conceptual Formation, Modeling, and Operationalization. *Entrep. Theory Pract.*, 35(5): 989-1024.
- Hair JF, Anderson RE, Tatham RL, Black WC (2010). *Multivariate Data Analysis*. 7th Ed, Prentice Hall, USA.
- Hall R (1993). A framework linking intangible resources and capabilities to sustainable competitive advantage. *Strateg. Manag. J.*, 14(8): 607-618.
- Hamel G, Prahalad CK (1989). Strategic Intent. *Harv. Bus. Rev.*, 67(3): 63-76.
- Hazilah AMN (2004). Quality management in the public sector: An empirical survey of the Ministry of Health Hospitals in Peninsular Malaysia. Unpublished PhD dissertation, Universiti Malay.
- Jaworski B, Kohil A (1993). Market orientation: Antecedents and consequences. *J. Mark.*, 57: 53-70.
- Kaplan RS, Norton DP (2000). *The strategy-focused organization*. USA, Harvard Business School Press.
- Kaynak H (2003). The relationship between total quality management practices and their effects on firm performance. *J. Oper. Manag.*, 21: 405-435.
- Keh HT, Nguyen TTM, Ng HP (2007). The effects of Entrepreneurial Orientation (EO) and marketing information on the performance of SMEs. *J. Bus. Venturing*, 22: 592-611.
- Khandwalla P (1977). *The design of organization*, New York, NY., Harcourt Brace Jovanovich.
- Kilmann RH, Saxton MJ, Serpa R (1985). Introduction: Five key issues in understanding and changing culture. In Kilmann RH, Saxton MJ, Serpa R, associates (Eds), *Gaining control of the corporate culture*, Jossey-Bass, San Francisco, CA.
- Knight GA (1997). Cross-cultural reliability and validity of a scale to measure firm entrepreneurial orientation. *J. Bus. Venturing*, 12: 213-225.
- Kumar V, Choisne F, Grosbois D, Kumar U (2009). Impact of TQM on company's performance. *Int. J. Qual. Rel. Manag.*, 26(1): 23-37.

- Kuratko DF, Welsch HP (2004). *Strategic Entrepreneurial growth* (2nd ed.). Ohio, Thomson, South-Western.
- Lakhal L, Pasin F, Limam M, (2005). Quality Management practices and their impact on Performance. *Int. J. Qual. Rel. Manag.*, 23(6): 625-646.
- Lee SM, Rho BH, Lee SG (2003). Impact of Malcolm Baldrige National Quality Award Criteria on organizational quality performance. *Int. J. Prod. Res.*, 41(9): 2003-2020.
- Lewis D (2002). Five years on - the organizational culture saga revisited. *Leadersh. Organiz. Dev. J.*, 23(5): 280-287.
- Lewis WG, Pun KF, Lalla TRM (2005). An AHP-based study of TQM benefits in ISO 901 certified SMEs in Trinidad and Tobago. *TQM Mag.*, 17(6): 558-627.
- Lewis WG, Pun KF, Lalla TRM (2006a). Exploring soft versus hard factors for TQM implementation in small and medium-sized enterprises. *Int. J. Prod. Person. Manag.*, 55(7): 539-592.
- Lewis WG, Pun KF, Lalla TRM (2006b). Empirical investigation of the hard and soft criteria of TQM in ISO 9001 certified small and medium-sized enterprises. *Int. J. Qual. Rel. Manag.*, 23(8): 964-1048.
- Li JH, Andersen AR, Harrison RT (2003). Total quality management principles and practices in China. *Int. J. Qual. Rel. Manag.*, 20(9): 1026-1050.
- Li Y, Huang J, Tsai M. (2009). Entrepreneurial orientation and firm performance: The role of knowledge creation process. *Ind. Market. Manag.*, 38: 440-449.
- Lumpkin GT, Dess GG (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Acad. Manag. Rev.*, 21(1): 135-172.
- McKinnon JL, Harrison GI, Chow CW, Wu A (2003). Organizational culture: Association with commitment, job satisfaction, propensity to remain, and information sharing in Taiwan. *Int. J. Bus. Stud.*, 11(1): 25-44.
- Miller D (1983). The correlates of entrepreneurship in three types of firms. *Manag. Sci.*, 29: 770-791.
- Miller D, Friesen P (1982). Innovation in conservative and entrepreneurial firms: two models of strategic momentum. *Strateg. Manag. J.*, 3: 1-25.
- Montes FJL, Jover AJV (2004). Total quality management, institutional isomorphism and performance: The case of financial services. *Serv. Ind. J.*, 24(5): 103-119.
- Morris MH, Sexton DL (1996). The concept of entrepreneurial intensity: Implications for company performance. *J. Bus. Res.*, 36(1): 5-13.
- Narver JC, Slater SF (1990). The effect of a market orientation on business profitability. *J. Market.*, October: 20-35.
- O'Reilly C, Chatman J (1996). Culture as social control: corporations, cults and commitment. *Res. Organiz. Behav.*, 18: 157-200.
- Ouchi WG, Wilkins AL (1985). Organizational Culture (OC). *Ann. Rev. Sociol.*, 11: 457-539.
- Owens R (1987). *Organizational Behavior in Education*. Englewood Cliffs, NJ, Prentice-Hall.
- Peteraf M (1993). The cornerstones of competitive advantage: A resource-based view. *Strateg. Manag. J.*, 14(3): 179-191.
- Prajogo DI (2005). The comparative analysis of TQM practices and quality performance between manufacturing and service firms. *Int. J. Serv. Ind. Manag.*, 16(3): 217-228.
- Prajogo DI, Sohal AS (2001). TQM and innovation: a literature review and research framework. *Technovation*, 21: 539-558.
- Rahman S (2001a). A comparative study of TQM practice and organizational performance of SMEs with and without ISO 9000 certification. *Int. J. Qual. Rel.*, 18(1): 35-49.
- Rahman S (2001b). Total quality management practices and business outcome: evidence from small and medium enterprises in Western Australia. *Tot. Qual. Manag. Bus. Exc.*, 12(2): 201-210.
- Ramachandran K, Devarajan TP, Ray S (2006). Corporate Entrepreneurship: How? *VIKALPA*, 31(1): 85-97.
- Reed R, Lemak DJ, Mero NP (2000). Total Quality Management and sustainable competitive advantage. *J. Qual. Manag.*, 5: 5-26.
- Salaheldin SI (2003). The implementation of TQM strategy in Egypt: a field-force analysis. *TQM Mag.*, 15: 266-274.
- Sanchez-Rodriguez C, Martinez-Lorente AR (2004). Quality management practices in the purchasing function: An empirical study. *Int. J. Oper. Prod. Manag.*, 24(7): 666-687.
- Saravanan R, Rao KSP (2006). The impact of employees' characteristics on total quality service implementation: An empirical study. *Qual. Manag. J.*, 13(4): 22-35.
- Schein EH (1990). Organizational culture. *Am. Psychol.*, 45(2):109-119.
- Sila I, Ebrahimpour M (2002). An investigation of the total quality management survey based research published between 1989 and 2000: A literature review. *Int. J. Qual. Rel. Manag.*, 19(7): 902-970.
- Sila I, Ebrahimpour M (2005). Critical linkages among TQM factors and business results. *Int. J. Oper. Prod. Manag.*, 25(11): 1123-1155.
- Smart DT, Conant JS (1994). Entrepreneurial Orientation (EO), distinctive marketing competencies and organizational performance. *J. Appl. Bus. Res.*, 10: 28-38.
- Sohail MS, Hoong TB (2003). TQM practices and organizational performance of SMEs in Malaysia: Some empirical observation. *Bench.: Int. J.*, 10(1): 37-53.
- Sohal AS, Terziovski M (2000). TQM in Australian manufacturing: Factors critical to success. *Int. J. Qual. Rel. Manag.*, 17(2): 158-167.
- Temtime ZT, Solomon GH (2002). Total quality management and the planning behavior of SMEs in developing economics. *TQM Mag.*, 14(3): 181-191.
- Thornton GC (1968). The relationship between supervisor- and self-appraisals of executive performance. *Person. Psychol.*, 441-495.
- Wernerfelt B (1984). A resource-based view of the firm. *Strateg. Manag. J.*, 5(2): 105-180.
- Wiklund J, Shepherd D (2005). Entrepreneurial Orientation (EO) and small business performance: a configurational approach. *J. Bus. Venturing*, 20: 71-91.
- Wruck KH, Jensen MC (1994). Science, Specific Knowledge and Total Quality Management. *J. Account. Econ.*, 18(3): 247-287.
- Yasin MM, Kunt JAM, Zimmerer TW (2004). TQM practices in service organizations: an exploratory study into the implementation, outcomes and effectiveness. *Manag. Serv. Qual.*, 14(5): 377-389.
- Zahra S (1991). Predictors and Financial Outcomes of Corporate Entrepreneurship: an Exploratory Study. *J. Bus. Venturing*, 6: 245-254.
- Zahra S, Nielsen A, Bonger W (1999). Corporate entrepreneurship, Knowledge, and Competence Development. *Entrep. Theory Pract.*, 23(3): 169-183.
- Zahra SA (1993). Environment, corporate entrepreneurship, and financial performance: A taxonomic approach. *J. Bus. Venturing*, 8: 319-340.
- Zahra SA, Jennings AF, Kuratko DF (1999). The antecedents and consequences of firm-level entrepreneurship: The state of the field. *Entrep. Theory Pract.*, 24(2): 45-65.
- Zheng W, Yang B, McLean GN (2010). Linking organizational culture, structure, strategy, and organizational effectiveness: Mediating role of knowledge management. *J. Bus. Res.*, 63: 763-771.
- Zu X, Robbins TL, Fredendall LD (2010). Mapping the critical links between organizational culture and TQM/Six Sigma practices. *Int. J. Prod. Econ.*, 123: 86-106.